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June 30, 2014

VIA Hand Delivery

Bridget C. Bohac, Chief Clerk
Texas Commission on Environmental Quality
12100 Park 35 Circle
Building F, 1st Floor
Austin, Texas 78753

CHIEF CLERK'S OFFICE
2014 JUN 30 PM 4:07
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

RE: Cottonwood Energy Company, LP
Cottonwood Energy Center Units 1-4, Deweyville, Newton County, Texas
Appeal of June 5, 2014 and June 17, 2017, Negative Use Determination
Application Nos. 15505, 16410, 16411, and 16412

Dear Ms. Bohac:

Cottonwood Energy Company, LP ("*Applicant*" or "*Cottonwood*") is in receipt of the Executive Director's letters dated June 5, 2014, and June 17, 2014, notifying it of the negative use determinations (the "*Determinations*") on Application Nos. 15505, 16410, 16411, and 16412 (the "*Applications*").

I. Procedures for Appeal

Applicant disagrees with the Determinations and pursuant to 30 TAC 17.23 hereby provides:

(1) the name, address, and daytime telephone number of the person filing the appeal is:

Mike Nasi
Jackson Walker L.L.P. 100 Congress Ave., Suite 1100
Austin, Texas 78701
512-236-2216

As legal counsel to:

Cottonwood Energy Company, LP

(2) the name and address of the entity to which the use determinations were issued:

Cottonwood Energy Company, LP
Cottonwood Energy Center
976 County Road 4213
Deweyville, Texas 77614

- (3) the use determination application numbers for the Applications were:

No. 15505, No. 16410, No. 16411, No. 16412

- (4) request Commission consideration of the use determination:

Applicant hereby requests the Commission to hear and consider the merits of the Applications and reach a determination that a positive use determination is appropriate; in the alternative, Applicant requests that the Commission reach a determination that the negative use determinations are not appropriate and the matter should be remanded back to the Executive Director for a determination that the property in question is eligible for a positive use determination.

- (5) The basis for the appeal is set forth in full in the attached brief.

Sincerely,



for

Michael J. Nasi
Counsel for Cottonwood Energy Company,
LP

**APPEAL OF NEGATIVE USE DETERMINATIONS ISSUED TO
COTTONWOOD ENERGY COMPANY, LP**

Cottonwood Energy Company, LP (“Applicant” or “Cottonwood”) files this appeal of the negative use determinations issued by the Executive Director (“ED”) on June 5, 2014 and June 17, 2014.¹ For the reasons articulated below, the Applicant respectfully requests that the Texas Commission on Environmental Quality (“TCEQ” or “Commission”) sustain the Applicant’s appeal of the negative use determinations and order that positive use determinations are appropriate using the Clarified CAP Model proposed by Applicant. In the alternative, Applicant requests that the Commission remand the matter to the ED with specific instructions to revisit the pollution control aspects of the subject property and use the tools Applicant has provided to bring these long-overdue use determinations to a close in a way that comports with applicable law.

In an effort to limit the volume of briefing material filed with the Commission, Applicant attaches and incorporates by reference its briefing filed in Docket No. 2012-1562-MIS-U and reiterates the arguments made therein.²

SUMMARY OF ARGUMENT

Based upon the comments by the Commissioners during the December 5, 2012 Agenda discussion of this matter leading up to their rejection of the ED’s negative use determination, it seems clear that the Commissioners recognized that this equipment is pollution control property entitled to some measure of positive use determination. But, rather than endeavor to pursue settlement negotiations or develop a compromise position consistent with the tone of the remand (and the express language of the statute), the ED has chosen to delay nearly 18 months to simply paper the file with additional justification of what was previously rejected. This kind of treatment of applicant is inconsistent with the Commission’s remand order. Now that applicants have been force to wait an additional 18 months and have, in good faith, expended significant resources to reach a compromise in this situation, basic fairness demands that the Commission reject the ED’s decision outright, and render a partial positive use determination based on the applicant’s proposed methodology.

The legal issue here is simple. As currently applied and reflected in the proposed negative use determinations that are before you, the ED’s interpretation of its own rules will always generate a negative use determination for heat recovery steam generators (“HRSGs”) and enhanced steam turbines (“ESTs”). This is patently in violation of Section 11.31 of the Texas Tax Code which unambiguously directs that the Commission “shall determine” that “heat recovery steam generators” and “enhanced steam turbine systems” are “used wholly or partly as qualifying pollution control property.”³

¹ Exhibits 5-12. Please note that the Negative Use Determination dated June 5, 2014 was sent to David Johnson, Tenaska, Inc. in Omaha, Nebraska. After being made aware of the incorrect address, the ED e-mailed new letters to Cottonwood on June 17, 2014.

² Exhibits 1-4.

³ TEX. TAX CODE §§ 11.31(k) and (m).

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While the ED has previously awarded 100 percent positive use determinations, which award is supportable under the Texas Tax Code, in light of the Commission's directive, Cottonwood has worked exhaustively with other similarly situated applicants ("Applicants") to develop a legally and technically valid approach that generates a positive use determination less than 100 percent that would be acceptable to the ED. Yet, that approach was summarily rejected by the ED in favor of an absurd interpretation of the rules that directly contradicts statutory law and, therefore, fundamental principles of Texas administrative law.

So that the Commission and Applicant are not subjected to another 18 month delay in this matter, Applicant is requesting that the Commission order that positive use determinations are appropriate using the Clarified CAP Model proposed by Applicant. In the alternative, Applicant is requesting that this matter be remanded to the ED for a new determination, and that the Commission specifically instruct the ED to comply with the Legislature's specific instructions in Tex. Tax Code § 11.31 to issue positive use determinations and utilize the tools that have been developed to generate positive use determinations that have a real chance of bringing this dispute to an end and providing the Commission with the tools to deal with future applications.

DISCUSSION

I. Procedural Background

Between 2008 and 2012, the Executive Director has received approximately thirty-eight applications for HRSGs and associated equipment installed at combined-cycle electric generation facilities. The Executive Director issued 100 percent positive use determinations for twenty-five of the applications representing 70 HRSGs. Six of those applications representing 16 HRSGs were appealed by local taxing units.

On July 5, 2011, Cottonwood filed a Tier III Application, Application No. 15505, for a Use Determination for Pollution Control Property with the Executive Director for one HRSG and a dedicated ancillary system that reduce air emissions at the Cottonwood Energy Center. On December 2, 2011, Cottonwood submitted three additional Tier III Applications, Application Nos. 16412, 16411, 16410, for three other HRSGs and dedicated ancillary systems that reduce air emissions at the Cottonwood Energy Center. The Executive Director failed to take any action on those applications until July 10, 2012, when it issued a negative use determination for the HRSGs, stating that "[h]eat recovery steam generators and associated dedicated ancillary systems are used solely for production; therefore, are not eligible for a positive use determination."

Applicant appealed the negative use determinations and the Commission took up the appeal at its December 5, 2012 Agenda Meeting. After considering the briefs and hearing the arguments, the Commission remanded to the matter back to the ED for a new determination. Upon remand, Applicants worked exhaustively to develop a legally and technically valid approach that generates a positive use determination less than 100 percent in hopes of providing the Commission with the tools to resolve this dispute, prepare itself for future applications, and avoid further resources being consumed to resolve this matter. Applicants met with the ED executive management and staff to explain the merits of these tools and answer any questions or concerns. Applicants believed progress had been made, but the ED's staff issued an NOD on

February 3, 2014 that reflected little progress in the mindset of the ED's staff. Applicant again replied to the NOD, providing additional information to the ED and reiterating the legal and technical merits of the proposed tools being offered. Unfortunately, on June 5, 2014, the ED issued a negative use determination for the applications submitted by Cottonwood, which is the subject of this appeal.

II. The Legislature Specifically Determined that HRSGs and ESTs are Pollution Control Property and Are Entitled to an Exemption from Taxation

Tex. Tax Code § 11.31 begins by stating that “A person is entitled to an exemption from taxation of all or part of real and personal property that the person owns and that is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution.”⁴ Under this provision, if the property is used for the control of air, water of land pollution, it is eligible to receive a tax exemption.

There can be no question that the Legislature specifically listed HRSGs and ESTs as “facilities, devices, or methods for the control of air, water, or land pollution” under 11.31(k). The term used by the Legislature, “facility, device, or method for the control of air, water, or land pollution” is defined in statute as:

any structure, building, installation, excavation, machinery, equipment, or device, and any attachment or addition to or reconstruction, replacement, or improvement of that property, that is used, constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency ... for the prevention, monitoring, control, or reduction of air, water, or land pollution.⁵

If equipment is considered a facility, device, or method “for the control of air, water, or land pollution” then, by definition, it is used “to meet or exceed rules or regulations adopted by an environmental protection agency for the prevention, monitoring, control, or reduction of air, water, or land pollution.” Thus, according to the Legislature's definition, HRSGs and ESTs not only meet or exceed environmental rules, but this equipment is also used to prevent, monitor, control or reduce air pollution.

The Legislature provided even more clarity in §11.31(m) which states that if an application is for a “facility, device, or method included on the list adopted under Subsection (k)” the ED “shall determine” that the equipment is “used wholly or partly” as qualifying pollution control property. In case the ED was still unsure about whether HRSGs and ESTs could qualify as pollution control property, the author of the bill which included the addition of 11.31(k) wrote a letter to the Commission stating that equipment which had both a production component and a pollution control component, achieved though energy efficiency, qualified as pollution control property.

And if there was still any room for doubt, two separate Texas Attorneys General have opined to the Texas Natural Resource Conservation Commission and the TCEQ that “methods of

⁴ TEX. TAX CODE §11.31(a) (emphasis added).

⁵ TEX. TAX CODE §11.31(b) (emphasis added).

production,” including the use of energy efficient measures such as HRSGs and ESTs, can and do qualify as exempt pollution control property.⁶

In this case, the equipment in question is statutorily defined as a “facility, device, or method for the control of air, water or land pollution,” thereby confirming that HRSGs and ESTs are, under the “plain meaning” of Tex. Tax Code §11.31, entitled to some exemption from taxation.

III. Despite the Unambiguous Statutory Language, the ED’s Staff’s Current Application of its Own Regulations Will Always Generate a Negative Use Determination for HRSGs and ESTs, Which is Patently in Violation of the Texas Tax Code.

Under TCEQ rules, Tier III applicants are required to use the Cost Analysis Procedure (“CAP”) to calculate the appropriate use determination. Applicant proposed a Clarified CAP Model which not only conforms with TCEQ rules, but more importantly, gives effect to the Legislature’s intent and provides the Commission with a mechanism to resolve the pending and future applications in a legally and technically valid manner.

In its negative use determination, the ED argues that, under the CAP, the Capital Cost Old (“CCO”) cannot be zero, even though there is no “old” equipment being replaced by a HRSG and EST. This equipment is not replacing other equipment, but is installed as part of the design of this type of facility.

What is interesting about this interpretation is that there is no statutory or regulatory requirement mandating this interpretation, yet this interpretation will always generate a result directly inconsistent with the statute. ED staff have concluded that applicants must assume that the CCO is equal to the cost of a boiler, because boilers, like HRSGs, produce steam. However, the statute does not require the ED to use the CAP, nor does the statute require that the cost of a comparable piece of equipment be used for CCO when there is no equipment being replaced. The requirement that applicants substitute the cost of a boiler as the CCO for HRSG applications is a regulatory fiction used by the ED designed to always generate a negative use determination.

This interpretation will necessarily result in an outcome which directly contradicts the Legislature’s unequivocal instruction to treat HRSGs and ESTs as pollution control property in Texas Tax Code §§11.31(k) and (m).

In a recent case, the Texas Supreme Court considered ambiguous provisions in a statute and applied traditional rules of statutory construction to accomplish the primary objective of ascertaining and giving effect to the legislature’s intent. The Court recognized the Comptroller’s construction of the tax code was entitled to “serious consideration” and that the Court normally would defer to the agency interpretation, but does not defer when that interpretation is plainly erroneous or inconsistent with the language of the statute.⁷ After considering the statute, the Court held the Comptroller’s construction to be inconsistent with the statute and reversed lower court decisions upholding the agency construction. Although the agency interpretation apparently was reasonable enough to result in ambiguity, the taxpayer’s interpretation was the

⁶ Tex. Att. Gen. Op. JC-0372 (2001); see Tex. Att. Gen. Op. GA-0587 (2007).

⁷ *TGS-NOPEC Geophysical Company v. Combs, et al.*, 340 S.W.3d 432 (Tex. 2011).

“better” one because the agency interpretation was inconsistent with the statute, and thus unreasonable.

Section 11.31 must be construed to give effect to the Legislature’s intent.⁸ An agency or court should first attempt to determine this intent from the actual language used by the Legislature. That is, an agency or court should first look to the plain, ordinary meaning of the statute’s words.⁹ Most importantly, “[i]f a statute is clear and unambiguous, [the courts] apply its words according to their common meaning without resort to rules of construction or extrinsic aids.”¹⁰ This is true even when the agency charged with enforcing the statute seeks to apply a different construction.¹¹

These pillars of Texas Administrative Law have been flatly ignored by the ED in this case. As noted above, the ED’s interpretation of its rules not only directly contradicts the Legislature’s directive as to how to process applications for equipment listed in 11.31(k) of the Tax Code, but also conflicts with its own rules. The ED argues that the CAP analysis requires that it assume the CCO is equivalent to some other piece of production equipment. This ignores the TCEQ’s own regulations, which define “Capital Cost Old,” as “[t]he cost of the equipment that *is being* or *has been replaced* by the equipment covered in an application.”¹² For these HRSG applications, no equipment is being or has been replaced.

In this case, the ED has chosen a boiler, since, like a HRSG, a boiler produces steam. The ED did not derive this conclusion from its rules, but made a unilateral judgment that is not mandated by statute or regulation since a boiler and HRSG are completely distinct pieces of equipment. HRSGs are a heat transfer area, in which waste heat from the combustion turbine is used to create steam. There is no furnace in a HRSG. A fossil fuel-fired boiler combusts fuel, by using a furnace, stoker, or fluidized bed, to generate the heat used to produce steam. The ED has arbitrarily chosen one similarity between HRSGs and boilers (that steam is emitted from them) and used that to rationalize a position that always generates a result that conflicts with express language of a statute. This is the definition of what a regulatory agency cannot do in Texas.

It goes without saying that the Commission should avoid interpreting its rules in a manner that will always generate a negative use percentage for equipment that has been legislatively assumed to be, in whole or in part, pollution control property. Beyond this basic premise of Texas Administrative Law, the Commission must recognize that staff’s interpretation of the CAP to always result in a negative use determination is tantamount to an ad hoc rulemaking to remove this equipment from eligibility. Such a procedure clearly violates Tax Code §11.31(l), which explicitly requires the Commission to go through formal rulemaking and satisfy a high burden (compelling evidence of no pollution control benefit) before disallowing eligibility for this equipment.

⁸ See TEX. GOV’T CODE § 312.005; *Gilbert v. El Paso County Hosp. Dist.*, 38 S.W.3d 85 (Tex. 2001).

⁹ See TEX. GOV’T CODE § 312.002(a); *Am. Home Prods. Corp. v. Clark*, 38 S.W.3d 92, 95-96 (Tex. 2000); *Crimmins v. Lowry*, 691 S.W.2d 582, 584 (Tex. 1985).

¹⁰ See *In Re Nash*, 220 S.W.3d 914, 917 (Tex. 2007) (emphasis added).

¹¹ See *Pretzer v. Motor Vehicle Bd.*, 138 S.W.3d 908, 914-15 (Tex. 2004); *Barchus v. State Farm Fire & Cas. Co.*, 167 S.W.3d 575, 578 (Tex. App.—Houston [14th Dist.] 2005, pet denied).

¹² 30 TAC §17.2(2). (emphasis added).

IV. ED's Reliance on Insufficient Environmental Citation is Not Based on Applicable Law.

In the negative use determinations issued to Cottonwood, the ED states:

[T]he ED does not find that the HRSG is used to meet or exceed any of the environmental laws that were cited in your application. While the application and responses provided numerous rule citations, none were to rules that the HRSG was required to meet. Therefore, the HRSG does not meet the applicability requirements of 30 TAC §17.4(a) to be eligible for exemption from ad valorem taxation.

As described above, under Section 11.31(a) any equipment "that is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution." Under this provision, if the property is used for the control of air, water of land pollution, it is eligible to receive a tax exemption.

The ED accurately notes that in addition to being property used for the control of air, water, or land pollution, that the property must also be used to meet or exceed an environmental regulation. What the ED refuses to recognize is that when the Legislature amended § 11.31 in 2007, by adding §11.31(k), the Legislature specifically defined the equipment listed in §11.31(k) as "facilities, devices, or methods for the control of air, water or land pollution." This is not just some generic description, but mirrors the defined terms used in §§11.31(a) and (b) and specifically satisfies the requirement to meet or exceed an environmental regulation.

Therefore, if equipment is considered a facility, device, or method "for the control of air, water, or land pollution" then, by definition, it is used "to meet or exceed rules or regulations adopted by an environmental protection agency for the prevention, monitoring, control, or reduction of air, water, or land pollution." There is no other way it can be interpreted. The fact that the Legislature specifically chose to define the items listed in 11.31(k) as "facilities, devices, or methods for the control of air, water, or land pollution" demonstrates that the Legislature had already determined that these items satisfy the requirement to meet or exceed an environmental regulation. Because the Legislature chose to describe this equipment using a statutorily defined term, that definition must be applied and the property must be considered to "meet or exceed rules or regulations adopted by any environmental protection agency . . . for the prevention, monitoring, control, or reduction of air, water, or land pollution." The ED cannot simply choose to ignore this statutory definition.

Thus, when the Legislature states that heat recovery steam generators ("HRSGs") and enhanced steam turbines ("ESTs") are "facilities devices, or methods for the control of air, water, or land pollution," the ED must treat them as that term is defined and recognize that they are used to meet or exceed an environmental regulation. If the ED continues to argue that there is no environmental regulation that HRSGs and ESTs meet or exceed, then the ED is willfully ignoring the statutory language. The ED has no such authority.

We also note that the ED's determination that the HRSGs do not qualify as pollution control property because they were not *required* in order to meet any of the cited rules, substantively

differs from the Legislature's determination that the only requirement is that the equipment meets or exceeds an environmental rule. These are two completely separate tests. We believe the one prescribed by the Legislature should prevail.

The Commission has previously recognized that "[t]he term 'exceed' is interpreted to include voluntary projects which go beyond the minimum requirements of environmental laws, rules, or regulations, provided that the projects are initiated pursuant to or in compliance with an adopted or enacted law, rule, or regulation."¹³ Thus, even if an environmental rule does not specifically call for the installation of a HRSG, if a HRSG assists in reducing pollution beyond the minimum requirements of that rule, then it exceeds the environmental rule and is eligible for a positive use determination.

Furthermore, an environmental rule regarding NO_x emissions can be exceeded not only by achieving greater emissions reductions than is required by the rule, but also by proactively complying with or exceeding the requirements of an adopted or enacted rule that the facility will have to comply with in the future. Even if the facility is not yet required to comply with a particular rule, if an applicant voluntarily complies with or exceeds the requirements of an adopted or enacted rule, then it meets the statutory requirements as well as the Commission's stated position of what it means to exceed a rule.

Cottonwood is subject to NSPS GG and NSPS Da, as it was not constructed or modified after February 18, 2005. NSPS GG and NSPS Da both provide concentration-based NO_x emission limits. While HRSGs and ESTs do not scrub an exhaust, for example, to reduce a particular emission, both help a facility comply with an output-based emission limit by improving the overall efficiency of the plant. Output based emissions limits are based on the amount of pollution produced per unit of useful output. This is why the Legislature specifically defined HRSGs and ESTs as "facilities, devices, or methods for the control of air, water, or land pollution."

Subpart KKKK, on the other hand, does provide an output based emissions limit. Subpart KKKK applies to the emissions from the gas turbine, as well as any associated HRSGs and duct burners. Furthermore, the TCEQ recently adopted a Permit By Rule ("PBR") for Natural Gas-Fired Combined Heat and Power Units.¹⁴ In the preamble to the adoption of the Combined Heat and Power ("CHP") PBR, the TCEQ states, "The Commission acknowledges the benefits and advantages of CHP as a means of providing efficient, reliable, and clean energy." As part of that PBR, TCEQ specifically provided that the emission limits for stationary natural gas engines would be measured in terms of air contaminant emissions per unit of total energy output.¹⁵ HRSGs are recognized as a typical industrial CHP application. The fact that the TCEQ recognizes the pollution control benefits of this type of equipment in its permitting program should be given weight when evaluating the Executive Director's arguments in this case that similar equipment does not have pollution control benefits.

¹³ 19 Tex. Reg. 7737, 7793 (Sept. 30, 1994).

¹⁴ 30 TAC §106.513; 37 Tex. Reg. 6037-6049, August 10, 2012.

¹⁵ 30 TAC §106.513(d).

It is worth noting that those facilities that have not triggered NSPS KKKK because they were constructed or last modified prior to February 18, 2005 still provide the exact same environmental benefit and emission reductions that facilities constructed or modified after February 18, 2005 provide. These are the same environmental benefits and emissions reductions that have been recognized and commended by the Commission.

Cottonwood contends that it is wholly unreasonable for the Commission to treat a plant which was constructed prior to 2005 as ineligible for a pollution control tax exemption because it was not subject to an output based emission standard, even though it provided the same emissions reductions and the same environmental benefits that a similar plant built in 2005 provides. Any facility constructed prior to February 18, 2005 that employs HRSGs and ESTs meets the Commission's definition of "exceed" as it is a "voluntary project" which goes "beyond the minimum requirements of environmental laws, rules, or regulations" that is "in compliance with an adopted or enacted law, rule, or regulation [i.e., NSPS KKKK]."

The ED's position would ignore the environmental benefit that the Commission has explicitly acknowledged that these facilities provide. We find it hard to believe that the Commission would choose to provide a market incentive to some, but not all, facilities that install the exact same pollution control equipment while ignoring the environmental benefit that older facilities have been providing for a longer period of time. In a seemingly ironic twist, under the ED's current position, those facilities that have provided the greatest amount of pollution prevention are the facilities that will be left without a positive use determination.

If, however, the ED wishes to distinguish between plants that provide the exact same environmental benefit based on the date which the facility commenced construction, there are other regulatory programs that the ED has previously recognized as appropriate citations that are applicable in this matter. The Commission has previously issued positive use determinations to dozens of applicants who have cited to the Clean Air Interstate Rule ("CAIR") and the National Ambient Air Quality Standards ("NAAQS") as the environmental rule that is being met or exceeded by the use of the pollution control property. The "Tax Relief for Pollution Control Property: Technical Review Document" for applications citing to the CAIR and NAAQS regulations indicates that these applications "cite valid rules."

Finally, on June 5, 2014, the ED issued negative use determination letters for all of the pending HRSG applications. Despite the fact that the type of facility and the environmental rules that were cited were all substantially identical, the ED issued some letters indicating that no appropriate environmental rule had been cited, while other letters were silent on the issue. One would assume that the ED staff would provide all of the technical and legal reasons that a particular application was being denied. If so, it is unclear how the applications for the same type of equipment that cite to the same environmental rules can receive different treatment from ED staff. Not only does this violate numerous state laws, including the Texas Constitution, it goes to highlight the arbitrary and inconsistent nature of the ED's staff determinations.

V. As Currently Applied, the CAP Fails to Comply with Legislative Directive, is Wildly Inconsistent, and Conflicts with the Commission's Stated Goal of Encouraging Pollution Reduction Through Energy Efficiency.

The ED has recognized that the CAP is a flawed system. During the December 5, 2012 Agenda meeting, both ED staff and Chairman Shaw recognized the shortcomings of the CAP. Yet, the ED continues to reject proposals from applicants about how to use the CAP in a way that more accurately reflects the pollution control benefits of HRSGs and ESTs. As an example of how inconsistent the ED has been in evaluating these applications, with regard to the application submitted by CER-Colorado Bend, the ED has separately argued for a 100% positive used determination, a 61% partial used determination, a 0% use determination, and a *negative* 276% use determination, for the exact same equipment.

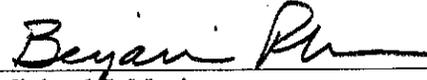
As currently applied, the CAP *cannot* address output based emission limits that govern natural gas combined cycle power plants.¹⁶ Yet, the current application of the CAP fails to recognize reductions in emission from an output based perspective and, thus, is the equivalent to the Commission sticking its head in the sand and hoping that output-based emission controls will pass us by. They will not. In fact, they are likely to be the majority of the pollution control techniques moving forward, especially as the Environmental Protection Agency ("EPA") continues to press for GHG regulation under the Clean Air Act.

CONCLUSION

The ED's position that HRSGs and ESTs are not eligible for a positive use determination fails to recognize the importance of the statutory definitions provided in Tex. Tax Code §11.31 and does not comply with the controlling statute. Because the Legislature chose to describe HRSGs and ESTs using a statutorily defined term, that definition must be applied and the property must be considered to "meet or exceed rules or regulations adopted by any environmental protection agency . . . for the prevention, monitoring, control, or reduction of air, water, or land pollution." The ED cannot simply choose to ignore this statutory definition. Furthermore, Applicant has provided the ED with more than enough technical support to understand and rely upon the Clarified CAP Model discussed at length above. Applicant trusts that the Commission will make every effort to comply with the clear intent of Tex. Tax Code §11.31 and either order that a positive use determination is appropriate or remand this matter to the ED for a new use determination with specific instructions to revisit the pollution control aspects of the subject property and use the tools Applicants has provided to bring this long-overdue use determination to a close in a way that comports with applicable law.

¹⁶ See 40 C.F.R. Subpart KKKK; 79 Fed. Reg. 34960 (June 18, 2014) (EPA's proposed Carbon Pollution Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units); and 79 Fed Reg. 34830 (June 18, 2014) (EPA's proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units).

Respectfully submitted,



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Steve Moore
State Bar No. 14377320
Benjamin Rhem
State Bar No. 24065967

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ATTORNEYS FOR
COTTONWOOD ENERGY COMPANY,
LP

Cottonwood Energy Company, LP Exhibit List

1. 07/31/2012 Appeal of Negative Use Determination issued to Cottonwood Energy Company, LP
2. 10/30/2012 Cottonwood Energy Company, LP's Reply to Response Briefs
3. 06/24/2013 Response to Notice of Technical Deficiency of Cottonwood Energy Company, LP
4. 03/21/2014 Response to Notice of Technical Deficiency of Cottonwood Energy Company, LP
5. 06/05/2014 TCEQ Notice of Negative Use Determination for Cottonwood Energy Center Unit 1
6. 06/05/2014 TCEQ Notice of Negative Use Determination for Cottonwood Energy Center Unit 2
7. 06/05/2014 TCEQ Notice of Negative Use Determination for Cottonwood Energy Center Unit 3
8. 06/05/2014 TCEQ Notice of Negative Use Determination for Cottonwood Energy Center Unit 4
9. 06/17/2014 TCEQ Notice of Negative Use Determination for Cottonwood Energy Center Unit 1
10. 06/17/2014 TCEQ Notice of Negative Use Determination for Cottonwood Energy Center Unit 2
11. 06/17/2014 TCEQ Notice of Negative Use Determination for Cottonwood Energy Center Unit 3
12. 06/17/2014 TCEQ Notice of Negative Use Determination for Cottonwood Energy Center Unit 4





JACKSON WALKER L.L.P.



ATTORNEYS & COUNSELORS

July 31, 2012

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VIA Hand Delivery

Bridget C. Bohac, Chief Clerk
Texas Commission on Environmental Quality
12100 Park 35 Circle
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Austin, Texas 78753

2012 JUL 31 PM 4:44
CHIEF CLERKS OFFICE
TEXAS COMMISSION
ON ENVIRONMENTAL
QUALITY

RE: Cottonwood Energy Company LP- Appeal of July 10, 2012 Negative Use Determinations

Dear Ms. Bohac:

We are in receipt of the Executive Director's letters dated July 10, 2012 notifying the Applicant of a negative use determination (the "*Determination*") on its applications; No. 15505, No. 16412, No. 16411 and No. 16410 (the "*Application*")

I. Procedures For Appeal

Applicant disagrees with the Determination and pursuant to 30 TAC 17.25 hereby provides:

(1) the name, address, and daytime telephone number of the person filing the appeal is:

Mike Nasi
Jackson Walker L.L.P.
100 Congress Ave., Ste. 1100
Austin, Texas 78701
512-236-2216

As legal counsel to:
Cottonwood Energy Company LP

(2) the name and address of the entity to which the use determination was issued:

Cottonwood Energy Company LP
Cottonwood Energy Center
976 County Road 4213
Deweyville, Texas (Newton County)

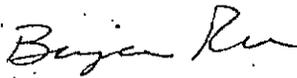
(3) the use determination application number for the Application was:
No. 15505, No. 16412, No. 16411, No. 16410

(4) request Commission consideration of the use determination:

Applicant hereby requests the Commission to hear and consider the merits of the Application and reach a determination that a negative use determination is not appropriate and the matter should be remanded back to the Executive Director with instructions to revisit the pollution control aspects of the subject property.

(5) The basis for the appeal is set forth in full in the attached brief.

Sincerely,



for Michael J. Nasi, Counsel for Cottonwood Energy
Company LP

TCEQ DOCKET NO. _____

APPEAL BY Cottonwood Energy § TEXAS COMMISSION
Company LP §
NEGATIVE USE DETERMINATION § ON
ISSUED TO Cottonwood Energy Company LP § ENVIRONMENTAL QUALITY

**APPEAL OF NEGATIVE USE DETERMINATION ISSUED TO
COTTONWOOD ENERGY COMPANY LP**

Cottonwood Energy Company LP ("*Applicant*" or "*Cottonwood*") files this appeal of the negative use determinations issued by the Executive Director on July 10, 2012. For the reasons articulated below, the Applicant respectfully requests that the Commission sustain the Applicant's appeal of the negative use determinations and remand the matter to the Executive Director with instructions to revisit the pollution control aspects of the subject property.

Part I of this brief provides a brief background of the Pollution Control Property Program; Part II describes the procedural background of the application; Part III-VI detail the Applicant's argument why the negative use determination is a misapplication of Texas law, is based on policy concerns outside of the Agency's purview, and is founded on a defective technical evaluation.

Summary of Argument

This is an appeal of a negative use determination. Therefore, quite simply, the only question before the Commission in considering this appeal is not whether an exact percentage is appropriate - the Commissioners need only evaluate whether *any* percentage above zero is appropriate. As set forth fully herein, applicable law, prior precedent, and the record in this case demand that, at a minimum, a number above zero be used and a positive use determination be issued. Thus, this appeal should be granted and this matter should be remanded back to the Executive Director for a determination that the property in question is eligible for a positive use determination.

I. Program Background

On November 2, 1993, Texans approved Proposition 2 amending the Texas Constitution to provide tax relief for pollution control property. This amendment added § 1-1 to the Texas Constitution, Article VIII, which states:

- (a) The legislature by general law may exempt from ad valorem taxation all or part of real and personal property used, constructed,

acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution.

(b) This section applies to real and personal property used as a facility, device, or method for the control of air, water, or land pollution that would otherwise be taxable for the first time on or after January 1, 1994.

In response to the constitutional amendment, the Texas Legislature added Texas Tax Code, § 11.31, Pollution Control Property (“§11.31”). The statute establishes a process where applicants submit Applications for Use Determination to the Executive Director of the TCEQ to determine whether the property is used wholly or in part for pollution control.¹ The Executive Director’s role is limited by § 11.31 to the specific task of conducting a technical evaluation to determine whether the equipment is used wholly or partly for the control of air, water, or land pollution,² and does not include any evaluation of the merit of the tax exemption itself or tax policy implications of granting positive or negative use determinations.

The tax appraisal district where the Pollution Control Property will be installed/constructed is the entity charged with actually granting the tax exemption. If an applicant obtains a positive use determination from the Executive Director, the applicant must then submit another application with the local appraisal district to receive the tax exemption for the pollution control property.

In 2001, the Legislature passed House Bill 3121, which amended §11.31. These amendments included providing a process for appealing the Executive Director’s use determinations.³ House Bill 3121 also required the Commission to adopt rules that establish specific standards for the review of applications that ensure determinations are equal and uniform,⁴ and to adopt rules to distinguish the proportion of property that is used to control pollution from the proportion that is used to produce goods or services.⁵

In 2007, § 11.31 was amended again with the passage of House Bill 3732, which required the Commission to adopt a list of equipment that is considered pollution control property, including the equipment listed in § 11.31(k). In adopting rules for the implementation of House Bill 3732, the TCEQ created a specific review process for those applications applying for the categories of listed equipment. For these applications, the Executive Director must determine

¹ TEX. TAX CODE § 11.31(c) and (d).

² TEX. TAX CODE § 11.31(c).

³ TEX. TAX CODE § 11.31(e).

⁴ TEX. TAX CODE § 11.31(g)(1) and (g)(2).

⁵ TEX. TAX CODE § 11.31(g)(3).

the proportion of the equipment used for pollution control and the proportion that is used for production. The application that is the subject of this appeal is a Tier III application.

II. Procedural Background

On July 5, 2011, the Applicant filed a Tier III Application for Use Determination for Pollution Control Property with the Executive Director for one Heat Recovery Steam Generator ("HRSG") and dedicated ancillary systems at the Cottonwood Energy Center (See Attachment A). The Applicant then submitted additional applications for three other HRSG units at the Cottonwood Energy Center on December 2, 2011 (See Attachments B, C and D). The Executive Director conducted a technical review of each of these four applications and on July 10, 2012 issued a negative use determination for the four HRSGs, stating that "[h]eat recovery steam generators and associated dedicated ancillary systems are used solely for production; therefore, are not eligible for a positive use determination." (See Attachments E, F, G and H).

The Executive Director has received approximately thirty-eight similar applications for HRSGs and associated equipment installed at combined-cycle electric generation facilities. The Executive Director issued 100 percent positive use determinations for twenty-six of the HRSG applications, leaving twelve applications pending. Six of the positive use determinations were appealed by local taxing units. The application at issue in this appeal was one of applications left pending by the Executive Director. On July 10, 2012, the Executive Director issued negative use determinations for all of the pending HRSG applications as well as the six applications that were appealed. The negative use determination was issued to Cottonwood despite its applications being substantively identical to the applications that received 100 percent positive use determinations.

III. Executive Director Failed to Comply with the Timeline in Texas Tax Code § 11.31(m) for Review of Application

In 2007, the Texas Legislature passed House Bill 3732, which amended Texas tax Code § 11.31. Specifically, House Bill 3732 added subsections (k) and (m). Subsections 11.31(k) and (m) direct that the Commission "shall determine" that "heat recovery steam generators" are "used wholly or partly" as qualifying pollution control property. There is no option under the statute for TCEQ to determine that equipment listed in 11.31(k) is not pollution control equipment. When the Legislature added subsection 11.31(k) in 2007, the purpose was to list equipment that was predetermined to be pollution control equipment and the only evaluation that needed to occur was to determine the percentage of the equipment that qualified as pollution control property. The question is not "whether the equipment is pollution control property", but instead should be "how much is pollution control property."

Furthermore, under Texas Tax Code § 11.31(m), the Executive Director "shall" review applications for equipment listed under § 11.31(k) and make a determination whether the equipment is wholly or partly pollution control property within 30 days. Furthermore, the statute states that the Executive Director "shall" take action on that determination and notify the

applicant and the appraisal district of the determination. Thus, the Executive Director must review and issue a use determination within 30 days for those applications which were submitted after House Bill 3732 became effective, and which include equipment that is listed under Texas tax Code § 11.31(k).

As indicated earlier, the Executive Director received one of Cottonwood's applications on July 5, 2011 and three subsequent applications on December 2, 2011. Despite the statute's clear requirement that the Executive Director act within 30 days on applications for equipment listed under § 11.31(k), in this instance, the Executive Director waited over six months for three of the applications and over a year on the first application after the applications were submitted to make a determination. By failing to act within 30 days, the Executive Director violated the statutory requirements of Texas Tax Code § 11.31(m) and effectively prevented the Applicant from receiving a tax exemption for which it met all of the statutory requirements.

IV. Texas Tax Code Requires Consistency

a) **The Executive Director's Use Determination Violates the Equal and Uniform Tax Mandate in Texas Constitution art. VIII, Section 1(a).**

In Texas, all taxation must be equal and uniform. Tex. Const. art. VIII, Section 1(a).⁶ The Texas Constitution's equal and uniform standard is strikingly incorporated into Section 11.31:

"(d) The commission shall adopt rules to implement this section. Rules adopted under this section must . . . (2) be sufficiently specific to ensure that determinations are equal and uniform . . ."

The constitutional mandate requires that a tax must treat taxpayers within the same class alike, and that any classifications must not be unreasonable, arbitrary, or capricious.⁷ The standard for determining equal and uniform taxation is a two-part test: "(1) whether the tax's classification is reasonable; and (2) whether, within the class, the legislation *operates equally*."⁸

A tax cannot satisfy the second prong of the equal and uniform standard unless the value of the tax base is ascertained by the same standard for all taxpayers within each class.⁹ ("The standard of uniformity prescribed by the Constitution being the value of property, taxation can not be in the same proportion to the value of the property, unless the value of all property is

⁶ The Article VIII, Section 1 of the Texas Constitution provides: "(a) Taxation shall be equal and uniform. (b) All real property and tangible personal property in this State, unless exempt as required or permitted by this Constitution, whether owned by natural persons or corporations, other than municipal, shall be taxed in proportion to its value, which shall be ascertained as may be provided by law."

⁷ *Hurt v. Cooper*, 110 S.W.2d 896, 901 (Tex. 1937).

⁸ *R.R. Comm'n of Tex. v. Channel Indus. Gas*, 775 S.W.2d 503, 507 (Tex. App.—Austin 1989, writ denied) (*emphasis added*).

⁹ *Lively v. Missouri, K. & T. Ry.*, 120 S.W. 852, 856 (Tex. 1909).

ascertained by the same standard."). In other words, when taxing value (i.e., the tax base), the Legislature may not say that the same economic value is more for some taxpayers than it is for other taxpayers.

In the instant case the Commission has granted 100 percent exemption for heat recovery steam generator systems that are substantively identical to Applicant's to approximately twenty other taxpayers. There has been no reasoned justification for the distinction based on any alleged differences in design or use or location of the equipment. The negative use determination made against Applicant is arbitrary in that there is no substantive distinction between the use or pollution reducing benefit of the HRSGs and the multiple other applicants whose systems have been granted 100% positive use determinations by the Commission. Such random enforcement causes 11.31 to operate unequally and in direct violation of the equal and uniform tax mandate.

b) The Commission Does Not Have Authority to Make a 100 Percent Negative Use Determination Under Section 11.31 of the Texas Tax Code

Subsections 11.31(k) and (m) direct that the Commission "shall determine" that "heat recovery steam generators" and "enhanced steam turbine systems" are "used wholly or partly" as qualifying pollution control property. Tex. Tax Code Section 11.31(k) & (m).

The Determination's negative use finding is facially and patently in violation of the Texas Tax Code.

The applications requested a 42.99 percent positive use determination that the Applicant's four HRSGs and associated dedicated ancillary systems were used in accordance with the following statutory standard set forth in Section 11.31¹⁰ of the Texas Tax Code:

"A person is entitled to an exemption from taxation of all or part of real and personal property that the person owns and that is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution."

In this section, "facility, device, or method for the control of air, water, or land pollution" means land that is acquired after January 1, 1994, or any structure, building, installation, excavation, machinery, equipment, or device, and any attachment or addition to or reconstruction, replacement, or improvement of that property, that is used, constructed, acquired, or installed *wholly or partly to*

¹⁰ Section 11.31 of the Texas Tax Code is authorized by Article VIII, Section 1-1 of the Texas Constitution, which provides: "(a) The legislature by general law may exempt from ad valorem taxation all or part of real and personal property used, constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution. (b) This section applies to real and personal property used as a facility, device, or method for the control of air, water, or land pollution that would otherwise be taxable for the first time on or after January 1, 1994. . . . (Added Nov. 2, 1993.)"

meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution."

The Application and Attachment I hereto establish the factual basis that the HRSGs qualify as a *device, or method for the control of pollution*.

Despite the clear factual record that HRSGs control pollution, the Executive Director's determination summarily finds, without explanation or substantive reasoning, that the HRSGs will be subject to a negative use determination because they are "used solely for production." The facts do not support the Determination, and there is no reasonable interpretation of Section 11.31 that would support the Determination.

Section 11.31 must be construed to give effect to the Legislature's intent.¹¹ An agency or court should first attempt to determine this intent from the actual language used by the Legislature. That is, an agency or court should first look to the plain, ordinary meaning of the statute's words.¹² Most importantly, "[i]f a statute is clear and unambiguous, [the courts] apply its words according to their common meaning without resort to rules of construction or extrinsic aids."¹³ This is true even when the agency charged with enforcing the statute seeks to apply a different construction.¹⁴

Further, Texas Attorney General Opinion JC-0372 (2001) has expressly opined to the Chair of the Texas Natural Resource Conservation Commission that "methods of production" can and do qualify as exempt pollution control property:

"Section 11.31 is *broadly written, and we believe its plain meaning is clear*. It embraces any property, real or personal, "that is used wholly or partly as a facility, device, or method for the control of air, water or land pollution. . . ." (*emphasis added*).

"Next, we consider whether section 11.31 excludes from its scope pollution-reducing *production* equipment. Significantly, the statute applies to property used "wholly or partly" for pollution control. See *id.* § 11.31(a). To qualify for the exemption, property must be used "wholly or partly" to meet or exceed environmental rules. See *id.* § 11.31(b). The term "wholly" clearly refers to property that is used only for pollution control, such as an add-on device. See

¹¹ See TEX. GOV'T CODE § 312.005; *Gilbert v. El Paso County Hosp. Dist.*, 38 S.W.3d 85 (Tex. 2001).

¹² See TEX. GOV'T CODE § 312.002(a); *Am. Home Prods. Corp. v. Clark*, 38 S.W.3d 92, 95-96 (Tex. 2000); *Crimmins v. Lowry*, 691 S.W.2d 582, 584 (Tex. 1985).

¹³ *In Re Nash*, 220 S.W.3d 914, 917 (Tex. 2007) (*emphasis added*).

¹⁴ See *Pretzer v. Motor Vehicle Bd.*, 138 S.W.3d 908, 914-15 (Tex. 2004); *Barchus v. State Farm Fire & Cas. Co.*, 167 S.W.3d 575, 578 (Tex. App.—Houston [14th Dist.] 2005, *pet denied*).

Merriam Webster's Collegiate Dictionary 1351 (10th ed. 1993) (defining "wholly" to mean "to the full or entire extent: ... to the exclusion of other things"). *The term "partly," however, embraces property that has only some pollution-control use.* See *id.* at 848 (defining "partly" to mean "in some measure or degree"). This broad formulation clearly embraces more than just add-on devices. *Furthermore, that statute clearly embraces not only "facilities" and "devices" but also "methods" that prevent, monitor, control, or reduce pollution. "Methods" is an extremely broad term that clearly embraces means of production designed, at least in part, to reduce pollution. See id. at 732 (defining "method" to include "a way, technique, or process of or for doing something").*

The HRSGs and associated dedicated ancillary systems are clearly used to comply with environmental laws and to control pollution and qualify for exemption under any valid rule or convention of statutory construction.

c) Failure To Comply With Commission Rules and the Texas Administrative Procedures Act.

The Commission cannot arbitrarily and capriciously create and enforce a new internally derived formula for heat recovery steam generators resulting in a drastic increase in the amount of property taxes assessed against Applicant, without, at the very least,¹⁵ adhering to the Texas Administrative Procedure Act (the "APA").

In brief, the APA requires state agencies to follow certain formal procedures before adopting and applying any "rule."¹⁶ Among other requirements, the APA requires state agencies to provide notice of any intent to promulgate a new rule, to publish the contemplated new rule, and to invite public comment with respect to the new rule.¹⁷ As the Texas Supreme Court explained: "In this way, the APA assures that the public and affected persons are heard on matters that affect them and receive notice of new rules."¹⁸

In addition to the APA requirements regarding the procedures that must be applied by state agencies when adopting and applying any "rule," Texas courts frequently require that an agency explain its reasoning when it "appears to the reviewing court that an agency has departed from its earlier administrative policy or there exists an apparent inconsistency in agency

¹⁵ And subject to the statutory arguments set forth below.

¹⁶ The APA defines the term "rule" to mean "a state agency statement of general applicability that... implements, interprets, or prescribes law or policy." Tex. Gov't Code § 2001.003(6).

¹⁷ See *Rodriguez v. Service Lloyds Ins. Co.*, 997 S.W.2d 248, 255 (Tex. 1999), *reh'g of cause overruled* (Sept. 9, 1999); see also Tex. Gov't Code § 2001.004(2) (additionally requiring agencies to "index, cross-index to statute, and make available for public inspection all rules and other written statements of policy or interpretations that are prepared, adopted, or used by the agency in discharging its functions").

¹⁸ *Id.*

determinations.” By issuing a 100 percent use determination and ultimately issuing a negative use determination, the TCEQ Executive Director's staff has departed from its earlier policy with regard to the evaluation of HRSGs. Furthermore, as explained earlier, TCEQ has issued 100 percent use determinations for other HRSGs, but issued negative use determinations for those applications that were appealed. In doing so, the TCEQ provided a one sentence explanation stating, “[HRSGs] are used solely for production and, therefore, are not eligible for a positive use determination.”

In this case the Commission clearly failed to follow the procedures of the Texas APA in reaching and applying its interpretation of Section 11.31(k) and (m) of the Texas Tax Code. Because the Commission failed to promulgate any rule or other formal statement expressing its new interpretation of Section 11.31(k) and (m) of the Texas Tax Code, its interpretation violates the APA and must be disregarded.

Further, the Determination appears to represent a sea change in the Commission's interpretation of Section 11.31 without any change to its Section 11.31 rules. The Commission's attempt to make a material change in policy retroactively without compliance with the APA is an invalid rule under the APA under the analysis in *El Paso Hospital District v. Texas Health and Human Services Commission*, 247 S.W.3d 709 (Tex. 2008).¹⁹

In *El Paso Hospital District*, the Texas Health and Human Services Commission (“HHSC”) adopted a regulation that established a “base year” for gathering claims data to be used in setting certain Medicaid hospital payment rates. Several hospitals sought a declaratory judgment that the cutoff rule was invalid under the APA, because HHSC did not adopt the rule in accordance with the APA. HHSC argued that the cutoff date was not a rule itself but rather an interpretation of a rule. The Texas Supreme Court held that the agency-applied cutoff date was an invalid rule because the agency did not follow the proper rule-making procedures contained in the APA. The Texas Supreme Court stated:

“HHSC argues that it complied with these statutes, and that the February 28 cutoff is not a rule itself, but rather its interpretation of the base-year rule. The Hospitals disagree, arguing the February 28 cutoff falls squarely within the APA's definition of a rule. We agree with the Hospitals. Under the APA, a rule: (1) is an agency statement of general applicability that either “implements, interprets, or prescribes law or policy” or describes [HHSC'S] “procedure or practice requirements;” (2) “includes the amendment or repeal of a prior rule;” and (3) “does not include a statement regarding only the internal management or organization of a state agency and not affecting private rights or procedures.” TEX. GOV'T CODE §2001.003(6)(A)-(C). *El Paso Hospital District* at 714.

¹⁹ *El Paso Hospital District v. Texas Health and Human Services Commission*, 247 S.W.3d 709 (Tex. 2008).

The Commission's new internal formula or reasoning that resulted in the Determination interprets or prescribes law or policy and amends or repeals positions previously applied by the Commission.

The violation of APA requirements is especially egregious in this case given that Section 11.31(l) of the Texas Tax code mandates that the TCEQ, "by rule shall update the list adopted under Subsection (k)" and then makes clear that "[a]n item may be removed from the list if the commission finds compelling evidence to support the conclusion that the time does not provide pollution control benefits." No APA rulemaking procedure has been followed to remove HRSGs or enhanced steam turbine systems from Section 11.31(k) and it is inconceivable how the TCEQ could find that "compelling evidence exists to support the conclusion that [HRSGs] do not provide pollution control benefits."

V. The Record Supports a Positive Use Determination and Clearly Contradicts a Negative Use Determination

a) Pollution Control Property

The only question before the Commission in considering this appeal is not whether an exact percentage is appropriate - the Commissioners need only evaluate whether *any* percentage above zero is appropriate. The Applicant's HRSGs can be defined as pollution control property based on the prevention of NOx emissions from natural gas use efficiencies. Under Tax Code § 11.31(a), "[a] person is entitled to an exemption from taxation of all or part of real and personal property that the person owns and that is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution." (emphasis added). The statute defines "a facility, device, or method for the control of air, water, or land pollution" as:

"[a] structure, building, installation excavation, machinery, equipment or device, and any attachment or addition to or reconstruction, replacement or improvement of that property, that is used, constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution."

Thus to qualify as pollution control property, the equipment or structure must control pollution and must meet or exceed applicable environmental protection regulations.

b) Method of Pollution Control

The use of otherwise wasted heat in the turbine exhaust gas within the HRSG results in higher plant thermal efficiency (net power output of the plant divided by the heating value of the fuel), compared to other power generation technologies. A plant incorporating a combined cycle

design emits less NO_x per pound of fossil fuel combusted due to the incorporation of both the Brayton and Rankine Thermodynamic cycles within plant design operations

Specifically, the equipment's increased thermal efficiency, as compared to a traditional steam boiler unit, reduces the fuel needs for the same power outputs, while emitting no additional air emissions. It is important to note that the lower fuel consumption associated with increased fuel conversion efficiency not only reduces NO_x emissions, but also reduces other emissions such as CO₂.

c) HRSGs are Used to Meet Certain New Source Performance Standards for Electric Generating Facilities

As cited in the Application, Title 40 of the Code of Federal Regulations ("CFR") subpart 60.44Da establishes New Source Performance Standards ("NSPS") for emissions of air contaminants for electric utility steam generating facilities.

Subpart § 60.40Da(e)(1) specifically lists HRSGs as subject to the NSPS requirements in 60.44Da, stating:

(i.e. heat recovery steam generators used with duct burners) associated with a stationary combustion turbine that are capable of combusting more than 73 MW (250MMBtu/H) heat input of fossil fuel are subject to this subpart.

Therefore, Applicant's four HRSGs are subject to the performance standards for air emissions as established within the Subpart Da. Specifically, they are subject to Section 60.44Da Standards for nitrogen oxides (NO_x) which states:

Except as provided in paragraph (h) of this section, on and after the date on which the initial performance test is completed or required to be completed...no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility for which construction...commenced before July 10, 1997 any gases that contain NO_x (expressed as NO₂) in excess of the applicable emissions limit in paragraphs (a)(1) and (2) of this section.

Furthermore, the Applicant's HRSGs were designed to meet the national primary and secondary ambient air quality standards ("NAAQS") for oxides of nitrogen (with nitrogen dioxide as the indicator) as set forth in 40 CFR § 50.11

Monitoring data from the Barney Davis Power Plant during both pre and post-repowering of that plant confirm the assumptions regarding the air emissions reductions per pound of fossil fuel use. This data is set out in Attachment "I."

VI. TCEQ's Role as a Technical Advisor to the State in Administering the Prop 2 Program Includes Factoring in Ever-Evolving Pollution Control Policies, not Tax Policy

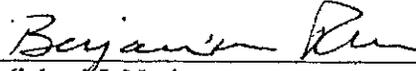
The clear structure and purpose of Section 11.31 of the Texas Tax Code has for nearly two decades been for the TCEQ to serve as the scientific and technical arbiter for determining the types of equipment that qualify as pollution control property. The TCEQ's role has always been to implement an efficient, consistent and scientifically accurate process to determine technologies that meet the statutory definition of pollution control property. Section 11.31 directs the TCEQ to determine whether particular items of property are used for pollution control based on its specialized knowledge and expertise.

As previously noted, the Executive Director had issued 100 percent positive use determinations for twenty-six of the HRSG applications, six of which were appealed by local taxing units. However, the application at issue in this appeal was one the Executive Director left pending for several years before making a final determination. On July 10, 2012, the Executive Director issued negative use determinations for all of the pending HRSG applications as well as the six applications that were appealed. The negative use determination was issued to Cottonwood despite its applications being substantively identical to the applications that received 100 percent positive use determinations.

Conclusion

As noted at the outset of this brief, the question before the Commission in considering this appeal is not whether an exact percentage is appropriate - the Commissioners need only evaluate whether *any* percentage above zero is appropriate. As set forth fully above, applicable law, prior precedent, and the record in this case demand that a positive use determination be issued. Thus, this appeal should be granted and this matter should be remanded back to the Executive Director for a determination that the property in question is eligible for a positive use determination.

Respectfully submitted,



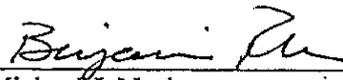
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ATTORNEYS FOR
Cottonwood Energy Company LP

CERTIFICATE OF SERVICE

I hereby certify that on the 31st day of July, 2012, a copy of the foregoing was provided by electronic mail or U.S. First Class Mail to the attached mailing list:

for 
Michael J. Nasi

Mailing List

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512/239-0600 FAX 512/239-0606

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Attachment A

DUFF & PHELPS

TCEQ Cashier's Office - MC-214
Building A
12100 Park 35 Circle
Austin, TX 78753

June 30, 2011

Re: Application for Use Determination for Air Pollution Control Property Located at
Cottonwood Energy Center in Newton County, Texas

Enclosed please find one application (the "Application") for property tax exemption for Air
Pollution Control Property located at Cottonwood Energy Center (the "Facility") in Newton County,
Texas. A copy of the Application has been provided for the appraisal district.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been
prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use
Determination for Pollution Control Property. The enclosed application is a Tier III Application.
Submission of this Application is required as a process step in the TCEQ's pollution control
certification process for tax exemption of certain assets used in pollution control capacities within
the Facility. As outlined by the application instructions, the fee for this Tier III Application is
\$2,500. Please find enclosed a check for the \$2,500 Tier III Application Fee.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier III	Unit 1 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	\$ 26,043,320

Please send one copy of the completed property tax exemption Use Determination to the
following address:

Mr. Greg Maxim
Duff & Phelps LLC
919 Congress Avenue, Suite 1450
Austin, TX 78701

Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, TX 78701

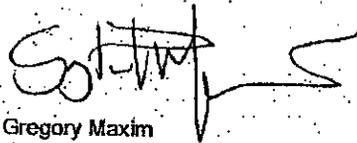
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gregory.maxim@duffandphelps.com
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TCEQ Cashier's Office
June 30, 2011
Page 2 of 2

If you have any questions regarding the Application or the information supplied within the Application, please contact me, Greg Maxim, Director, Duff & Phelps LLC, at (512) 671-5580 or by e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,



Gregory Maxim
Director
Specialty Tax

Enclosures

cc: Ms. Kathryn Tronsberg Macciocca (Duff & Phelps, LLC)

Texas Commission on Environmental Quality

Use Determination for Pollution Control Property Application

A person seeking a use determination must complete this application form. For assistance in completing the application form please refer to the *Instructions for Use Determination for Pollution Control Property Application Form TCEQ-00611*, as well as the rules governing the Tax Relief Program in Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Information relating to completing this application form is also available in the TCEQ regulatory guidance document, *Property-Tax Exemptions for Pollution Control Property, RG-46t*. For additional assistance, please call the Tax Relief Program at 512-239-4900.

You must supply information for each field of this application form unless otherwise noted.

Section 1. Eligibility

1. Is the property/equipment subject to any lease, lease-to-own agreement, or environmental incentive grant? Yes No
2. Is the property/equipment used solely to manufacture or produce a product or provide a service that prevents, monitors, controls, or reduces air, water or land pollution?
Yes No
3. Was the property/equipment acquired, constructed, installed, or replaced before January 1, 1994? Yes No

If the answer to any of these questions is 'Yes', then the property/equipment is not eligible for a tax exemption under this program.

Section 2. General Information

1. What is the type of ownership of this facility?
Corporation Partnership Utility
Sole Proprietor Limited Partner Other: **Limited Liability**
2. Size of Company: Number of Employees
1 to 99 500 to 999 2,000 to 4,999
100 to 499 1,000 to 1,999 5,000 or more
3. Business Description: (Briefly describe the type of business or activity at the facility)
Natural Gas-Fired Electric Power Generation.
4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility. **221122 - Electric Power Generation, fossil fuel**

Section 3. Type of Application and Fee

1. Select only one:

Tier I – Fee: \$150

Tier II – Fee: \$1,000

Tier III – Fee: \$2,500

2. Payment Information:

Check/Money Order/Electronic Payment Receipt Number:

Payment Type: Check

Payment Amount: \$2,500

Name on payment: Duff & Phelps

Total Amount: \$2,500

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

Section 4. Property/Equipment Owner Information

1. Company Name of Owner: Cottonwood Energy Company LP

2. Mailing Address: 976 County Road 4213

3. City, State, Zip: Deweyville, TX 77614

4. Customer Number (CN): CN602765687

5. Regulated Entity Number (RN): RN100226109

6. Is this property/equipment owned by the CN listed in Question 4? Yes No

If the answer is 'No,' please explain: N/A.

7. Is this property/equipment leased from a third party? Yes No

If the answer is 'Yes,' please explain: N/A.

8. Is this property/equipment operated by the RN listed in Question 5? Yes No

If the answer is 'No,' please explain: N/A.

Section 5. Name of Property/Equipment Operator (If different from Owner)

1. Company Name: N/A

2. Mailing Address: N/A

3. City, State, Zip: N/A

4. Customer Number (CN): N/A

5. Regulated Entity Number (RN): N/A

Section 6. Physical Location of Property/Equipment

1. Name of Facility or Unit where the property/equipment is physically located:

Cottonwood Energy Center

2. Type of Mfg. Process or Service: Natural Gas-Fired Electric Power Generation

3. Street Address: 976 County Road 4213
4. City, State, Zip: Deweyville, TX 77614

Section 7. Appraisal District with Taxing Authority

1. Appraisal District: Newton County
2. District Account Number(s): 9900015-0805153

Section 8. Contact Name

1. Company Name: Duff & Phelps, LLC
2. First Name of Contact: Greg
3. Last Name of Contact: Maxim
4. Salutation: Mr. Mrs. Ms. Dr. Other:
5. Title: Director
6. Mailing Address: 919 Congress Avenue, Suite 1450
7. City, State, Zip: Austin, TX 78701
8. Phone Number/Fax Number: (P) 512-671-5580; (F) 512-351-7911
9. Email Address: Gregory.maxim@duffandphelps.com
10. Tracking Number (optional): CC-2011-48

Section 9. Property/Equipment Description, Applicable Rule, and Environmental Benefit

For each piece, or each category, of pollution control property/equipment for which a use determination is being sought, answer the following questions.

Attach additional response sheets to the application for each piece of integrated pollution control property/equipment if a use determination is being sought for more than one (1) piece.

General Information

1. Name the property/equipment:
Unit 1 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems
2. Is the property/equipment used 100% as pollution control equipment? Yes No
If the answer is 'Yes,' explain how it was determined that the equipment is used 100% for pollution control: N/A. See Calculation of Percentage of pollution control Property in attached Cost Analysis Procedure ("CAP") Model.
3. Does the property/equipment generate a Marketable Product? Yes No
If the answer is 'Yes,' describe the marketable product: Electricity
4. What is the appropriate Tier I Table or Expedited Review List number? ERL #8
5. Is the property/equipment integrated pollution control equipment? Yes No

If the answer is 'No,' separate applications must be filed for each piece of property/equipment.

6. List applicable permit number(s) for the property/equipment; Title V Operating Permit O2338.

Incremental Cost Difference

7. Is the Tier I Table percentage based on the incremental cost difference? Yes No N/A

If the answer is 'Yes,' answer the following questions:

8. What is the cost of the new piece of property/equipment? N/A
9. What is the cost of the comparable property/equipment? N/A
10. How was the value of the comparable property/equipment calculated? N/A

Property/Equipment Description

11. Describe the property/equipment. (What is it? Where is it? How is it used?)

Background: Cottonwood Energy Center

The Cottonwood Energy Center (the "Facility") is a natural gas-fired, combined cycle power generating facility located in Deweyville, Newton County, Texas. Four GE 7-FA combustion turbines are routed to four Foster Wheeler heat recovery steam generators ("HRSGs"), which provide steam to four Alstom steam turbine-generator sets. The Facility began commercial operation in December 2003. It has a base load capacity of 1,260 MW. The Facility serves the SERC Reliability Corporation region.

Pollution Control Property Description - Cottonwood Unit 1 HRSG

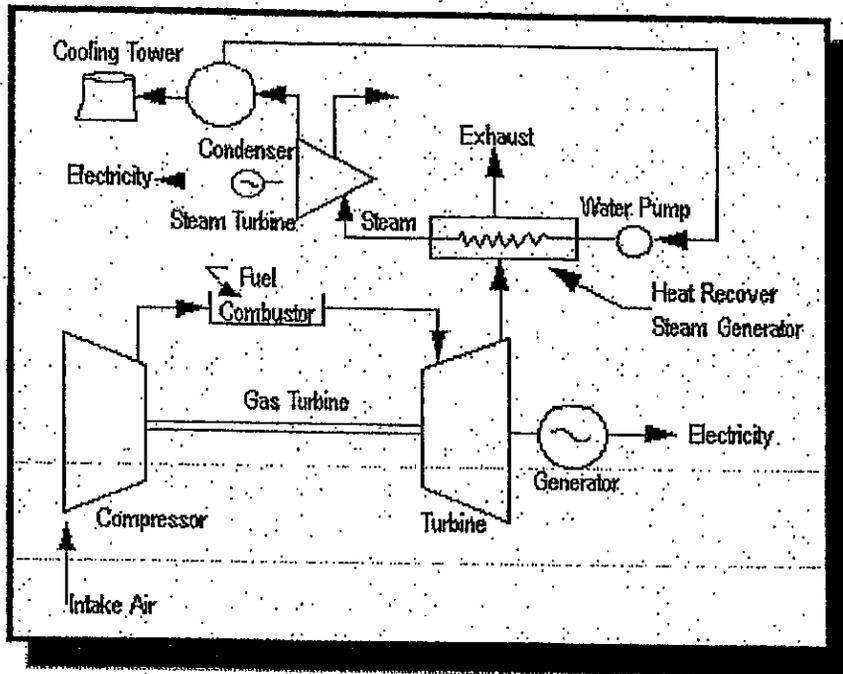
The pollution control property described in this Application is the Unit 1 HRSG and dedicated ancillary system (the "PC Property") installations.

Cottonwood Unit 1 HRSG

The Facility consists of a combined-cycle gas turbine power plant with four (4) gas Combustion Turbines ("CTs") each equipped with HRSGs and dedicated ancillary systems necessary to capture heat from the CTs' exhaust and convert it into electrical power. The Unit 1 HRSG captures and utilizes the waste heat of combustion from the Unit 1 CT exhaust gas and utilizes this waste heat to produce steam, which in turn powers a steam turbine-generator set to produce electric power at the Facility in addition to the electric power generated by the CT alone.

The Facility gains both production and pollution control benefits from the subject PC Property. First, the use of this waste heat of combustion by the Unit 1 HRSG creates a thermal efficiency benefit for the Facility. Specifically, the use of waste heat in the Unit 1 CT exhaust gas results in the conversion of approximately 50% of the chemical energy of the natural gas utilized at the Facility into electricity (HHV basis), a gain over the CT's alone's use of the fuel. Secondly, due to this efficiency gain, the Facility is able to generate fewer emissions (particularly NO_x emissions) than a traditional power generation facility utilizing a single thermodynamic cycle; and allowing the subject PC Property to appear on the Expedited Review List.

The Figure below is representative of a simplified combined-cycle plant process flow.



Please see the Cost Analysis Procedure ("CAP") Model attached for the calculation of the percentage of the subject pollution control property eligible for property tax exemption.

Applicable Rule

12. What adopted environmental rule or regulation is being met by the construction or installation of the property/equipment? The citation must be to the subsection level.

The PC Property was installed to meet the requirements of 40 CFR Part 60.44da(a) "Standards for nitrogen oxides ("NO_x") for Electric Utility Steam generating units for New Source Performance Standards ("NSPS")."

As well, the PC Property allows emissions to meet or exceed Best Available Control Technology emission limitations established in Federal Operating Permit #O2338. Per 30 Texas Administrative Code ("TAC") §122.143(4), the permit holder must comply with all terms and conditions codified in the permit and any provisional terms and conditions required to be included with the permit.

Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property/equipment?

The PC Property reduces the formation of and/or controls the emission of NO_x and other air emissions associated with the combustion of natural gas used in combined cycle power generation at the Facility.

Section 10. Process Flow Diagram (Optional)

Attach documentation to the application showing a Process Flow Diagram for the property/equipment.

Please see the simplified Process Flow Diagram above for a representation of the combined-cycle power plant.

Section 11. Partial-Use Percentage Calculation

This section must be completed for all Tier III applications. Attach documentation to the application showing the calculations used to determine the partial-use percentage for the property/equipment.

Please see the attachment to this application for the Cost Analysis Procedure ("CAP") Calculations.

Section 12. Property Categories and Costs

List each piece of property/equipment of integrated pollution control property/equipment for which a use determination is being sought.

Property/Equipment Name	Tier 1 Table No. or Expedited Review List No.	Use Percent	Estimated Dollar Value
Land:			
Property: Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	N/A	42.99%	\$ 60,584,465
Property:			
Property:			
Total:			\$ 26,043,320

Attach additional response sheets to the application if more than three (3) pieces.

NOTE: Separate applications must be filed for each piece of nonintegrated pollution control property/equipment.

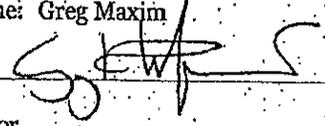
Section 13. Certification Signature

Must be signed by owner or designated representative.

By signing this application, I certify that I am duly authorized to submit this application form to the TCEQ and that the information supplied here is true and accurate to the best of my knowledge and belief.

Printed Name: Greg Maxim

Date: 6/30/2011

Signature: 

Title: Director

Company Name: Duff & Phelps, LLC

Under Texas Penal Code 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to \$2,000, or a prison term of two to 10 years and a fine of up to \$5,000.

Company: Coltwood Energy Company, LP
Plant: Coltwood Energy Center
Plant Summary: 1,140 MW Net Combined Cycle Gas Turbine (CCGT)
Plant Location: Newton County, Texas
Project: Net W Cost Analysis Procedure ("CWA") Calculations
Date: June 30, 2011
Rev: 7

Sources Required	
C	Calculated Assumption
DAP	DAP VEA Provided/Calculated
CW	Coltwood CWA Provided Data
HI	Heavy Industry Natural Gas Pricing
SO TAC	SO TAC Chapter 17

I. Assumptions

Plant Design Profile

Item	Value	Source
FC Property		
FC Property Capital Cost	\$ 80,584,486	CW
FC Property Capital Cost (2011\$)	\$ 708	D
FC Property Capacity (MW)	381	CW
FC Property Net Annual Generation Capacity (MW)	406,463,136	C
FC Property Net Annual Generation Capacity (MW)	406,463	C
Plant Capacity Factor	33.00%	CW
Plant Heat Rate (Btu/kWh)	7,503	CW
Plant Heat Rate (MMBtu/MMWh)	0.01	C
Capital Cost CM (CCCF)		
Compressible Technology Cost	\$	
Compressible Technology	\$	
Design Capacity Factor	0%	
Capacity (MW)		

Conversion Factors

Item	Value	Source
Heat/Year	8,760	
MMWh	1,000	
MWh	1,000	
MMBtu	3,600	
MWh	1,000,000	

Economic Assumptions

Item	Value	Source
Discount Rate	10.0%	DMP
Property	30	DM
FC Property Fixed O&M Cost (\$/MWh)	\$ 4.50	DM
Fuel Cost (\$/MMBtu)	\$ 2.80 ¹	HI
FC Property Variable Cost (\$/MWh)	\$ 0.46	CW
FC Property Variable Cost (\$/MMWh)	\$ 0.00	D
SOFC Electricity Pricing (¢/kWh)	\$ 30.00	HI
Interest Rate	10%	SO TAC

Levelized Cost of Energy ("LCOE") Model Outputs

Capital Recovery Factor ("CRF")	10.21%
LCOE (\$/MWh)	0.00078

¹ Not Limited Cost of Energy used in Procedure A

¹ These year average daily historical electricity rates by BE&G. Reliability Dependent.

Target: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center
 Plant Name: 1,286 MW Air Cooled Combined Cycle Power Plant (2008)
 Plant Location: Maricopa County, Arizona
 Project: The Unit Analysis Procedure ("UAP") Calculations
 Date: June 30, 2011
 Rev: 7

I. Unit Analysis Procedure ("UAP")

Formula:

$$\frac{(PCF \times CCH) - CCO - NPVMP}{CCN}$$

A. Definitions provided by TCEQ¹

1. Production Capacity Factor ("PCF")

The ratio of the capacity of the existing equipment or process to the capacity of the new equipment or process.

2. Capital Cost New ("CCN")

CCN is the estimated net capital cost of the new equipment or process.

3. Capital Cost Old ("CCO")

CCO is the cost of comparable equipment of a comparable process within the pollution control.

The standards for calculating CCO are:

1. If comparable equipment within the pollution control industry is on the market in the U.S.A., then use the average market price of the most recent generation of technology used.
2. If the conditions in variable 3.1 do not apply and the company is replacing an existing unit that already has received a positive unit determination, the company shall use the CCO from the application for the previous unit determination.
3. If the conditions in variable 3.1 and 3.2 do not apply and the company is replacing an existing unit, then the company shall consider the original cost of the unit to be depreciated by using a published industry specific standard. If the production capacity of the new equipment or process is lower than the production capacity of the old equipment or process CCO is divided by the PCF to adjust CCO to reflect the same capacity as CCN.
4. If the conditions in variables 3.1, 3.2 and 3.3 do not apply, and the company can obtain an estimate to manufacture the alternative equipment within the pollution control industry, then an average adjusted cost to manufacture the unit shall be used. The comparable unit must be the most recent generation of technology. A copy of the estimate must be provided with the worksheet including the specific name of the manufacturer.

4. Marketable Product ("MP")

Anything produced or recovered using pollution control property that is sold as a product, by accumulation for later use, or is used as raw material in a manufacturing process. Marketable product includes, but is not limited to, anything recovered or produced using the pollution control property used, if sold, accumulated for later use, or used in a manufacturing process (including the direct facility). Marketable product does not include any unmarketable waste or emission byproducts that result from the use of the pollution control property.

5. Marketable Product Value ("MPV")

The marketable product value may be calculated in one of two ways:

1. The total value of the product produced by the equipment for one year periods. Typically, the most recent three-year average price of the material is used as the market value to be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average and explain how the figures were determined.
2. If the material is used as an intermediate material in a production process, then the value assigned to the material for internal accounting purposes may be used. If the responsibility of the applicant is shown that the internally assigned value is comparable to the value assigned by other similar producers of the product.

6. Direct Costs of Production ("DCP")

The costs directly attributed to the production of the product, including raw materials, storage, transportation, and personnel, but excluding non-made costs, such as overhead and depreciation.

7. In Factor

The estimated useful life in years of the equipment that is being evaluated for a unit determination.

8. If Factor

Year One.

9. Interest Rate

10%.

10. Title 31, Texas Administrative Code, Chapter 17

II. CAP Formulas provided by TCEQ

Fixed Unit Determination = $\frac{(PCF \times CCH) - CCO - NPVMP}{CCN}$

Where:

Production Capacity Factor ("PCF") = $\frac{\text{Production Capacity of Existing Equipment at the Site}}{\text{Production Capacity of New Equipment or Process}}$

And where:

NPVMP = $\sum_{t=1}^n \frac{MPV - PC}{(1 + Interest Rate)^t}$

C. CAP Formulas for PC Property

Marketable Product Value ("MPV") = Electricity Value (\$/MWh) x MWh per Year

Direct Cost of Production ("DCP") = LCOE x MWh per year

LCOE = $\frac{\left(\frac{\text{Capital Cost}}{\text{Hours per Year}} \times \text{Capital Recovery Factor} \right) + \frac{\text{Fixed O&M Costs}}{\text{Capacity Factor}}}{\left(\text{Fuel Cost} \times \text{Heat Rate} \right)}$

Taxpayer: Coltonwood Energy Company, LP
 Plant: Coltonwood Energy Center
 Plant Summary: 1,280 MW Net Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: The IR Cost Analysis Procedure ("CAP") Calculation
 Date: June 30, 2011
 Rev: 7

III. Cost Analysis Procedure ("CAP") Calculations for Coltonwood Unit 1 HRSG

Formula:
$$\frac{(PCF \times CCN) - COG - NPVMP}{CCN}$$

A. Marketable Product Value ("MPV")

$$\begin{aligned} \text{Electricity Price} & \frac{\$}{\text{MWh}} \times \frac{\text{Plant MWh}}{\text{Year}} = (\$) \text{ MPV} \\ \$35.22 & \frac{\$}{\text{MWh}} \times 806,403 \frac{\text{MWh}}{\text{Year}} = \$28,657,781 \end{aligned}$$

B. Production Cost ("PC")

$$\begin{aligned} \text{Levelized Cost of Energy ("LOEC")} & \frac{\$}{\text{MWh}} \times \frac{\text{Plant MWh}}{\text{Year}} = (\$) \text{ PC} \\ 30.0308 & \frac{\$}{\text{MWh}} \times 808,493,135 \frac{\text{MWh}}{\text{Year}} = \$24,803,682 \end{aligned}$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) \text{ MPV} - (\$) \text{ PC}}{(1 + \text{Interest Rate})^t} = \text{NPVMP } (\$)$$

$$\sum_{t=1}^n \frac{\$28,657,781 - \$24,803,682}{(1 + 10\%)^t} = \$34,541,145 = \text{NPVMP}$$

* If MP is < 0, then MP = 0.

Project: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center
 Plant Summary: 1,250 MW 491 Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier II Cost Analysis Procedure ("CAP") Calculations
 Date: June 30, 2011
 Rev: 7

C. Production Capacity Factor ("PCF")

$$\frac{\text{Production Capacity of Existing Equipment at Process} - \text{Production Capacity of New Equipment or Process}}{292 \text{ MW} \times 31.65\%} = \text{PCF}$$

PCF = 1.000

D. Capital Cost New ("CCN")
PC Property

CCN = \$60,684,465

E. Capital Cost Old ("CCO")
Comparable Technology

CCO = \$0

Partial Use Determination Calculation

(PCF x CCN)	CCO	MP	Partial Use Determination %
1,000 x \$60,684,465	\$0	\$34,541,185	
	\$60,684,465		

YCQ Use Determination Application Section 12, use:
 Use Percent: 42.80%
 Estimated Dollar Value: \$ 80,684,465

Eligible FFBG Costs
 (Partial Use Determination % x PC Property Cost) = \$ 26,043,320

ATTACHMENT A

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260-MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 30, 2011
Rev: 7

Levelized Cost of Energy ("LCOE") Model^[1]

Formulas

$$\text{Capital Recovery Factor ("CRF")} = \frac{i \times (1 + i)^n}{(1 + i)^n - 1}$$

$$\text{LCOE} = \left(\frac{\text{Capital Cost} \times \text{CRF}}{\text{Hours per Year} \times \text{Capacity Factor}} \right) + \frac{\text{Fixed O\&M Costs}}{\text{Capacity Factor}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$$

Calculations

Capital Recovery Factor	10.23%
LCOE (\$/kWh)	\$ 0.03079

^[1] http://www.nrel.gov/analysis/lcoe_documentation.html

Note: The Levelized Cost of Energy is a calculation developed by the United States Department of Energy's National Renewable Energy Lab to determine the cost of generating energy (electricity) using the design or performance criteria for a specific power generation unit. The website above gives a more detailed description of the model and its development.

ATTACHMENT B

Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$3,664,099	1	1.10	\$ 3,330,999
\$3,664,099	2	1.21	\$ 3,028,181
\$3,664,099	3	1.331	\$ 2,752,892
\$3,664,099	4	1.4641	\$ 2,502,829
\$3,664,099	5	1.61051	\$ 2,275,117
\$3,664,099	6	1.771581	\$ 2,068,288
\$3,664,099	7	1.9487171	\$ 1,880,282
\$3,664,099	8	2.14358881	\$ 1,709,329
\$3,664,099	9	2.357947891	\$ 1,553,936
\$3,664,099	10	2.59374246	\$ 1,412,869
\$3,664,099	11	2.853116708	\$ 1,284,244
\$3,664,099	12	3.138428377	\$ 1,167,496
\$3,664,099	13	3.452271214	\$ 1,061,359
\$3,664,099	14	3.797498336	\$ 964,872
\$3,664,099	15	4.177248169	\$ 877,156
\$3,664,099	16	4.594972988	\$ 797,415
\$3,664,099	17	5.054470285	\$ 724,822
\$3,664,099	18	5.559917313	\$ 659,020
\$3,664,099	19	6.115909045	\$ 599,109
\$3,664,099	20	6.727499949	\$ 544,645
\$3,664,099	21	7.400249944	\$ 495,132
\$3,664,099	22	8.140274939	\$ 450,120
\$3,664,099	23	8.954302433	\$ 409,200
\$3,664,099	24	9.849732676	\$ 372,000
\$3,664,099	25	10.83470584	\$ 338,182
\$3,664,099	26	11.91817654	\$ 307,438
\$3,664,099	27	13.10999419	\$ 279,489
\$3,664,099	28	14.42099381	\$ 254,081
\$3,664,099	29	15.86309287	\$ 230,983
\$3,664,099	30	17.44940227	\$ 209,984
NPVMP:			\$ 34,541,146

Attachment B

TCEQ Cashier's Office - MC-214
Building A
12100 Park 35 Circle
Austin, TX 78753

December 2, 2011

Re: Application for Use Determination for Air Pollution Control Property Located at
Cottonwood Energy Center in Newton County, Texas

Enclosed please find one application (the "Application") for property tax exemption for Air Pollution Control Property located at Cottonwood Energy Center (the "Facility") in Newton County, Texas. A copy of the Application has been provided for the appraisal district.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier III Application. Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier III Application is \$2,500. Please find enclosed a check for the \$2,500 Tier III Application Fee.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier III	Unit 2 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	\$ 26,043,320

Please send one copy of the completed property tax exemption Use Determination to the following address:

Mr. Greg Maxim
Duff & Phelps LLC
919 Congress Avenue, Suite 1450
Austin, TX 78701

TCEQ Cashier's Office
June 30, 2011
Page 2 of 2

If you have any questions regarding the Application or the information supplied within the Application, please contact me, Greg Maxim, Director, Duff & Phelps LLC, at (512) 671-5580 or by e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Greg Maxim', with a horizontal line extending to the right.

Gregory Maxim
Director
Specialty Tax

Enclosures

cc: Ms. Kathryn Tronsberg Macciocca (Duff & Phelps, LLC)

Texas Commission on Environmental Quality

Use Determination for Pollution Control Property Application

A person seeking a use determination must complete this application form. For assistance in completing the application form please refer to the *Instructions for Use Determination for Pollution Control Property Application Form TCEQ-00611*, as well as the rules governing the Tax Relief Program in Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Information relating to completing this application form is also available in the TCEQ regulatory guidance document, *Property-Tax Exemptions for Pollution Control Property, RG-461*. For additional assistance, please call the Tax Relief Program at 512-239-4900.

You must supply information for each field of this application form unless otherwise noted.

Section 1. Eligibility

1. Is the property/equipment subject to any lease, lease-to-own agreement, or environmental incentive grant? Yes No
2. Is the property/equipment used solely to manufacture or produce a product or provide a service that prevents, monitors, controls, or reduces air, water or land pollution?
Yes No
3. Was the property/equipment acquired, constructed, installed, or replaced before January 1, 1994? Yes No

If the answer to any of these questions is 'Yes', then the property/equipment is not eligible for a tax exemption under this program.

Section 2. General Information

1. What is the type of ownership of this facility?
Corporation Partnership Utility
Sole Proprietor Limited Partner Other: **Limited Liability**
2. Size of Company: Number of Employees
1 to 99 500 to 999 2,000 to 4,999
100 to 499 1,000 to 1,999 5,000 or more
3. Business Description: (Briefly describe the type of business or activity at the facility)
Natural Gas-Fired Electric Power Generation
4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility. **221122 - Electric Power Generation, fossil fuel**

Section 3. Type of Application and Fee

1. Select only one:

Tier I – Fee: \$150

Tier II – Fee: \$1,000

Tier III – Fee: \$2,500

2. Payment Information:

Check/Money Order/Electronic Payment Receipt Number:

Payment Type: Check 5119

Payment Amount: \$2,500

Name on payment: Duff & Phelps

Total Amount: \$2,500

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

Section 4. Property/Equipment Owner Information

1. Company Name of Owner: Cottonwood Energy Company LP

2. Mailing Address: 976 County Road 4213

3. City, State, Zip: Deweyville, TX 77614

4. Customer Number (CN): CN602765687

5. Regulated Entity Number (RN): RN100226109

6. Is this property/equipment owned by the CN listed in Question 4? Yes No

If the answer is 'No,' please explain: N/A

7. Is this property/equipment leased from a third party? Yes No

If the answer is 'Yes,' please explain: N/A

8. Is this property/equipment operated by the RN listed in Question 5? Yes No

If the answer is 'No,' please explain: N/A

Section 5. Name of Property/Equipment Operator (If different from Owner)

1. Company Name: N/A

2. Mailing Address: N/A

3. City, State, Zip: N/A

4. Customer Number (CN): N/A

5. Regulated Entity Number (RN): N/A

Section 6. Physical Location of Property/Equipment

1. Name of Facility or Unit where the property/equipment is physically located:

Cottonwood Energy Center

2. Type of Mfg. Process or Service: **Natural Gas-Fired Electric Power Generation**

3. Street Address: 976 County Road 4213
4. City, State, Zip: Deweyville, TX 77614

Section 7. Appraisal District with Taxing Authority

1. Appraisal District: Newton County
2. District Account Number(s): 9900015-0805153

Section 8. Contact Name

1. Company Name: Duff & Phelps, LLC
2. First Name of Contact: Greg
3. Last Name of Contact: Maxim
4. Salutation: Mr. Mrs. Ms. Dr. Other:
5. Title: Director
6. Mailing Address: 919 Congress Avenue, Suite 1450
7. City, State, Zip: Austin, TX 78701
8. Phone Number/Fax Number: (P) 512-671-5580; (F) 512-351-7911
9. Email Address: Gregory.maxim@duffandphelps.com
10. Tracking Number (optional): CC-2011-48
2012-02

Section 9. Property/Equipment Description, Applicable Rule, and Environmental Benefit

For each piece, or each category, of pollution control property/equipment for which a use determination is being sought, answer the following questions.

Attach additional response sheets to the application for each piece of integrated pollution control property/equipment if a use determination is being sought for more than one (1) piece.

General Information

1. Name the property/equipment:
Unit 1 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems
2. Is the property/equipment used 100% as pollution control equipment? Yes No
If the answer is 'Yes,' explain how it was determined that the equipment is used 100% for pollution control: N/A. See Calculation of Percentage of Pollution Control Property in attached Cost Analysis Procedure ("CAP") Model.
3. Does the property/equipment generate a Marketable Product? Yes No
If the answer is 'Yes,' describe the marketable product: Electricity
4. What is the appropriate Tier I Table or Expedited Review List number? ERL #8
5. Is the property/equipment integrated pollution control equipment? Yes No

If the answer is 'No,' separate applications must be filed for each piece of property/equipment.

6. List applicable permit number(s) for the property/equipment: Title V Operating Permit O2338

Incremental Cost Difference

7. Is the Tier I Table percentage based on the incremental cost difference? Yes No N/A

If the answer is 'Yes,' answer the following questions:

8. What is the cost of the new piece of property/equipment? N/A
9. What is the cost of the comparable property/equipment? N/A
10. How was the value of the comparable property/equipment calculated? N/A

Property/Equipment Description

11. Describe the property/equipment. (What is it? Where is it? How is it used?)

Background: Cottonwood Energy Center

The Cottonwood Energy Center (the "Facility") is a natural gas-fired, combined cycle power generating facility located in Deweyville, Newton County, Texas. Four GE 7-FA combustion turbines are routed to four Foster Wheeler heat recovery steam generators ("HRSGs"), which provide steam to four Alstom steam turbine-generator sets. The Facility began commercial operation in December 2003. It has a base load capacity of 1,260 MW. The Facility serves the SERC Reliability Corporation region.

Pollution Control Property Description – Cottonwood Unit 2 HRSG

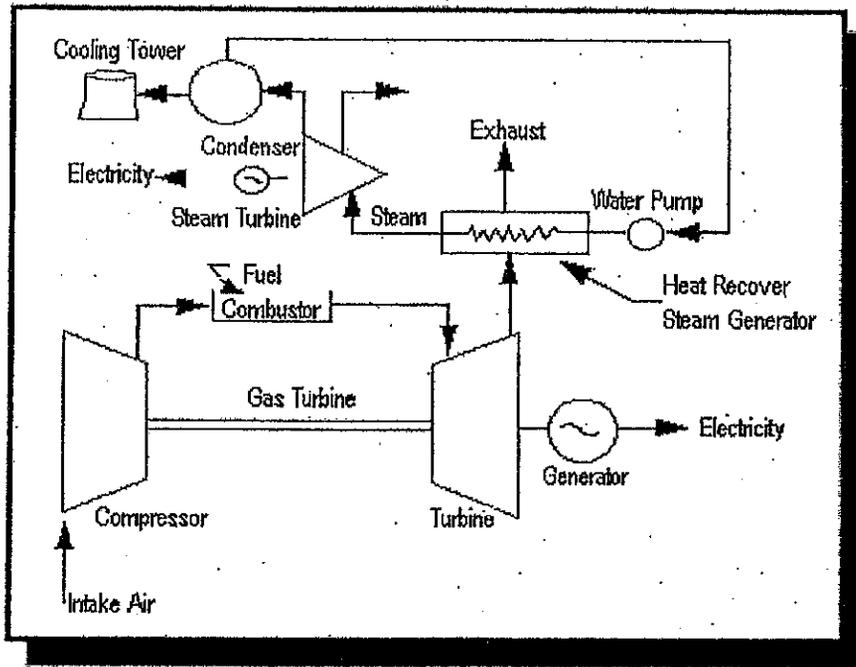
The pollution control property described in this Application is the Unit 2 HRSG and dedicated ancillary system (the "PC Property") installations.

Cottonwood Unit 2 HRSG

The Facility consists of a combined-cycle gas turbine power plant with four (4) gas Combustion Turbines ("CTs") each equipped with HRSGs and dedicated ancillary systems necessary to capture heat from the CTs' exhaust and convert it into electrical power. The Unit 2 HRSG captures the waste heat of combustion from the Unit 2 CT exhaust gas and utilizes this waste heat to produce steam, which in turn powers a steam turbine-generator set to produce electric power at the Facility in addition to the electric power generated by the CT alone.

The Facility gains both production and pollution control benefits from the subject PC Property. First, the use of this waste heat of combustion by the Unit 2 HRSG creates a thermal efficiency benefit for the Facility. Specifically, the use of waste heat in the Unit 2 CT exhaust gas results in the conversion of approximately 50% of the chemical energy of the natural gas utilized at the Facility into electricity (HHV basis), a gain over the use of the fuel by these CTs alone. Secondly, due to this efficiency gain, the Facility is able to generate fewer emissions (particularly NO_x emissions) than a traditional power generation facility utilizing a single thermodynamic cycle; thus supporting the subject PC Property's inclusion on the Expedited Review List.

The Figure below is representative of a simplified combined-cycle plant process flow.



Please see the Cost Analysis Procedure ("CAP") Model attached for the calculation of the percentage of the subject pollution control property eligible for property tax exemption.

Applicable Rule

12. What adopted environmental rule or regulation is being met by the construction or installation of the property/equipment? The citation must be to the subsection level.

The PC Property was installed to meet the requirements of 40 CFR Part 60.44da(a) "Standards for nitrogen oxides ("NOx") for Electric Utility Steam generating units for New Source Performance Standards ("NSPS").

As well, the PC Property allows emissions to meet or exceed Best Available Control Technology emission limitations established in Federal Operating Permit #O2338. Per 30 Texas Administrative Code ("TAC") §122.143(4), the permit holder must comply with all terms and conditions codified in the permit and any provisional terms and conditions required to be included with the permit.

Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property/equipment?

The PC Property reduces the formation of and/or controls the emission of NO_x and other air emissions associated with the combustion of natural gas used in combined cycle power generation at the Facility.

Section 10. Process Flow Diagram (Optional)

Attach documentation to the application showing a Process Flow Diagram for the property/equipment.

Please see the simplified Process Flow Diagram above for a representation of the combined-cycle power plant.

Section 11. Partial-Use Percentage Calculation

This section must be completed for all Tier III applications. Attach documentation to the application showing the calculations used to determine the partial-use percentage for the property/equipment.

Please see the attachment to this application for the Cost Analysis Procedure ("CAP") Calculations.

Section 12. Property Categories and Costs

List each piece of property/equipment of integrated pollution control property/equipment for which a use determination is being sought.

Property/Equipment Name	Tier 1 Table No. or Expedited Review List No.	Use Percent	Estimated Dollar Value
Land:			
Property: Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	N/A	42.99%	\$ 60,584,465
Property:			
Property:			
Total:			\$ 26,043,320

Attach additional response sheets to the application if more than three (3) pieces.

NOTE: Separate applications must be filed for each piece of nonintegrated pollution control property/equipment.

Section 13. Certification Signature

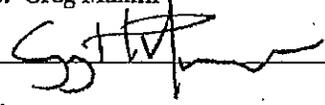
Must be signed by owner or designated representative.

By signing this application, I certify that I am duly authorized to submit this application form to the TCEQ and that the information supplied here is true and accurate to the best of my knowledge and belief.

Printed Name: Greg Maxim

Date: 12/2/2011

Signature: _____



Title: Director

Company Name: Duff & Phelps, LLC

Under Texas Penal Code 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to \$2,000, or a prison term of two to 10 years and a fine of up to \$5,000.

Topic: Cottonwood Energy Company, LP
 Plant: 1,200 MW Gas Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedure ("CAP") Calculations
 Date: December 2, 2011
 Rev: 0

Source Legend

C	Company Assumptions
DLP	DLP VAS Standard/Estimates
CH	Cottonwood Client-Provided Data
HH	Henry Hub Natural Gas Pricing
30 TAG	30 TAG Chapter 17

1. Assumptions

Plant Design Profile

PC Property		Source
PC Property Capital Cost (\$MM)	\$ 60,564,465	CW
PC Property Capacity (MW)	208	C
PC Property Net Annual Generation Capacity (MW)	302,463,103	C
Plant Capacity Factor	31.04%	CH
Plant Heat Rate (Btu/kWh)	7,602	CW
Plant Heat Rate (MWh/1,000kWh)	0.21	C

Capital Cost Old ("COO")	\$
Comparable Technology Cost	\$
Design Capacity Factor	0%
Capacity ("MW")	1

Conversion Factors

Hours/Year	8,760
MWh/MW	1,000
\$/kg	2.20
\$/year	3,650
\$/MWh	1,000,000

Economic Assumptions

Discount Rate	10.0%	Source
Period	40	DLP
PC Property Fixed O&M Cost (\$/MWh-yr)	\$ 4.55	CW
Fuel Cost (\$/MMBTU)	\$ 2.60	HH
PC Property Variable Cost (\$/MWh)	\$ 0.00	CW
PC Property Variable Cost (\$/MWh)	\$ 0.00	C
SERC Electricity Pricing (\$/MWh)	\$ 35.50	30 TAG
Interest Rate	10%	30 TAG

Levelized Cost of Energy ("LCOE") Model Outputs

Capital Recovery Factor ("CRF")	\$	10.23%
LCOE (\$/MWh)	\$	0.03078

*See Appendix C for Energy Model to Attachment A.

RI Three-year average daily historical electricity rates for SERC Reliability Corporation.

Transmitter: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,200 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

II. Cost Analysis Procedures ("CAP")

Formula:
$$\frac{[(PCF \times CCO) - CCO - MP]}{CCN}$$

A. Definitions (provided by TCEQ) (1)

1. **Production Capacity Factor (PCF)**
The ratio of the capacity of the existing equipment or process to the capacity of the new equipment or process.

2. **Capital Cost New (CCN)**
CCN is the estimated total capital cost of the new equipment or process.

3. **Capital Cost Old (CCO)**
CCO is the cost of comparable equipment or a comparable process without the pollution control.

The standards for calculating CCO are:

- 3.1 If comparable equipment without the pollution control feature is on the market in the U.S., then use the average market price of the most recent generation of technology must be used.
- 3.2 If the conditions in variable 3.1 do not apply and the company is replacing an existing unit that already has received a positive use determination, the company shall use the CCO from the application for the previous use determination.
- 3.3 If the conditions in variable 3.1 and 3.2 do not apply and the company is replacing an existing unit, then the company shall convert the original cost of the unit to today's dollars by using a published industry specific standard. If the production capacity of the new equipment or process is lower than the production capacity of the old equipment or process CCO is divided by the PCF to adjust CCO to reflect the same capacity as CCN.
- 3.4 If the conditions in variables 3.1, 3.2 and 3.3 do not apply, and the company can obtain an estimate to manufacture the alternative equipment without the pollution control feature, then an average estimated cost to manufacture the unit must be used. The comparable unit must be the most recent generation of technology. A copy of the estimate must be provided with the worksheet including the specific source of the information.

4. **Marketable Product ("MP")**
Anything produced or recovered using pollution control property that's sold as a product. It accumulated for later use, or is used as raw material in a new activity. The product includes, but is not limited to, anything recovered or produced using the pollution control property sold, traded, accumulated for later use, or used in manufacturing process (including at a different facility). Marketable product does not include any emission credits or emission allowances that result from installation of the pollution control property.

5. **Marketable Product Value ("MPV")**
The marketable product value may be calculated in one of two ways:
1. The retail value of the product produced by the equipment for one year periods. Typically, the most recent three-year average price of the material as sold on the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average and explain how the figures were determined.

2. If the material is used as an intermediate material in a production process, then the value assigned to the material for internal accounting purposes may be used. It is the responsibility of the applicant to show that the internally assigned value is comparable to the value assigned by other similar producers of the product.

6. **Direct Costs of Production ("DOP")**
The costs directly attributed to the production of the product, including raw materials, storage, transportation, and personnel, but excluding non-cash costs, such as overhead and depreciation.

7. **g Factor**
The estimated useful life in years of the equipment that is being evaluated for a use determination.

8. **f Factor**
Year One.

9. **Interest Rate**
10%.

10. Title 30, Texas Administrative Code, Chapter 17

B. CAP Formulas (provided by TCEQ)

Partial Use Determination =
$$\frac{[(PCF \times CCO) - CCO - NPV]}{CCN}$$

Where:
Production Capacity Factor (PCF) =
$$\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}}$$

And where:
NPV =
$$\sum_{t=1}^n \frac{MPV_t}{(1 + \text{Interest Rate})^t}$$

C. CAP Formulas for PC Property

Marketable Product Value ("MPV") = Electricity Price (\$/MWh) x MWh per Year

Direct Cost of Production ("DOP") = LCOE x KWh per year

LCOE =
$$\frac{\left(\frac{\text{Capital Cost}}{\text{Hours per Year}} \times \text{Capital Recovery Factor} \right) + \left(\frac{\text{Fixed O\&M Costs}}{\text{Capacity}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right) \right)}{\text{Factor}}$$

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

III. Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 2 HRSG

Formula:
$$\frac{[PCF \times CCN - CCO - NPVMP]}{CCN}$$

A. Marketable Product Value ("MPV")

$$\text{Electricity Price} \left(\frac{\$}{\text{MWh}} \right) \times \text{Plant MWh/Year} = (\$) \text{ MPV}$$

$$535.32 \left(\frac{\$}{\text{MWh}} \right) \times 808,493 \left(\frac{\text{MWh}}{\text{Year}} \right) = \$28,557,791$$

B. Production Cost ("PC")

$$\text{Levelized Cost of Energy ("LCOE")} \left(\frac{\$}{\text{MWh}} \right) \times \text{Plant MWh/Year} = (\$) \text{ PC}$$

$$30.0308 \left(\frac{\$}{\text{MWh}} \right) \times 808,493 \left(\frac{\text{MWh}}{\text{Year}} \right) = \$24,090,662$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) \text{ MPV}}{(1 + \text{Interest Rate})^t} - (\$) \text{ PC} = \text{NPVMP } (\$)$$

$$\sum_{t=1}^n \frac{28,557,791}{(1 + 10\%)^t} - 24,090,662 = \$4,541,145$$

* If MP is < 0, then NP = 0.

Taxpayer: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center
 Plant Summary: 1,200 MW sikt Conventional Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedures ("CAP") Calculations
 Date: December 2, 2011
 Rev: 0

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process
 Production Capacity of New Equipment or Process

0
 282 MW = 31.65%

PCF
 1,000

D. Capital Cost New ("CCN")
 PC Property

\$60,584,465

E. Capital Cost Old ("CCO")
 Comparable Technology

\$0

Partial Use Determination Calculation

(PCF x CCN) = CCN
 1,000 x \$60,584,465 = \$60,584,465
 MP = \$34,541,145
 Partial Use Determination % = 26.04,320

CCO Use Determination Application Section 12 Use
 Use Percent 42.89%
 Estimated Dollar Value \$ 60,584,465

Eligible HRS Costs
 (Partial Use Determination % x PC Property Cost)

ATTACHMENT B

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

Levelized Cost of Energy ("LCOE") Model^[1]

Formulas

$$\text{Capital Recovery Factor ("CRF")} = \frac{i \times (1+i)^n}{(1+i)^n - 1}$$

$$\text{LCOE} = \left(\frac{\text{Capital Cost} \times \text{CRF}}{\text{Hours per Year} \times \text{Capacity Factor}} + \frac{\text{Fixed O\&M Costs}}{\text{Capacity Factor}} \right) + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$$

Calculations

Capital Recovery Factor 10.23%

LCOE (\$/kWh) \$ 0.03079

^[1] http://www.nrel.gov/analysis/lcoe_documentation.html

Note: The Levelized Cost of Energy is a calculation developed by the United States Department of Energy's National Renewable Energy Lab to determine the cost of generating energy (electricity) using the design or performance criteria for a specific power generation unit. The website above gives a more detailed description of the model and its development.

ATTACHMENT B

Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$3,664,099	1	1.10	\$ 3,330,999
\$3,664,099	2	1.21	\$ 3,028,181
\$3,664,099	3	1.331	\$ 2,752,892
\$3,664,099	4	1.4641	\$ 2,502,629
\$3,664,099	5	1.61051	\$ 2,275,117
\$3,664,099	6	1.771561	\$ 2,068,288
\$3,664,099	7	1.9487171	\$ 1,880,262
\$3,664,099	8	2.14358881	\$ 1,709,329
\$3,664,099	9	2.357947691	\$ 1,553,936
\$3,664,099	10	2.59374246	\$ 1,412,669
\$3,664,099	11	2.853116706	\$ 1,284,244
\$3,664,099	12	3.138428377	\$ 1,167,495
\$3,664,099	13	3.452271214	\$ 1,061,359
\$3,664,099	14	3.797498336	\$ 964,872
\$3,664,099	15	4.177248169	\$ 877,156
\$3,664,099	16	4.594972986	\$ 797,415
\$3,664,099	17	5.054470285	\$ 724,922
\$3,664,099	18	5.559917313	\$ 659,020
\$3,664,099	19	6.115909045	\$ 599,109
\$3,664,099	20	6.727499949	\$ 544,645
\$3,664,099	21	7.400249944	\$ 495,132
\$3,664,099	22	8.140274939	\$ 450,120
\$3,664,099	23	8.954302433	\$ 409,200
\$3,664,099	24	9.849732676	\$ 372,000
\$3,664,099	25	10.83470594	\$ 338,182
\$3,664,099	26	11.91817654	\$ 307,438
\$3,664,099	27	13.10999419	\$ 279,489
\$3,664,099	28	14.42099361	\$ 254,081
\$3,664,099	29	15.86309297	\$ 230,983
\$3,664,099	30	17.44940227	\$ 209,984
			\$ 34,541,145

NPVMP:

5117

DUFF & PHELPS LLC
ACCOUNTS PAYABLE
300 HEADQUARTERS BLAZA
EAST TOWER, 12TH FLOOR
MORRISTOWN, NJ 07960

2-377104
GTSS

DATE Nov 29 2011

\$ 2,500.00

DOLLARS

PAY TO THE ORDER OF TCEQ

Two thousand five hundred

Bank of America



Check # 5117

[Signature]

FOR

⑆0005117⑆ ⑆071000039⑆ 888850088561⑆

Attachment C

DUFF & PHELPS

TCEQ Cashier's Office - MC-214
Building A
12100 Park 36 Circle
Austin, TX 78753

December 2, 2011

Re: Application for Use Determination for Air Pollution Control Property Located at
Cottonwood Energy Center in Newton County, Texas

Enclosed please find one application (the "Application") for property tax exemption for Air Pollution Control Property located at Cottonwood Energy Center (the "Facility") in Newton County, Texas. A copy of the Application has been provided for the appraisal district.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier III Application. Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier III Application is \$2,500. Please find enclosed a check for the \$2,500 Tier III Application Fee.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier III	Unit 3 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	\$ 26,043,320

Please send one copy of the completed property tax exemption Use Determination to the following address:

Mr. Greg Maxim
Duff & Phelps LLC
919 Congress Avenue, Suite 1450
Austin, TX 78701

Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, TX 78701

T +1 512 671 5580
F +1 512 351 7911

gregory.maxim@duffandphelps.com
www.duffandphelps.com

TCEQ Cashier's Office
December 2, 2011
Page 2 of 2

If you have any questions regarding the Application or the information supplied within the Application, please contact me, Greg Maxim, Director, Duff & Phelps LLC, at (512) 671-5580 or by e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Greg Maxim', with a horizontal line extending to the right.

Gregory Maxim
Director
Specialty Tax

Enclosures

cc: Ms. Kathryn Tronsberg Macciocca (Duff & Phelps, LLC)

Texas Commission on Environmental Quality

Use Determination for Pollution Control Property Application

A person seeking a use determination must complete this application form. For assistance in completing the application form please refer to the *Instructions for Use Determination for Pollution Control Property Application Form TCEQ-00611*, as well as the rules governing the Tax Relief Program in Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Information relating to completing this application form is also available in the TCEQ regulatory guidance document, *Property-Tax Exemptions for Pollution Control Property, RG-461*. For additional assistance, please call the Tax Relief Program at 512-239-4900.

You must supply information for each field of this application form unless otherwise noted.

Section 1. Eligibility

1. Is the property/equipment subject to any lease, lease-to-own agreement, or environmental incentive grant? Yes No
2. Is the property/equipment used solely to manufacture or produce a product or provide a service that prevents, monitors, controls, or reduces air, water or land pollution?
Yes No
3. Was the property/equipment acquired, constructed, installed, or replaced before January 1, 1994? Yes No

If the answer to any of these questions is 'Yes', then the property/equipment is not eligible for a tax exemption under this program.

Section 2. General Information

1. What is the type of ownership of this facility?
Corporation Limited Partner Other: **Limited Liability Corporation**
Sole Proprietor Utility
Partnership
2. Size of Company: Number of Employees
1 to 99 500 to 999 2,000 to 4,999
100 to 499 1,000 to 1,999 5,000 or more
3. Business Description: (Briefly describe the type of business or activity at the facility).
Natural Gas-Fired Electric Power Generation
4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility. **221122 - Electric Power Generation, fossil fuel**

Section 3. Type of Application and Fee

1. Select only one:

Tier I – Fee: \$150

Tier II – Fee: \$1,000

Tier III – Fee: \$2,500

2. Payment Information:

Check/Money Order/Electronic Payment Receipt Number:

Payment Type: Check ~~5118~~

Payment Amount: \$2,500

Name on payment: Duff & Phelps

Total Amount: \$2,500

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

Section 4. Property/Equipment Owner Information

1. Company Name of Owner: Cottonwood Energy Company LP

2. Mailing Address: 976 County Road 4213

3. City, State, Zip: Deweyville, TX 77614

4. Customer Number (CN): CN602765687

5. Regulated Entity Number (RN): RN100226109

6. Is this property/equipment owned by the CN listed in Question 4? Yes No

If the answer is 'No,' please explain: N/A

7. Is this property/equipment leased from a third party? Yes No

If the answer is 'Yes,' please explain: N/A

8. Is this property/equipment operated by the RN listed in Question 5? Yes No

If the answer is 'No,' please explain: N/A

Section 5. Name of Property/Equipment Operator (If different from Owner)

1. Company Name: N/A

2. Mailing Address: N/A

3. City, State, Zip: N/A

4. Customer Number (CN): N/A

5. Regulated Entity Number (RN): N/A

Section 6. Physical Location of Property/Equipment

1. Name of Facility or Unit where the property/equipment is physically located:

Cottonwood Energy Center

2. Type of Mfg. Process or Service: **Natural Gas-Fired Electric Power Generation**

3. Street Address: 976 County Road 4213
4. City, State, Zip: Deweyville, TX 77614

Section 7. Appraisal District with Taxing Authority

1. Appraisal District: Newton County
2. District Account Number(s): 9900015-0805153

Section 8. Contact Name

1. Company Name: Duff & Phelps, LLC
2. First Name of Contact: Greg
3. Last Name of Contact: Maxim
4. Salutation: Mr. Mrs. Ms. Dr. Other:
5. Title: Director
6. Mailing Address: 919 Congress Avenue, Suite 1450
7. City, State, Zip: Austin, TX 78701
8. Phone Number/Fax Number: (P) 512-671-5580; (F) 512-351-7911
9. Email Address: Gregory.maxim@duffandphelps.com
10. Tracking Number (optional): CC-2012-03

Section 9. Property/Equipment Description, Applicable Rule, and Environmental Benefit

For each piece, or each category, of pollution control property/equipment for which a use determination is being sought, answer the following questions.

Attach additional response sheets to the application for each piece of integrated pollution control property/equipment if a use determination is being sought for more than one (1) piece.

General Information

1. Name the property/equipment:
Unit 3 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems
2. Is the property/equipment used 100% as pollution control equipment? Yes No
If the answer is 'Yes,' explain how it was determined that the equipment is used 100% for pollution control: N/A. See Calculation of Percentage of pollution control Property in attached Cost Analysis Procedure ("CAP") Model.
3. Does the property/equipment generate a Marketable Product? Yes No
If the answer is 'Yes,' describe the marketable product: Electricity
4. What is the appropriate Tier I Table or Expedited Review List number? ERL #8
5. Is the property/equipment integrated pollution control equipment? Yes No

If the answer is 'No,' separate applications must be filed for each piece of property/equipment.

6. List applicable permit number(s) for the property/equipment: Title V Operating Permit O2338

Incremental Cost Difference

7. Is the Tier I Table percentage based on the incremental cost difference? Yes No N/A

If the answer is 'Yes,' answer the following questions:

8. What is the cost of the new piece of property/equipment? N/A
9. What is the cost of the comparable property/equipment? N/A
10. How was the value of the comparable property/equipment calculated? N/A

Property/Equipment Description

11. Describe the property/equipment. (What is it? Where is it? How is it used?)

Background: Cottonwood Energy Center

The Cottonwood Energy Center (the "Facility") is a natural gas-fired, combined cycle power generating facility located in Deweyville, Newton County, Texas. Four GE 7-FA combustion turbines are routed to four Foster Wheeler heat recovery steam generators ("HRSGs"), which provide steam to four Alstom steam turbine-generator sets. The Facility began commercial operation in December 2003. It has a base load capacity of 1,260 MW. The Facility serves the SERC Reliability Corporation region.

Pollution Control Property Description – Cottonwood Unit 3 HRSG

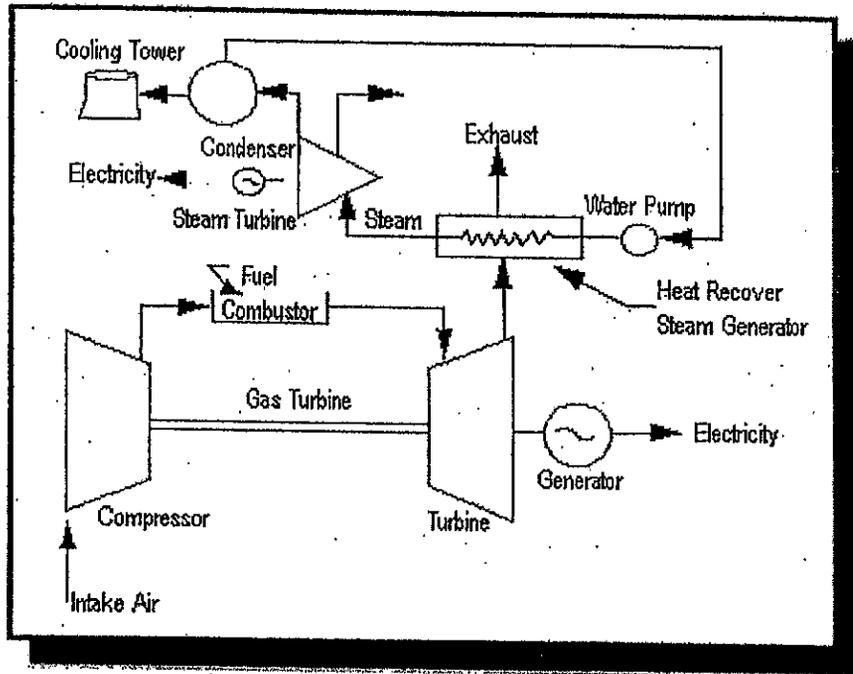
The pollution control property described in this Application is the Unit 3 HRSG and dedicated ancillary system (the "PC Property") installations.

Cottonwood Unit 3 HRSG

The Facility consists of a combined-cycle gas turbine power plant with four (4) gas Combustion Turbines ("CTs") each equipped with HRSGs and dedicated ancillary systems necessary to capture heat from the CTs' exhaust and convert it into electrical power. The Unit 3 HRSG captures the waste heat of combustion from the Unit 3 CT exhaust gas and utilizes this waste heat to produce steam, which in turn powers a steam turbine-generator set to produce electric power at the Facility in addition to the electric power generated by the CT alone.

The Facility gains both production and pollution control benefits from the subject PC Property. First, the use of this waste heat of combustion by the Unit 3 HRSG creates a thermal efficiency benefit for the Facility. Specifically, the use of waste heat in the Unit 3 CT exhaust gas results in the conversion of approximately 50% of the chemical energy of the natural gas utilized at the Facility into electricity (HHV basis), a gain over the use of the fuel by these CTs alone. Secondly, due to this efficiency gain, the Facility is able to generate fewer emissions (particularly NO_x emissions) than a traditional power generation facility utilizing a single thermodynamic cycle; thus supporting the subject PC Property's inclusion on the Expedited Review List.

The Figure below is representative of a simplified combined-cycle plant process flow.



Please see the Cost Analysis Procedure ("CAP") Model attached for the calculation of the percentage of the subject pollution control property eligible for property tax exemption.

Applicable Rule

12. What adopted environmental rule or regulation is being met by the construction or installation of the property/equipment? The citation must be to the subsection level.

The PC Property was installed to meet the requirements of 40 CFR Part 60.44da(a) "Standards for nitrogen oxides ("NOx") for Electric Utility Steam generating units for New Source Performance Standards ("NSPS")".

As well, the PC Property allows emissions to meet or exceed Best Available Control Technology emission limitations established in Federal Operating Permit #O2338. Per 30 Texas Administrative Code ("TAC") §122.143(4), the permit holder must comply with all terms and conditions codified in the permit and any provisional terms and conditions required to be included with the permit.

Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property/equipment?

The PC Property reduces the formation of and/or controls the emission of NO_x and other air emissions associated with the combustion of natural gas used in combined cycle power generation at the Facility.

Section 10. Process Flow Diagram (Optional)

Attach documentation to the application showing a Process Flow Diagram for the property/equipment.

Please see the simplified Process Flow Diagram above for a representation of the combined-cycle power plant.

Section 11. Partial-Use Percentage Calculation

This section must be completed for all Tier III applications. Attach documentation to the application showing the calculations used to determine the partial-use percentage for the property/equipment.

Please see the attachment to this application for the Cost Analysis Procedure ("CAP") Calculations.

Section 12. Property Categories and Costs

List each piece of property/equipment of integrated pollution control property/equipment for which a use determination is being sought.

Property/Equipment Name	Tier 1 Table No. or Expedited Review List No.	Use Percent	Estimated Dollar Value
Land:			
Property: Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	N/A	42.99%	\$ 60,584,465
Property:			
Property:			
Total:			\$ 26,043,320

Attach additional response sheets to the application if more than three (3) pieces.

NOTE: Separate applications must be filed for each piece of nonintegrated pollution control property/equipment.

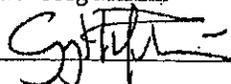
Section 13. Certification Signature

Must be signed by owner or designated representative.

By signing this application, I certify that I am duly authorized to submit this application form to the TCEQ and that the information supplied here is true and accurate to the best of my knowledge and belief.

Printed Name: Greg Maxim

Date: 12/2/2011

Signature:  _____

Title: Director

Company Name: Duff & Phelps, LLC

Under Texas Penal Code 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to \$2,000, or a prison term of two to 10 years and a fine of up to \$5,000.

Cottonwood Energy Company, LP

Titlepage: Cottonwood Energy Company, LP
Client: Cottonwood Energy Center
Plant Summary: 1,250 MW Gas Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure (CALP) Calculations
Date: October 2, 2011
Rev: 0

Source Legend	
D	Calculated Assumptions
DAF	D32 VAS Steadstate Estimate
CW	Calculated Client-Provided Data
HH	Henry Hub Natural Gas Pricing
30 TAC	30 TAC Chapter 17

1. Assumptions

Plant Design Profile

	Source
PC Property Capital Cost	\$ 82,344,485
PC Property Capacity (MW)	200
PC Property Capacity (MW)	80,000,000
PC Property Net Annual Generation Capacity (MW)	80,000,000
PC Property Net Annual Generation Capacity (MW)	80,000,000
Plant Capacity Factor	31.85%
Plant Heat Rate (MBTU/MWh)	7,503
Plant Heat Rate (MBTU/MWh)	0.91
Capital Cost OI ₀ (CCO ₀)	\$
Comparable Technology	\$
Design Capacity Factor	0%
Capacity (MW)	1

Conversion Factors

Hour/Year	Source
8760	D
1,000	CW
2,200	CW
3,600	CW
1,000,000	C

Economic Assumptions

Discount Rate	Source
10.0%	DAF
40	CW
4.53	HH
2.00	CW
0.48	CW
0.00	C
33.33	SNL
10%	30 TAC

Levelized Cost of Energy (LCOE) Model Output

Capital Recovery Factor (CRF)	\$
LCOE (\$/MWh)	10.23%

*See Levelized Cost of Energy, model in Attachment A.

†: Three-year average daily historical electricity rates for SERC Reliability Corporation.

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,250 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

II. Cost Analysis Procedure ("CAP")

Formula:
$$\frac{[(PCF \times CCN) - (CCO \times MP)]}{CCN}$$

A. Definitions (provided by TCEQ):²¹

1. Production Capacity Factor ("PCF")
 The ratio of the capacity of the existing equipment or process to the capacity of the new equipment or process.

2. Capital Cost New ("CCN")
 CCN is the estimated total capital cost of the new equipment or process.

3. Capital Cost Old ("CCO")
 CCO is the cost of comparable equipment or a comparable process without the pollution control.
 The standards for calculating CCO are:
 21. If comparable equipment without the pollution control feature is on the market in the U.S., then use the average market price of the most recent generation of technology must be used.

22. If the conditions in variable 3.1 do not apply and the company is replacing an existing unit that already has received a possible use determination, the company shall use the CCO from the application for the previous use determination.

23. If the conditions in variable 3.1 and 3.2 do not apply and the company is replacing an existing unit, then the company shall convert the original cost of the unit to today's dollars by using a published industry specific standard. If the production capacity of the new equipment or process is lower than the production capacity of the old equipment or process CCO is divided by the PCF to adjust CCO to reflect the same capacity as CCN.

24. If the conditions in variables 3.1, 3.2 and 3.3 do not apply, and the company can obtain an estimate to manufacture the alternative equipment without the pollution control feature, then an average estimated cost to manufacture the unit must be used. The comparable unit must be the most recent generation of technology. A copy of the estimate must be provided with the worksheet including the specific source of the information.

4. Marketable Product ("MP")
 Anything produced or recovered using pollution control property that is sold as a product, is accumulated for later use, or is used as raw material in a manufacturing process. Marketable product includes, but is not limited to, anything recovered or produced using the pollution control property sold, leased, accumulated for later use, or used in a manufacturing process (including at a different facility). Marketable product does not include any emission credits or emission allowances that result from installation of the pollution control property.

5. Marketable Product Value ("MPV")
 The marketable product value may be calculated in one of two ways:
 1. The retail value of the product produced by the equipment for one year period. Typically, the most recent three-year average price of the material as sold on the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average and report how the figures were determined.
 2. If the material is used as an intermediate material in a production process then the value assigned to the material for internal accounting purposes may be used. It is the responsibility of the applicant to show that the internally assigned value is comparable to the value assigned by other similar producers of the product.

6. Direct Costs of Production ("DCP")
 The costs directly attributed to the production of the product, including raw materials, storage, transportation, and personnel, but excluding non-cash costs, such as overhead and depreciation.

7. n Factor
 The estimated useful life in years of the equipment that is being evaluated for a use determination.

8. f Factor
 Year One.

9. Interest Rate
 10%.

H. Title 30, Texas Administrative Code, Chapter 17

B. CAP Formulas (provided by TCEQ):

Partial Use Determination =
$$\frac{[(PCF \times CCN) - (CCO \times NPVMP)]}{CCN}$$

Where:

Production Capacity Factor ("PCF") =
$$\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}}$$

And where:

NPVMP =
$$\sum_{t=1}^n \frac{MPV_t - PC}{(1 + \text{Interest Rate})^t}$$

C. CAP Formulas for PC Property

Marketable Product Value ("MPV") = Electricity Price (\$/MWh) x MWh per Year

Direct Cost of Production ("DCP") = LCOE x MWh per year

LCOE =
$$\frac{\left(\frac{\text{Capital Cost}}{\text{Hours per Year}} \times \text{Capital Recovery Factor} \right) + \left(\frac{\text{Fixed O&M Cost}}{\text{Capacity}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right) \right)}{\text{Factor}}$$

Cottonwood Energy Company, LP

Prepared by: Cottonwood Energy Company, LP
Plant Name: Cottonwood Energy Center
Plant Summary: 1,260 MW 4K4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

III. Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 3 HRSG

A. Marketable Product Value ("MPV")

$$\begin{aligned} \text{Electricity Price} &= \frac{\$}{\text{MWh}} \times \frac{\text{Plant MWh}}{\text{Year}} = (\$) \text{ MPV} \\ \$36.32 &= \frac{\$}{\text{MWh}} \times 808,463 \frac{\text{MWh}}{\text{Year}} = \$28,557,781 \end{aligned}$$

B. Production Cost ("PC")

$$\begin{aligned} \text{Levelized Cost of Energy ("LCOE")} &= \frac{\$}{\text{kWh}} \times \frac{\text{Plant MWh}}{\text{Year}} = (\$) \text{ PC} \\ \$21.0308 &= \frac{\$}{\text{kWh}} \times 808,453,135 \frac{\text{kWh}}{\text{Year}} = \$24,893,682 \end{aligned}$$

Formula:
$$\frac{[(PC \times CCN) - CCO] - NPVMP}{CCN}$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) \text{ MPV}}{(1 + \text{Interest Rate})^t} = (\$) \text{ PC}$$

$$\sum_{t=1}^n \frac{\$28,557,781}{(1 + 10\%)^t} = \$24,893,682$$

NPVMP (\$)
NPVMP
\$34,541,145

* If MP is ≤ 0 , then MP = 0.

taxpayer: Cottonwood Energy Company, LP
 plant: Cottonwood Energy Center
 plant summary: 1,260 MW A&4 Configuration Combined Cycle Power Plant (2003)
 plant location: Newton County, Texas
 project: Tier III Cost Analysis Procedure ("CAP") Calculations
 date: December 2, 2011
 rev: 0

C. Production Capacity Factor ("PCF")

$$\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}} = \text{PCF}$$

$$\frac{0}{282 \text{ MW} \times 31.65\%} = 1.000$$

D. Capital Cost New ("CCN")

PC Property

E. Capital Cost Old ("CCO")

Comparable Technology

Partial Use Determination Calculation

$$\frac{\text{CCO}}{\text{CCN}} = \text{MP}$$

$$\frac{\$0}{\$60,584,465} = 0.0001651145$$

$$1.000 \times \$60,584,465 = \$60,584,465$$

$$\frac{\text{Partial Use Determination \%}}{\text{Eligible HRSG Costs}} = \text{Partial Use Determination \% x PC Property Cost}$$

$$\frac{26.043320}{\$60,584,465} = \$1,651,145$$

TCSG Use Determination Application Section 12 use
 Partial Use Percent 42.99%
 Estimated Dollar Value \$ 60,584,465

ATTACHMENT B

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003).
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

Levelized Cost of Energy ("LCOE") Model^[1]

Formulas:

$$\text{Capital Recovery Factor ("CRF")} = \frac{i \times (1 + i)^n}{(1 + i)^n - 1}$$

$$\text{LCOE} = \left(\frac{\text{Capital Cost} \times \text{CRF}}{\text{Hours per Year}} \right) + \frac{\text{Fixed O\&M Costs}}{\text{Capacity Factor}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$$

Calculations:

Capital Recovery Factor	10.23%
LCOE (\$/kWh)	\$ 0.03079

^[1] http://www.nrel.gov/analysis/lcoe_documentation.html

Note: The Levelized Cost of Energy is a calculation developed by the United States Department of Energy's National Renewable Energy Lab to determine the cost of generating energy (electricity) using the design or performance criteria for a specific power generation unit. The website above gives a more detailed description of the model and its development.

Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$3,664,099	1	1.10	\$ 3,330,999
\$3,664,099	2	1.21	\$ 3,028,181
\$3,664,099	3	1.331	\$ 2,752,892
\$3,664,099	4	1.4641	\$ 2,502,529
\$3,664,099	5	1.61051	\$ 2,275,117
\$3,664,099	6	1.771561	\$ 2,068,288
\$3,664,099	7	1.9487171	\$ 1,880,262
\$3,664,099	8	2.14358881	\$ 1,709,329
\$3,664,099	9	2.357947691	\$ 1,553,936
\$3,664,099	10	2.59374246	\$ 1,412,669
\$3,664,099	11	2.853116706	\$ 1,284,244
\$3,664,099	12	3.138428377	\$ 1,167,495
\$3,664,099	13	3.452271214	\$ 1,061,359
\$3,664,099	14	3.797498336	\$ 964,872
\$3,664,099	15	4.177248169	\$ 877,156
\$3,664,099	16	4.594972986	\$ 797,415
\$3,664,099	17	5.054470285	\$ 724,922
\$3,664,099	18	5.559917313	\$ 659,020
\$3,664,099	19	6.115909045	\$ 599,109
\$3,664,099	20	6.727499949	\$ 544,645
\$3,664,099	21	7.400249544	\$ 495,132
\$3,664,099	22	8.140274939	\$ 450,120
\$3,664,099	23	8.954302433	\$ 409,200
\$3,664,099	24	9.848732676	\$ 372,000
\$3,664,099	25	10.83470594	\$ 338,182
\$3,664,099	26	11.91817654	\$ 307,438
\$3,664,099	27	13.10989419	\$ 279,489
\$3,664,099	28	14.42099361	\$ 254,081
\$3,664,099	29	15.86309297	\$ 230,983
\$3,664,099	30	17.44940227	\$ 209,984
NPVMP:			\$ 34,541,145

**DUFF & PHELPS LLC
ACCOUNTS PAYABLE**

300 HEADQUARTERS PLAZA
EAST TOWER 12TH FLOOR
MORRISTOWN, NJ 07960

5118

2-9710 L
GT355

DATE

Nov 29, 2011

PAY
TO THE
ORDER OF

TCEQ

\$ 2,500.00

Two thousand five hundred

DOLLARS



Bank of America



Check # 11811

FOR

[Signature]

⑆005118⑆ ⑆071000039⑆ 88885108856⑆

Attachment D

DUFF & PHELPS

TCEQ Cashier's Office - MC-214
Building A
12100 Park 35 Circle
Austin, TX 78753

December 2, 2011

Re: Application for Use Determination for Air Pollution Control Property Located at Cottonwood Energy Center in Newton County, Texas

Enclosed please find one application (the "Application") for property tax exemption for Air Pollution Control Property located at Cottonwood Energy Center (the "Facility") in Newton County, Texas. A copy of the Application has been provided for the appraisal district.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier III Application. Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier III Application is \$2,500. Please find enclosed a check for the \$2,500 Tier III Application Fee.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier III	Unit 4 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	\$ 26,043,320

Please send one copy of the completed property tax exemption Use Determination to the following address:

Mr. Greg Maxim
Duff & Phelps LLC
919 Congress Avenue, Suite 1450
Austin, TX 78701

Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, TX 78701

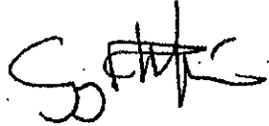
T +1 512 671 6580
F +1 512 351 7911

gregory.maxim@duffandphelps.com
www.duffandphelps.com

TCEQ Cashier's Office
December 2, 2011
Page 2 of 2

If you have any questions regarding the Application or the information supplied within the Application, please contact me, Greg Maxim, Director, Duff & Phelps LLC, at (512) 671-5580 or by e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Greg Maxim', written over a faint, illegible stamp or watermark.

Gregory Maxim
Director
Specialty Tax

Enclosures

cc: Ms. Kathryn Tronsberg Macciocca (Duff & Phelps, LLC)

Texas Commission on Environmental Quality

Use Determination for Pollution Control Property Application

A person seeking a use determination must complete this application form. For assistance in completing the application form please refer to the *Instructions for Use Determination for Pollution Control Property Application Form TCEQ-00611*, as well as the rules governing the Tax Relief Program in Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Information relating to completing this application form is also available in the TCEQ regulatory guidance document, *Property-Tax Exemptions for Pollution Control Property, RG-461*. For additional assistance, please call the Tax Relief Program at 512-239-4900.

You must supply information for each field of this application form unless otherwise noted.

Section 1. Eligibility

1. Is the property/equipment subject to any lease, lease-to-own agreement, or environmental incentive grant? Yes No
2. Is the property/equipment used solely to manufacture or produce a product or provide a service that prevents, monitors, controls, or reduces air, water or land pollution?
Yes No
3. Was the property/equipment acquired, constructed, installed, or replaced before January 1, 1994? Yes No

If the answer to any of these questions is 'Yes', then the property/equipment is not eligible for a tax exemption under this program.

Section 2. General Information

1. What is the type of ownership of this facility?
Corporation Limited Partner Other: **Limited Liability Corporation**
Sole Proprietor Utility
Partnership
2. Size of Company: Number of Employees
1 to 99 500 to 999 2,000 to 4,999
100 to 499 1,000 to 1,999 5,000 or more
3. Business Description: (Briefly describe the type of business or activity at the facility)
Natural Gas-Fired Electric Power Generation
4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility. **221122 - Electric Power Generation, fossil fuel**

Section 3. Type of Application and Fee

1. Select only one:

Tier I – Fee: \$150

Tier II – Fee: \$1,000

Tier III – Fee: \$2,500

2. Payment Information:

Check/Money Order/Electronic Payment Receipt Number:

Payment Type: Check 5119

Payment Amount: \$2,500

Name on payment: Duff & Phelps

Total Amount: \$2,500

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

Section 4. Property/Equipment Owner Information

1. Company Name of Owner: Cottonwood Energy Company LP

2. Mailing Address: 976 County Road 4213

3. City, State, Zip: Deweyville, TX 77614

4. Customer Number (CN): CN602765687

5. Regulated Entity Number (RN):RN100226109

6. Is this property/equipment owned by the CN listed in Question 4? Yes No

If the answer is 'No,' please explain: N/A

7. Is this property/equipment leased from a third party? Yes No

If the answer is 'Yes,' please explain: N/A

8. Is this property/equipment operated by the RN listed in Question 5? Yes No

If the answer is 'No,' please explain: N/A

Section 5. Name of Property/Equipment Operator (If different from Owner)

1. Company Name: N/A

2. Mailing Address: N/A

3. City, State, Zip: N/A

4. Customer Number (CN): N/A

5. Regulated Entity Number (RN):N/A

Section 6. Physical Location of Property/Equipment

1. Name of Facility or Unit where the property/equipment is physically located:

Cottonwood Energy Center

2. Type of Mfg. Process or Service: **Natural Gas-Fired Electric Power Generation**

3. Street Address: 976 County Road 4213
4. City, State, Zip: Deweyville, TX 77614

Section 7. Appraisal District with Taxing Authority

1. Appraisal District: Newton County
2. District Account Number(s): 9900015-0805153

Section 8. Contact Name

1. Company Name: Duff & Phelps, LLC
2. First Name of Contact: Greg
3. Last Name of Contact: Maxim
4. Salutation: Mr. Mrs. Ms. Dr. Other:
5. Title: Director
6. Mailing Address: 919 Congress Avenue, Suite 1450
7. City, State, Zip: Austin, TX 78701
8. Phone Number/Fax Number: (P) 512-671-5580; (F) 512-351-7911
9. Email Address: Gregory.maxim@duffandphelps.com
10. Tracking Number (optional): CC-2012-04

Section 9. Property/Equipment Description, Applicable Rule, and Environmental Benefit

For each piece, or each category, of pollution control property/equipment for which a use determination is being sought, answer the following questions.

Attach additional response sheets to the application for each piece of integrated pollution control property/equipment if a use determination is being sought for more than one (1) piece.

General Information

1. Name the property/equipment:
Unit 4 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems
2. Is the property/equipment used 100% as pollution control equipment? Yes No
If the answer is 'Yes,' explain how it was determined that the equipment is used 100% for pollution control: N/A. See Calculation of Percentage of pollution control Property in attached Cost Analysis Procedure ("CAP") Model.
3. Does the property/equipment generate a Marketable Product? Yes No
If the answer is 'Yes,' describe the marketable product: Electricity
4. What is the appropriate Tier I Table or Expedited Review List number? ERL #8
5. Is the property/equipment integrated pollution control equipment? Yes No

If the answer is 'No,' separate applications must be filed for each piece of property/equipment.

6. List applicable permit number(s) for the property/equipment: Title V Operating Permit O2338

Incremental Cost Difference

7. Is the Tier I Table percentage based on the incremental cost difference? Yes No N/A

If the answer is 'Yes,' answer the following questions:

8. What is the cost of the new piece of property/equipment? N/A
9. What is the cost of the comparable property/equipment? N/A
10. How was the value of the comparable property/equipment calculated? N/A

Property/Equipment Description

11. Describe the property/equipment. (What is it? Where is it? How is it used?)

Background: Cottonwood Energy Center

The Cottonwood Energy Center (the "Facility") is a natural gas-fired, combined cycle power generating facility located in Deweyville, Newton County, Texas. Four GE 7-FA combustion turbines are routed to four Foster Wheeler heat recovery steam generators ("HRSGs"), which provide steam to four Alstom steam turbine-generator sets. The Facility began commercial operation in December 2003. It has a base load capacity of 1,260 MW. The Facility serves the SERC Reliability Corporation region.

Pollution Control Property Description – Cottonwood Unit 4 HRSG

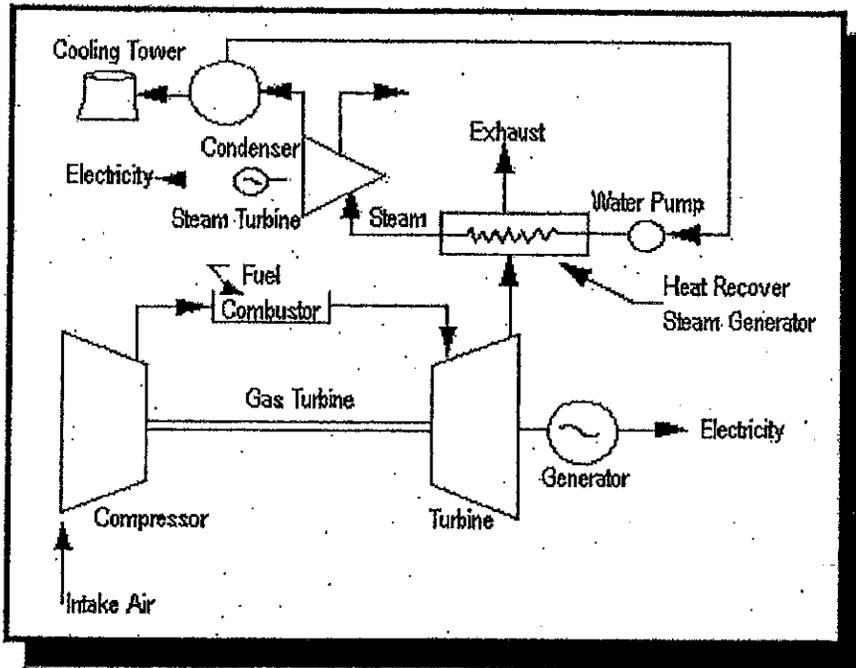
The pollution control property described in this Application is the Unit 4 HRSG and dedicated ancillary system (the "PC Property") installations.

Cottonwood Unit 4 HRSG

The Facility consists of a combined-cycle gas turbine power plant with four (4) gas Combustion Turbines ("CTs") each equipped with HRSGs and dedicated ancillary systems necessary to capture heat from the CTs' exhaust and convert it into electrical power. The Unit 4 HRSG captures the waste heat of combustion from the Unit 4 CT exhaust gas and utilizes this waste heat to produce steam, which in turn powers a steam turbine-generator set to produce electric power at the Facility in addition to the electric power generated by the CT alone.

The Facility gains both production and pollution control benefits from the subject PC Property. First, the use of this waste heat of combustion by the Unit 4 HRSG creates a thermal efficiency benefit for the Facility. Specifically, the use of waste heat in the Unit 4 CT exhaust gas results in the conversion of approximately 50% of the chemical energy of the natural gas utilized at the Facility into electricity (HHV basis), a gain over the use of the fuel by these CTs alone. Secondly, due to this efficiency gain, the Facility is able to generate fewer emissions (particularly NO_x emissions) than a traditional power generation facility utilizing a single thermodynamic cycle; thus supporting the subject PC Property's inclusion on the Expedited Review List.

The Figure below is representative of a simplified combined-cycle plant process flow.



Please see the Cost Analysis Procedure ("CAP") Model attached for the calculation of the percentage of the subject pollution control property eligible for property tax exemption.

Applicable Rule

12. What adopted environmental rule or regulation is being met by the construction or installation of the property/equipment? The citation must be to the subsection level.

The PC Property was installed to meet the requirements of 40 CFR Part 60.44da(a) "Standards for nitrogen oxides ("NOx") for Electric Utility Steam generating units for New Source Performance Standards ("NSPS").

As well, the PC Property allows emissions to meet or exceed Best Available Control Technology emission limitations established in Federal Operating Permit #O2338. Per 30 Texas Administrative Code ("TAC") §122.143(4), the permit holder must comply with all terms and conditions codified in the permit and any provisional terms and conditions required to be included with the permit.

Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property/equipment?

The PC Property reduces the formation of and/or controls the emission of NO_x and other air emissions associated with the combustion of natural gas used in combined cycle power generation at the Facility.

Section 10. Process Flow Diagram (Optional)

Attach documentation to the application showing a Process Flow Diagram for the property/equipment.

Please see the simplified Process Flow Diagram above for a representation of the combined-cycle power plant.

Section 11. Partial-Use Percentage Calculation

This section must be completed for all Tier III applications. Attach documentation to the application showing the calculations used to determine the partial-use percentage for the property/equipment.

Please see the attachment to this application for the Cost Analysis Procedure ("CAP") Calculations.

Section 12. Property Categories and Costs

List each piece of property/equipment of integrated pollution control property/equipment for which a use determination is being sought.

Property/Equipment Name	Tier 1 Table No. or Expedited Review List No.	Use Percent	Estimated Dollar Value
Land:			
Property: Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	N/A	42.99%	\$ 60,584,465
Property:			
Property:			
Total:			\$ 26,043,320

Attach additional response sheets to the application if more than three (3) pieces.

NOTE: Separate applications must be filed for each piece of nonintegrated pollution control property/equipment.

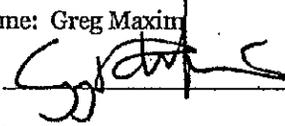
Section 13. Certification Signature

Must be signed by owner or designated representative.

By signing this application, I certify that I am duly authorized to submit this application form to the TCEQ and that the information supplied here is true and accurate to the best of my knowledge and belief.

Printed Name: Greg Maxim

Date: 12/2/2011

Signature:  _____

Title: Director

Company Name: Duff & Phelps, LLC

Under Texas Penal Code 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to \$2,000, or a prison term of two to 10 years and a fine of up to \$5,000.

Tract/Year: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,250 MW Ax4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

Source Legend	Calculated Assumption
D&P	D&P VAS Standard Estimate
CW	Cottonwood Client Provided Data
HH	Hery-Hus Natural Gas Pricing
30 TAC	30 TAC Chapter 17

I. Assumptions		Conversion Factors		Economic Assumptions		Levelized Cost of Energy ("LCOE") Model Outputs*	
Plant Design Profile		Hours/Year		Discount Rate		Global Recovery Factor ("GRF")	
PC Property Capital Cost	\$ 80,544,405	MWh/yr	8,700	Projects	10.0%	LCOE (\$/MWh)	\$ 10.23%
PC Property Capacity (MW)	232	\$/MWh	1,000	PC Property Fixed O&M Cost (\$/MWh)	4.0		0.02473
PC Property Net Annual Generation Capacity (MW)	808,493,135	\$/hour	2,200	Fuel Cost (\$/MMBTU)	2.30		
PC Property Net Annual Generation Capacity (MWh)	808,493	\$/hour	3,600	PC Property Variable Cost (\$/MWh)	0.48		
Plant Capacity Factor	37.65%	\$/hour	1,000,000	PC Property Variable Cost (\$/MWh)	0.00		
Plant Heat Rate (Btu/MWh)	7,503	\$/hour		SERC Electricity Pricing (\$/MWh) ¹	35.32		
Plant Heat Rate (MMBTU/MWh)	8.81	\$/hour		Interest Rate	10%		
Capital Cost Out ("CCO")	\$ -						
Comparable Technology Cost	\$ -						
Design Capacity Factor	0%						
Capacity (MW)	1						

*1. Three-year average daily historical electricity rates for SERC Reliability Corporation.

Transpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW-44 Configuration Combined Cycle Power Plant (2002)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

II. Cost Analysis Procedure ("CAP")

Formula:

$$\frac{[(PCF \times CCO) - CCO - MP]}{CCN}$$

A. Definitions (provided by TCEQ)¹⁸

1. Production Capacity Factor ("PCF")
 The ratio of the capacity of the existing equipment or process to the capacity of the new equipment or process.

2. Capital Cost New ("CCN")
 CCN is the estimated total capital cost of the new equipment or process.

3. Capital Cost Old ("CCO")
 CCO is the cost of comparable equipment or a comparable process without the pollution control. The rationale for calculating CCO are:

- 1. If comparable equipment without the pollution control feature is on the market in the U.S., then use the average market price of the most recent generation of technology must be used.
- 2. If the conditions in variable 3.1 do not apply and the company is replacing an existing unit that already has received a positive use determination, the company shall use the CCO from the application for the previous use determination.

3. If the conditions in variable 3.1 and 3.2 do not apply, and the company can obtain an estimate to manufacture the alternative equipment without the pollution control feature, then an average estimated cost to manufacture the unit must be used. The comparable unit must be the most recent generation of technology. A copy of the estimate must be provided with the worksheet including the specific source of the information.

4. If the conditions in variable 3.1 and 3.2 do not apply, and the company is replacing an existing unit, then the company shall convert the original cost of the unit to today's dollars by using a published industry specific standard. If the production capacity of the new equipment or process is lower than the production capacity of the old equipment or process CCO is divided by the PCF to adjust CCO to reflect the same capacity as CCN.

5. Marketable Product Value ("MPV")
 Anything produced or recovered using pollution control property that is sold as a product, is accumulated for later use, or is used as raw material in a refining process, marketable product includes, but is not limited to, anything recovered or produced using the pollution control property such as liquid, solid, or gas. However, it does not include any emissions or byproducts from a manufacturing process (including air or a solvent "slip"). Marketable product does not include any emissions or byproducts that result from installation of the pollution control property.

6. Marketable Product Value ("MPV")
 The marketable product value may be calculated in one of two ways:
 1. The retail value of the product produced by the equipment for one year periods. Typically, the most recent theoretical average price of the material as sold on the market should be used in the calculation, if the price varies from state-to-state, the applicant shall calculate an average and explain how the figures were determined.

2. If the material is used as an intermediate material in a production process, then the value assigned to the material for financial accounting purposes may be used. It is the responsibility of the applicant to show that the internally assigned value is comparable to the value assigned by other similar producers of the product.

7. Direct Costs of Production ("DCP")
 The costs directly attributed to the production of the product, including raw materials, storage, transportation, and personnel, but excluding non-cash costs, such as overhead and depreciation.

8. Factor Year One
 Interest Rate
 10%

9. Title 30, Texas Administrative Code, Chapter 17

Duff Phase I Cottonwood Unit 4 HRSG CAP Calculations

B. CAP Formulas (provided by TCEQ)
Plant Use Determination

$$\frac{[(PCF \times CCO) - CCO - MP]}{CCN}$$

Where:
Production Capacity Factor ("PCF") = $\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}}$

And Where:
MP/MP = $\sum_{i=1}^n \frac{MP_i - PC}{(1 + \text{Interest Rate})^i}$

C. CAP Formulas for PC Property

Marketable Product Value ("MPV") = Electricity Price (\$/MWh) x MWh per Year

Direct Cost of Production ("DCP") = LCOE x MWh per Year

LCOE = $\frac{\text{Capital Cost} \times \text{Capital Recovery Factor} + \text{Fixed O\&M Costs}}{\text{Hours per Year} \times \text{Capacity Factor}} + \left(\frac{\text{Fuel Cost} \times \text{Heat Rate}}{\text{Capacity Factor}} \right)$

Taxpayer: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center
 Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedure (CAP) Calculations
 Date: December 2, 2011
 Rev: 0

III. Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 4 HRSG

A. Marketable Product Value ("MPV")

$$\begin{aligned}
 \text{Electricity Price} \frac{\$}{\text{MWh}} \times \frac{\text{Plant MWh}}{\text{Year}} &= (\$) \text{ MPV} \\
 \$35.32 \times 608,493 \frac{\text{MWh}}{\text{Year}} &= \$24,557,781
 \end{aligned}$$

B. Production Cost ("PC")

$$\begin{aligned}
 \text{Levelized Cost of Energy ("LCOE")} \frac{\$}{\text{kWh}} \times \frac{\text{Plant kWh}}{\text{Year}} &= (\$) \text{ PC} \\
 \$0.0308 \times 608,493,135 \frac{\text{kWh}}{\text{Year}} &= \$24,853,692
 \end{aligned}$$

$$\text{Formula: } \frac{(\text{PC} \times \text{CC}) - \text{CCO} - \text{NPVMP}}{\text{CCN}}$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\begin{aligned}
 - \sum_{t=1}^n \frac{(\$) \text{ MPV}}{(1 + \text{Interest Rate})^t} - (\$) \text{ PC} &= \text{NPVMP } (\$) \\
 - \sum_{t=1}^n \frac{\$24,557,781}{(1 + 10\%)^t} - \$24,853,692 &= \$34,541,145 \\
 \text{NPVMP} &= \$34,541,145
 \end{aligned}$$

* If MP is < 0, then IRR = 0.

Trapsayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,250 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process = **PCF**
 Production Capacity of New Equipment or Process = **1,000**
 282 MW * 31.65% = **0**

**D. Capital Cost New ("CCN")
PC Property**

= **\$80,584,465**

**E. Capital Cost Old ("CCO")
Comparable Technology**

= **\$0**

Partial Use Determination Calculation

(PCF x CCN)	-	CCO	-	MRP
1,000 x \$80,584,465	-	\$0	-	\$34,541,145
	=	\$80,584,465	=	
				Partial Use Determination %
				\$ 26,043,320

TCEQ Use Determination Application Section 12, Use	
Use Percent	42.89%
Estimated Dollar Value	\$ 80,584,465

Eighte HRSG Costs
 (Partial Use Determination % x PC Property Cost)

ATTACHMENT B

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

Levelized Cost of Energy ("LCOE") Model⁽¹⁾

Formulas:

$$\text{Capital Recovery Factor ("CRF")} = \frac{i \times (1+i)^n}{(1+i)^n - 1}$$

$$\text{LCOE} = \left(\frac{\text{Capital Cost} \times \text{CRF}}{\text{Hours per Year} \times \text{Capacity Factor}} + \frac{\text{Fixed O\&M Costs}}{\text{Capacity Factor}} \right) + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$$

Calculations:

Capital Recovery Factor	10.23%
LCOE (\$/kWh)	\$ 0.03079

⁽¹⁾ http://www.nrel.gov/analysis/lcoe_documentation.html

Note: The Levelized Cost of Energy is a calculation developed by the United States Department of Energy's National Renewable Energy Lab to determine the cost of generating energy (electricity) using the design or performance criteria for a specific power generation unit. The website above gives a more detailed description of the model and its development.

ATTACHMENT B

Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$3,664,099	1	1.10	\$ 3,330,999
\$3,664,099	2	1.21	\$ 3,028,181
\$3,664,099	3	1.331	\$ 2,752,892
\$3,664,099	4	1.4641	\$ 2,502,629
\$3,664,099	5	1.61051	\$ 2,275,117
\$3,664,099	6	1.771561	\$ 2,068,288
\$3,664,099	7	1.9487171	\$ 1,880,262
\$3,664,099	8	2.14358881	\$ 1,709,329
\$3,664,099	9	2.357947691	\$ 1,553,936
\$3,664,099	10	2.59374246	\$ 1,412,669
\$3,664,099	11	2.853116706	\$ 1,284,244
\$3,664,099	12	3.138428377	\$ 1,167,495
\$3,664,099	13	3.452271214	\$ 1,061,359
\$3,664,099	14	3.797498336	\$ 964,872
\$3,664,099	15	4.177248169	\$ 877,156
\$3,664,099	16	4.594972986	\$ 797,415
\$3,664,099	17	5.054470285	\$ 724,922
\$3,664,099	18	5.559917313	\$ 659,020
\$3,664,099	19	6.115909045	\$ 599,109
\$3,664,099	20	6.727499949	\$ 544,645
\$3,664,099	21	7.400249944	\$ 495,132
\$3,664,099	22	8.140274939	\$ 450,120
\$3,664,099	23	8.954302433	\$ 409,200
\$3,664,099	24	9.849732676	\$ 372,000
\$3,664,099	25	10.83470594	\$ 338,182
\$3,664,099	26	11.91817654	\$ 307,438
\$3,664,099	27	13.10999419	\$ 279,489
\$3,664,099	28	14.42099361	\$ 254,081
\$3,664,099	29	15.86309297	\$ 230,983
\$3,664,099	30	17.44940227	\$ 209,984
NPVMP:			\$ 34,541,145

5119

DUFF & PHELPS LLC
ACCOUNTS PAYABLE

200 HEADQUARTERS PLAZA
EAST TOWER, 12TH FLOOR
MORRISTOWN, NJ 07960

2-3710 L
07345

DATE Nov 29 2011

\$ 2,500.00

DOLLARS

PAY TO THE ORDER OF JCEQ

Two thousand five hundred

Bank of America

Chicago, Illinois

[Signature]

FOR

⑆005149⑆ ⑆071000039⑆ 8885508656⑆

Attachment E

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2012

Mr. Greg Maxim
Director
Duff and Phelps, LLC
919 Congress Ave Ste 1450
Austin, Texas 78701

Re: Notice of Negative Use Determination
Cottonwood Energy Company, LP
Cottonwood Energy Center
976 County Road 4213
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Number: 15505; Tracking Number: CC-2011-48

Dear Mr. Maxim:

This letter responds to Cottonwood Energy Company, LP's Application for Use Determination, received July 5, 2011, pursuant to the Texas Commission on Environmental Quality's (TCEQ) Tax Relief for Pollution Control Property Program for the Cottonwood Energy Center.

The TCEQ has completed the review for application #15505 and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) §17.4 and §17.6. Heat recovery steam generators and associated dedicated ancillary equipment are used solely for production; therefore, are not eligible for a positive use determination.

Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at ronald.hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chance Goodin".

Chance Goodin, Team Leader
Stationary Source Programs
Air Quality Division

Mr. Greg Maxim
Page 2
July 10, 2012

CG/RH

cc: Chief Appraiser, Newton County Appraisal District, 109 Court Street, Newton, Texas 75966

Attachment F

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2012

Mr. Greg Maxim
Director
Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, Texas 78701

Re: Notice of Negative Use Determination
Cottonwood Energy Compnay, LP
Cottonwood Energy Center
976 County Road 4213
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Number: 16412
Tracking Number: CC-2012-02

Dear Mr. Maxim:

This letter responds to Cottonwood Energy Compnay, LP's Application for Use Determination, received December 2, 2011, pursuant to the Texas Commission on Environmental Quality's (TCEQ) Tax Relief for Pollution Control Property Program for the Cottonwood Energy Center.

The TCEQ has completed the review for application #16412 and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) §17.4. The justification for the negative use determination is provided below.

Heat recovery steam generators and associated dedicated ancillary equipment are used solely for production; therefore, are not eligible for a positive use determination.

Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

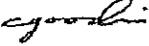
If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at Ronald.Hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • www.tceq.state.tx.us

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Mr. Greg Maxim
Page 2
July 10, 2012

Sincerely,



Chance Goodin, Team Leader
Stationary Sources Team
Air Quality Division

CG/RH

Enclosure

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St, Newton, Texas
75966

Attachment G

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2012

Mr. Greg Maxim
Director
Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, Texas 78701

Re: Notice of Negative Use Determination
Cottonwood Energy Compnay, LP
Cottonwood Energy Center
976 County Road 4213
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Number: 16411
Tracking Number: CC-2012-03

Dear Mr. Maxim:

This letter responds to Cottonwood Energy Compnay, LP's Application for Use Determination, received December 2, 2011, pursuant to the Texas Commission on Environmental Quality's (TCEQ) Tax Relief for Pollution Control Property Program for the Cottonwood Energy Center.

The TCEQ has completed the review for application #16411 and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) §17.4. The justification for the negative use determination is provided below.

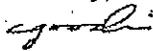
Heat recovery steam generators and associated dedicated ancillary equipment are used solely for production; therefore, are not eligible for a positive use determination.

Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at Ronald.Hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

Mr. Greg Maxim
Page 2
July 10, 2012

Sincerely,



Chance Goodin, Team Leader
Stationary Sources Team
Air Quality Division

CG/RH

Enclosure

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St, Newton, Texas
75966

Attachment H

Bryan W. Shaw, Ph.D., *Chairman*
Carlos Rubinstein, *Commissioner*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2012

Mr. Greg Maxim
Director
Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, Texas 78701

Re: Notice of Negative Use Determination
Cottonwood Energy Compnay, LP
Cottonwood Energy Center
976 County Road 4213
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Number: 16410
Tracking Number: CC-2012-04

Dear Mr. Maxim:

This letter responds to Cottonwood Energy Compnay, LP's Application for Use Determination, received December 2, 2011, pursuant to the Texas Commission on Environmental Quality's (TCEQ) Tax Relief for Pollution Control Property Program for the Cottonwood Energy Center.

The TCEQ has completed the review for application #16410 and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) §17.4. The justification for the negative use determination is provided below.

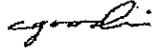
Heat recovery steam generators and associated dedicated ancillary equipment are used solely for production; therefore, are not eligible for a positive use determination.

Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at Ronald.Hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

Mr. Greg Maxim
Page 2
July 10, 2012

Sincerely,



Chance Goodin, Team Leader
Stationary Sources Team
Air Quality Division

CG/RH

Enclosure

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St, Newton, Texas
75966

Attachment I

Pre-Repowering Efficiency and Air Emissions Unit 1

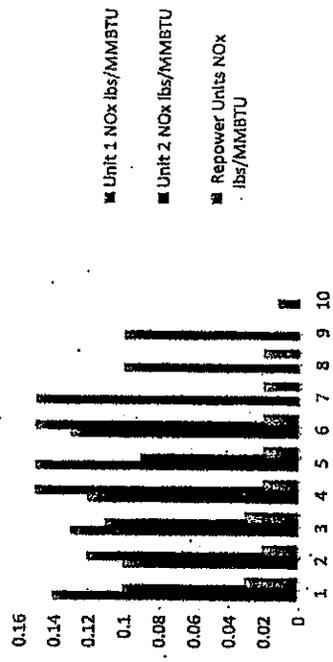
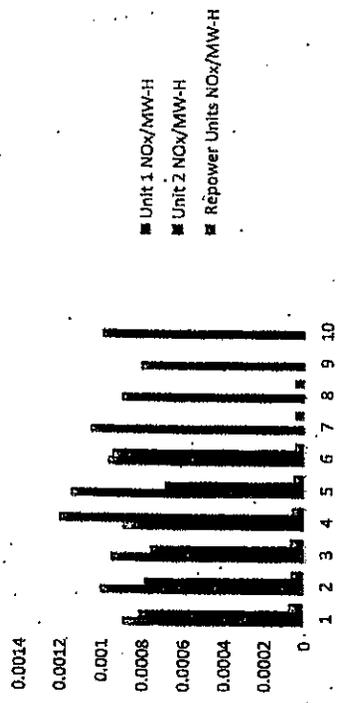
FACILITY_NAME	UNITID	OP_YEAR	HEAT_INPUT	NOX_RATE lbs/MMBTU	NOX_MASS TONS	Gross Load (MW-H)	CO2 Tons	Operating Hours	NOX TONS/MW-HR
Barney M. Davis	1	2003	9,882,095	0.14	814.4	923,389	611,010.3	8,398	0.0009
Barney M. Davis	1	2004	1,365,091	0.1	115.4	115,931	81,133.3	1,273	0.0010
Barney M. Davis	1	2005	4,018,371	0.13	343.1	363,700	238,809.6	3,423	0.0009
Barney M. Davis	1	2006	3,861,536	0.12	319.8	361,211	229,487.0	2,820	0.0009
Barney M. Davis	1	2007	1,815,633	0.15	198.3	173,553	107,904.3	1,658	0.0011
Barney M. Davis	1	2008	4,749,542	0.13	420.8	436,979	282,257.8	3,852	0.0010
Barney M. Davis	1	2009	3,199,412	0.15	332.1	315,615	190,145.3	2,112	0.0011
Barney M. Davis	1	2010	660,763	0.1	48.3	53,988	39,255.9	843	0.0009
Barney M. Davis	1	2011	1,906,567	0.1	131	162,795	113,309.8	1,761	0.0008
Barney M. Davis	1	2012	1,674,769	0.012	138.1	138,581	99,528.2	1,494	0.0010

Pre-Repowering Efficiency and Air Emissions Unit 2

FACILITY_NAME	UNITID	OP_YEAR	HEAT_INPUT	NOX_RATE lbs/MMBTU	NOX_MASS TONS	Gross Load (MW-H)	CO2 Tons	Operating Hours	NOX TONS/MW-HR
Barney M. Davis	2	2003	2,094,717	0.1	152.7	189,000	131,053.6	1,606	0.0008
Barney M. Davis	2	2004	11,922,584	0.12	837.6	1,070,886	708,543.8	7,750	0.0008
Barney M. Davis	2	2005	6,256,894	0.11	388.7	516,358	371,856.8	5,580	0.0008
Barney M. Davis	2	2006	2,965,995	0.15	280.5	233,671	176,265.6	1,763	0.0012
Barney M. Davis	2	2007	1,339,322	0.09	82.8	120,870	79,592.2	1,060	0.0007
Barney M. Davis	2	2008	3,419,274	0.15	294.4	312,553	203,201.2	2,679	0.0009

Post-Repowering Efficiency and Air Emissions BMD Units 3, 4 & NB Units 8, 9

FACILITY_NAME	UNITID	OP_YEAR	HEAT_INPUT	NOX_RATE lbs/MMBTU	NOX_MASS TONS	Gross Load (MW-H)	CO2 Tons	Operating Hours	NOX TONS/MW-HR
Barney M. Davis	3	2011	8,264,568	0.03	73.3	1,064,646	491,149.8	5637	0.0001
Barney M. Davis	3	2012	5,289,883	0.02	40.1	687,998	314,371.3	3524	0.0001
Barney M. Davis	4	2011	8,092,698	0.03	68.9	1,081,929	480,942.4	5742	0.0001
Barney M. Davis	4	2012	4,943,162	0.02	36.3	663,495	293,764.0	3425	0.0001
Nueces Bay	8	2011	7,989,948	0.02	52.7	1,099,549	474,830.6	5692	0.0000
Nueces Bay	8	2012	5,011,986	0.02	30	687,430	297,856.4	3517	0.0000
Nueces Bay	9	2011	7,978,245	0.02	45.5	1,092,722	474,132.6	5558	0.0000
Nueces Bay	9	2012	5,117,020	0.02	29.5	698,703	304,095.0	3545	0.0000



TCEQ DOCKET NO. 2012-1562-MIS-U

APPEAL OF EXECUTIVE DIRECTOR'S
NEGATIVE USE DETERMINATION
ISSUED TO COTTONWOOD
ENERGY COMPANY LP
(NO. 15505, 16410, 16411, 16412)

§
§
§
§
§

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

2012 OCT 30 PM 4:27
CHIEF CLERK'S OFFICE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

COTTONWOOD ENERGY COMPANY LP'S REPLY TO RESPONSE BRIEFS

Cottonwood Energy Company LP ("Cottonwood" or "Applicant") files this Reply to the Responses of the Executive Director, Office of Public Interest Counsel ("OPIC") and the Newton County Appraisal District (the "Appraisal District") regarding the appeal of the negative use determination issued by the Executive Director on July 10, 2012.

Cottonwood refers the Commissioners to its Appeal Brief for a complete history on the Pollution Control Property Program and the procedural history of this case.¹ This Reply Brief will not reiterate that background, but instead focus on the arguments made by the Executive Director, OPIC, and the Appraisal District. Following a brief summary of Applicant's argument, Parts II-VI of this Reply Brief detail why the arguments made by the Executive Director, OPIC, and the Appraisal District in support of the negative use determination are a misapplication of Texas law, are based on policy concerns outside of the Agency's purview, and are founded on an inadequate technical evaluation.

I. Summary of Argument

The various arguments from the Executive Director, OPIC, and the Appraisal District go to great lengths to explain why the Executive Director is completely reversing course since issuing 25 positive use determinations to essentially the same type of equipment that is the subject of this appeal. Yet all the Response Briefs miss the fundamental underlying point of the pending appeals – that the express language and structure of Texas Tax Code §§11.31(k-m) make clear that the Executive Director does not have the discretion to issue negative use determinations to equipment listed in Texas Tax Code §11.31(k). In other words, the question is not whether the equipment is pollution control property – the legislature has already determined that it is. The question is how much of a percentage positive use determination should be issued.

This appeal should be granted and the negative use determinations remanded so the Executive Director can conduct the review necessary to ensure that the TCEQ does the job the legislature has instructed them to do – to acknowledge the legislatively-established pollution control benefits of the equipment in question and then determine the percentage of positive use determination for the equipment in question given the concurrent pollution control and

¹ Cottonwood Energy Company LP – Appeal of July 10, 2012 Negative Use Determinations, July 31, 2012.

production benefits resulting from the thermal efficiency improvements of the heat recovery steam generators (HSRGs).

II. Procedural Error – The Executive Director Failed to Provide a Technical Evaluation of the Application

In its response brief, OPIC states that it defers to the Executive Director's technical evaluation of whether HRSGs qualify as pollution control equipment. OPIC states, "Although the July 10, 2012 letter provides no information as to why the Executive Director no longer considers HRSGs pollution control equipment, OPIC defers to the Executive Director on this technical issue and anticipates that the Executive Director's response brief will provide adequate explanation. Further explanation from the Executive Director as well as the Commission's Agenda discussion and subsequent order memorializing the Commissioners' decision on this matter will serve to complete the record."²

As the OPIC acknowledges, the Executive Director's negative use determinations completely failed to articulate any basis for the decisions. Now, after the fact, the Executive Director attempts to justify what was clearly an arbitrary decision. As an attachment to its response brief, the Executive Director provided a one-page document entitled "Application Review Summary" for each of the appealed applications.³ The inclusion of the Application Review Summary in its response brief is the first time the Executive Director made this document available to Applicant and the public. By failing to provide this document to the Applicant until filing its response brief, the Executive Director prevented the Applicant from evaluating the technical basis of the Executive Director's determination before the deadline for appeals had passed. This approach to technical review and documentation and distribution of same sets a bad precedent, is highly prejudicial, and should not be allowed.

Furthermore, even if the Executive Director had provided this document to the Applicant, the Application Review Summary is woefully insufficient, as it provides no discussion of the technical merits of the Executive Director's conclusion that HRSGs and associated dedicated ancillary equipment are used wholly for production purposes. The Final Determination for three of the Applicant's four HRSG applications states, "A negative determination for the heat recovery steam generator and associated dedicated ancillary equipment."⁴ The other Application Review Summary states, "A negative determination for the heat recovery steam generator and its dedicated ancillary equipment are used for production not pollution control and therefore are not eligible for tax relief. Further, the cited regulations do not require installation of the heat recovery steam generator."⁵

The fact that the Executive Director initially provided no information that could be considered a technical evaluation and that the Applicant had to wait until the Executive Director filed a

² Office of Public Interest Counsel's Response to Appeal of Negative Use Determination ("OPIC Response Brief"), October 4, 2012, pp. 12-13.

³ Executive Director's Application Review Summary for the Cottonwood Energy Center (Attachment 1). It should be noted that Cottonwood filed a separate application for each of its four HRSGs.

⁴ *Id.*

⁵ *Id.*

response brief in this appeal to receive any information regarding its negative use determination offers yet another example of the Executive Director's failure to comply with the statutory requirements in §11.31. In fact, the Application Review Summary that the Executive Director did provide includes no analysis to support the Executive Director's position that HRSGs are entirely production equipment and cannot be considered an actual technical evaluation. It merely restates the Executive Director's conclusion without providing any context, insight into, or technical basis for that conclusion. The Application Review Summary should be rejected as failing to comply with the statutory requirements in §11.31 and, even if taken into consideration by the Commissioners, provides no basis for the Executive Director's erroneous decision.

III. Texas Tax Code §§ 11.31(k) and 11.31(m) Do Not Provide the Executive Director With Authority to Issue a Negative Use Determination for Property Listed in §11.31(k)

The Executive Director, OPIC, and the Appraisal District each argue that when the Legislature listed items in §11.31(k), it did not intend for these items to qualify for a positive use determination. Instead, they argue that the Legislature merely intended for the property listed in §11.31(k) to be reviewed to determine eligibility for a use determination.⁶ This renders the legislative language meaningless. Section 11.31 must be construed to give effect to the Legislature's intent.⁷ An agency or court should first attempt to determine this intent from the actual language used by the Legislature. That is, an agency or court should first look to the plain, ordinary meaning of the statute's words.⁸ Most importantly, "[i]f a statute is clear and unambiguous, [the courts] apply its words according to their common meaning without resort to rules of construction or extrinsic aids."⁹

Sections 11.31(k) and (m) direct that the Commission "shall determine that" heat recovery steam generators are "used wholly or partly as facility, device, or method for the control of air, water, or land pollution."¹⁰ Other than passing a rule to remove this equipment from an established list of pollution control equipment (based on compelling evidence that the equipment does not provide pollution control benefits), there is no option under the statute for TCEQ to determine that equipment listed in §11.31(k) is not pollution control equipment. Put simply, based on the language of the statute, if an item is listed in §11.31(k), the question is not "whether the equipment is pollution control property," but instead should be "what percentage is pollution control property."

A. Section 11.31(k)-(l)

Section 11.31(k) states:

⁶ Executive Director's Response to the Appeals Filed on the Negative Use Determinations for the Heat Recovery Steam Generator Applications ("Executive Director Response Brief"), October 4, 2012, p. 12; OPIC Response Brief at 9; Appraisal District Response Brief at 2.

⁷ See TEX. GOV'T CODE §312.005; *Gilbert v. El Paso County Hosp. Dist.*, 38 S.W.3d 85 (Tex. 2001).

⁸ See TEX. GOV'T CODE §312.002(a); *Am. Home Prods. Corp. v. Clark*, 38 S.W.3d 92, 95-96 (Tex. 2000); *Crimmins v. Lowry*, 691 S.W.2d 582, 584 (Tex. 1985).

⁹ *In Re Nash*, 220 S.W.3d 914, 917 (Tex. 2007).

¹⁰ TEX. TAX CODE §11.31(k) & (m).

“[t]he Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include: ...

(8) heat recovery steam generators.¹¹

The very purpose of this section is to provide a list of equipment that the Legislature determined was “for the control of air, water, or land pollution.” It seems incredibly far-fetched to argue that the Legislature provided a list of equipment that it specifically designated as “for the control of pollution” but did not intend for the equipment listed therein to be considered pollution control equipment.

Moreover, the Legislature included language describing an option to add items to the §11.31(k) list when it stated in subsection (k)(18) “any other equipment designed to prevent, capture, abate, or monitor nitrogen oxides, volatile organic compounds, particulate matter, mercury, carbon monoxide, or any criteria pollutant.”¹² A plain reading of this language demonstrates that the Legislature had determined that each of the previously listed items were “equipment designed to prevent, capture, abate, or monitor” pollution.

Furthermore, §11.31(l) requires that the TCEQ must update the §11.31(k) list at least once every three years. An item may be removed from the list, but only if the TCEQ “finds compelling evidence to support the conclusion that the item does not provide pollution control benefits.” By including HRSGs on the list, the Legislature determined that these items provided a pollution control benefit unless and until the TCEQ found compelling evidence to the contrary. The TCEQ has not provided compelling evidence that HRSGs do not provide a pollution control benefit. Nor has the TCEQ initiated a rulemaking to remove these items from the list contemplated in §11.31(k).

To summarize, in this statute, the Legislature states in §11.31(k-1) that the equipment listed in §11.31(k): 1) is “for the control of air, water, or land pollution”; 2) is “designed to prevent, capture, abate, or monitor” pollution; and 3) can only be removed from the statutorily-directed list of pollution control equipment if the Executive Director provides “compelling evidence” that the equipment “does not provide pollution control benefits.” To suggest that the Legislature placed the list in the statute as mere surplusage and intended for TCEQ to have the discretion to issue negative use determinations on the ad hoc basis currently being proposed stretches the bounds of any reasonable interpretation and effectively disregards the language of the statute and intent of the Legislature.

B. Section 11.31(m)

Section 11.31(m) provides the Executive Director with a very clear directive about how to handle applications for items listed in §11.31(k). Section 11.31(m) states:

“Notwithstanding the other provisions of this section, if the facility, device, or method . . . is . . . included on the list adopted under Subsection (k), the executive

¹¹ TEX. TAX CODE §11.31(k).

¹² TEX. TAX CODE §11.31(k)(18).

director of the Texas Commission on Environmental Quality, . . . , shall determine that the facility, device, or method described in the application is used wholly or partly . . . for the control of air, water, or land pollution . . .” (emphasis added).

A close reading of this section reveals that if an entity submits an application for a pollution control property tax exemption for an item that is listed in §11.31(k), the Executive Director has 30 days within which, he must determine that the item described in the application is used wholly or partly for the control of air, water, or land pollution. Furthermore, this section provides that the Executive Director must make this determination without regard to whether information about the environmental benefit of the item is provided in the application. The only reasonable reading of this language is that the Legislature had determined that the items listed in §11.31(k) were pollution control property and thus, did not want the TCEQ to require a demonstration that an environmental benefit existed or get bogged down in that determination.

The Executive Director’s brief then states that tax exemptions must be strictly construed against a taxpayer. In this case strict construction requires, at minimum, a partial positive use determination because the statute recognizes the equipment as pollution control property. When interpreting legislation, courts are generally required to ascertain and apply the plain meaning of a statute.¹³ And, while any legislative grace provided through an express deduction or exemption from a tax is strictly construed against the taxpayer,¹⁴ the statute cannot be so narrowly construed as to avoid the plain meaning of the words used or to destroy the very purpose of an exemption. The Austin Court of Civil Appeals has cited with approval, the following correct reasoning with respect to the scope of a tax exemption:

“[T]he . . . exemption must be viewed in light of the legislative intent . . . Although construction of exemption statutes is generally to be construed against the taxpayer, the overall scheme and intent of the legislation must not be overlooked.”¹⁵

As described above, the statutory language clearly indicates that the Legislature considers the items listed in §11.31(k) as equipment for the control of air, water, or land pollution. This is further supported by the fact that under §11.31(m) applicants for items listed in §11.31(k) are not required to submit information regarding the environmental benefit. This is not to suggest that the equipment does not have to provide an environmental benefit, it merely demonstrates that the Legislature already determined that these pieces of equipment by their very nature provide an environmental benefit and therefore, it is not necessary for applicants to provide this information to the Executive Director.

It is also important to note the textual difference between the limiting instructions given in §11.31(m) and the discretion afforded under §11.31(d). For equipment not listed in §11.31(k), §11.31(d) allows the TCEQ discretion to “determine if [equipment] is [pollution control property]” (emphasis added). However, §11.31(m) limits that discretion by using the phrase

¹³ See *Fitzgerald v. Advanced Spine Fixation Syst., Inc.*, 996 S.W.2d 864, 865-66 (Tex. 1999) (courts must apply plain meaning of statute).

¹⁴ *Upjohn Co. v. Rylander*, 38 S.W.3d 600, 606 (Tex. App. — Austin 2000, pet. denied).

¹⁵ *Sharp vs. Tyler Pipe*, 919 S.W.2d 157 (Tex. App.—Austin 1996, writ denied).

“determine that” instead of “determine if”. As previously discussed, §11.31 must be construed to give effect to the Legislature’s intent.¹⁶ Furthermore, “[w]ords and phrases shall be read in context and construed according to the rules of grammar and common usage.”¹⁷

Considering the clear and unambiguous language, as well as the structure, of §11.31(d), (k), (l), & (m), three things are clear:

(1) the equipment listed in §11.31(k) must be considered pollution control property, thereby precluding a negative use determination by the TCEQ;

(2) the only method by which the TCEQ could issue a negative use determination to an item on the 11.31(k) list would be to go through rulemaking and, based compelling evidence demonstrating that an item does not provide pollution control benefits, remove that item from the statutorily-directed list; and

(3) the TCEQ is afforded discretion to issue partial positive use determinations to take into account concurrent pollution control and production benefits of equipment.

Appellant respectfully submits that the debate about items 1 and 2 end, so the TCEQ can do the job the Legislature has asked it to do under item 3.

C. Executive Director’s Legislative Acceptance Argument is Without Merit

After claiming that TCEQ can ignore the Legislature’s instruction to recognize the equipment listed in §11.31(k) as pollution control property, the Executive Director then proceeds to argue that the Legislature has acquiesced in the TCEQ’s current refusal to follow the statute.¹⁸ Not only does the Executive Director’s argument lack merit, the doctrine it cites actually supports the Appellants’ position. As evidence of how it intended to implement §11.31(k-m), the Executive Director relies not upon an actual case applying the statute or the express language of a rule implementing the statute, but rather a reference in a rulemaking preamble. What the Executive Director fails to mention is that, the last two times the Legislature was in session, the Executive Director had already applied §§11.31(k-m) to grant 100% positive use determinations for HRSGs in 25 separate instances. If the legislative acceptance argument has any applicability here, it would be that the Legislature’s acceptance is of the Commission’s implementation of §11.31(k) as applied to the 25 HRSG applications.

Even if the Commission were to conclude that the Executive Director’s previous application of §§11.31(k-m) as applied to HRSG applications does not negate the legislative acceptance argument, a review of the case law cited by the Executive Director demonstrates that the legislative acceptance argument would still not apply in the instant case. In the case cited by the Executive Director supporting the legislative acceptance argument, *Grocers Supply Co. v. Sharp*, the Court actually denied applying the legislative acceptance argument because the Agency’s

¹⁶ See TEX. GOV’T CODE §312.005; *Gilbert v. El Paso County Hosp. Dist.*, 38 S.W.3d 85 (Tex. 2001).

¹⁷ TEX. GOV’T CODE §311.011(a).

¹⁸ Executive Director’s Response Brief at 7.

interpretation of the statute was uncertain over time and the statute was unambiguous.¹⁹ The Court stated, "We cannot conclude that the legislature's reenactment of the exemptions without change constitutes an acceptance of an interpretation contrary to the precedent."²⁰ The only previous formal action that the TCEQ ever took regarding the Group I HRSG applications was to grant 100% percent positive use determinations. By granting a 100% positive use determination to HRSG applications, it would appear that the Agency's interpretation was that HRSGs qualified as pollution control property.

Even more importantly, §11.31 is not ambiguous. It has already been stated, but bears repeating, §11.31 must be construed to give effect to the Legislature's intent.²¹ The legislative acceptance argument falls flat when the statute is clear, for "[n]either legislative ratification nor judicial deference to an administrative interpretation can work a contradiction of plain statutory language."²² When the statutory provisions in the statute clearly contradict the agency's interpretation, the agency's erroneous interpretation should be given no deference. While the Executive Director may now interpret the statute so that equipment listed in §11.31(k) could be determined not to be pollution control property, the statute does not allow for such an interpretation.

IV. Failure to Comply with the Commission Rules and the Texas Administrative Procedures Act

Under the Administrative Procedures Act ("APA") states agencies are required to follow certain formal procedures before adopting and applying any "rule." A "rule" is defined as "a state agency statement of general applicability that...implements, interprets, or prescribes law or policy."²³ In reaching and applying its new interpretation of §§11.31(k) and 11.31(m), the Commission failed to follow the procedures of the APA and should therefore, be disregarded.

The Executive Director argues that rulemaking was not necessary for the Executive Director or the Commission to issue negative use determinations for the HRSG applications. The Executive Director states that the determination that each of the HRSG applications should be denied was the result of a case-by-case review of each application and that the Executive Director generated a "technical review" for each application. Finally, the Executive Director states the change in interpretation is not of a rule of general applicability because it affects a limited number of Applicants for a use determination.²⁴

The Executive Director's argument that APA rulemaking requirements do not apply to the unexplained and undocumented statement of the Executive Director that "[h]eat recovery steam generators are used solely for production; therefore, are not eligible for a positive use determination" is without merit. There was no case-by-case analysis in the Executive Director's

¹⁹ *Grocers Supply*, 978 S.W.2d at 644.

²⁰ *Id.*

²¹ See TEX. GOV'T CODE §312.005; *Gilbert v. El Paso County Hosp. Dist.*, 38 S.W.3d 85 (Tex. 2001).

²² See *Pretzer v. Motor Vehicle Bd.*, 138 S.W.3d 908, 915 (Tex. 2004); see also *Barchus v. State Farm Fire & Cas. Co.*, 167 S.W.3d 575, 578 (Tex. App.—Houston [14th Dist.] 2005, pet denied).

²³ TEX. GOV'T CODE § 2001.003(6).

²⁴ Executive Director Response Brief at 17.

general negative use determination. The statement is a rule as defined by the APA; in fact it is a statement that applies generally to an identified segment or class of the regulated public (HRSG owners) and seeks to implement, interpret and prescribe law or policy. In addition, the statement, in effect, amends 30 TAC §§17.4 and 17.17 which previously were adopted pursuant to notice and comment procedure under APA §§ 2001.023, 2001.025, 2001.029 and 2001.033.

The statement is an “interpretive rule,” defined by Professor Ron Beal as an agency statement made outside of a contested case hearing or notice and comment rule-making by which the agency sets forth how the agency intends to interpret and apply a statute or substantive rule to all persons similarly situated.²⁵ The statement is a rule if it meets a four part test according to Professor Beal:

- (1) It is issued by an agency board, commission, executive director or other officer vested with the power to act on behalf of the agency;
- (2) It is issued with the intent of the agency to notify persons or entities that are similarly situated or within a class described in general terms;
- (3) It is issued to notify those persons or entities of the agency’s interpretation of a statutory provision [or substantive rule] which has been crystallized following reflective examination in the course of the agency’s interpretive process;
- (4) Such interpretation was not labeled as tentative or otherwise qualified by arrangement for consideration at a later date.

The Executive Director’s negative use determinations meet every part of this test.

An interpretive rule, like the Executive Director’s negative use determinations, is invalid in Texas for failure to adhere to mandatory APA notice and comment procedure.²⁶ In *Combs v. Entertainment Publications, Inc.*, the Comptroller had issued, in a 2007 letter ruling (Accession No. 200704926L), guidelines for determining whether a fundraising firm or a school organization was a “seller” for purposes of collecting sales tax. In March and April of 2008, the Comptroller issued two letters essentially changing the import or interpretation of the 2007 letter. Plaintiff filed suit for injunctive relief against enforcement of the changed interpretation, sought declaratory relief under §2001.038 of the APA that the “rule” embodied in the 2008 letters was invalid, and sought declaratory relief under the Uniform Declaratory Judgments Act (“UDJA”) that the Comptroller exceeded her statutory authority under §151.024 of the tax code in adopting that “rule” and applying §151.024 to the plaintiff.

The Court of Appeals affirmed the district court ruling that it had jurisdiction under §2001.038 of the APA and that the 2008 letters were invalid because of the failure to comply with the notice

²⁵ Ron Beal, *A Miry Bog Part II: UDJA and APA Declaratory Judgment Actions and Agency Statements Made Outside a Contested Case Hearing Regarding the Meaning of the Law*, 59 Baylor L. Rev. 267, 270 (2007); see also Ron Beal, *The APA and Rulemaking: Lack of Uniformity Within a Uniform System*, 56 Baylor L. Rev. 1, 29-46 (2004).

²⁶ *Combs v. Entertainment Publications, Inc.*, 292 S.W.3d 712, 723-24 and footnote 6 (Tex.App.—Austin 2009, no pet.)

and comment procedural requirements of the APA. Also affirmed was the trial court's injunction directing the Comptroller to desist and refrain from implementing and enforcing the "new" rule unless and until the Comptroller properly enacted the rule pursuant to APA procedures, or "until final judgment of the trial court."²⁷

The Executive Director's attempted distinctions of *El Paso Hospital*, *Texas Mutual*, and *WBD Oil* are inappropriate. In *El Paso Hospital* an agency interpretive rule contradicted a previously adopted notice and comment rule. Similarly, the Executive Director's negative use determinations are inconsistent with Tax Code §11.31 and 30 TAC §§17.4 and 17.17. In *Texas Mutual* the court did not, as the Executive Director suggests, hold that if the statement made in the staff report "was a statement that fell within the definition of a rule," that somehow it could avoid scrutiny as a rule because "it is well established that not every administrative pronouncement is a rule within the meaning of the APA."²⁸ The Court did quote language from uses prior to *Combs*, "that not every administrative pronouncement is a rule within the meaning of the APA."²⁹ However, those prior cases did not involve agency statements that met the four-point test set out above.

In addition, the court statements misconstrued by the Executive Director were numerous. The plaintiff in *Texas Mutual* sought a declaratory judgment regarding the interpretation of a substantive rule. The Court of Appeals reversed the trial court judgment and upheld the agency interpretation of the rule that had been adopted pursuant to notice and comment procedure.

Similarly, the Executive Director's reference to *WBD Oil* is most unusual. The Executive Director recognizes the "field rules" at issue in *WBD* were created through a contested case hearing. Under the APA parties to a contested case hearing are entitled to notice of an adjudicative type hearing, presentation of evidence, cross examination of witnesses under oath, and issuance of a final order confirming findings of fact and conclusions of law.³⁰ No such procedure was followed prior to the Executive Director's issuance of the unsupported and undocumented statement of July 10, 2012, and all of *WBD's* interesting statements about the differences between agency adjudications in contested cases and agency rule-makings are completely irrelevant since Applicant have not been afforded either fair procedure in this matter.³¹

²⁷ *Id.* at 719.

²⁸ Executive Director's Response Brief at 16.

²⁹ *Texas Mutual Insurance Co. v Vista Community Medical Center, LLP*, 275 S.W.3d 538, 555 (Tex.App.—Austin 2008).

³⁰ TEX GOV'T CODE §§2001.051, 2001.085, 2001.087, 2001.088, and 2001.141.

³¹ See *Railroad Commission of Texas v. WBD Oil & Gas Co.*, 104 S.W.3d 69 (Tex. 2003).

V. The Record Supports a Positive Use Determination and Clearly Contradicts a Negative Use Determination

A. HRSGs Qualify as Pollution Control Property Under §11.31

The Applicant's HRSGs can be defined as pollution control property based on the prevention of NOx emissions from natural gas use efficiencies. Under Tax Code §11.31(a), "[a] person is entitled to an exemption from taxation of all or part of real and personal property that the person owns and that is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution." (emphasis added). The statute defines "a facility, device, or method for the control of air, water, or land pollution" as:

"[a] structure, building, installation excavation, machinery, equipment or device, and any attachment or addition to or reconstruction, replacement or improvement of that property, that is used, constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution."

In fact, the Executive Director conducted a technical review of the 25 Group I HRSG applications and on May 1, 2008, issued positive use determinations for these applications stating, "[t]his equipment is considered to be pollution control equipment and was installed to meet or exceed federal or state regulations."

B. Environmental Benefit

1. Recognition of Emission Avoidance as Pollution Control

The Executive Director and the Appraisal District argue that HRSGs are not used in any way to prevent, monitor, or control air, water, or land pollution. Specifically, the Executive Director states that a "HRSG does not remove air contaminants in the manner that a traditional pollution control device does" and that it has never recognized emission avoidance as pollution control.³² In the Executive Director's view, a piece of equipment provides an environmental benefit only if it is used to remove air contaminants.

However, the statute provides that pollution control property is used "for the prevention, monitoring, control, or reduction of air, water, or land pollution."³³ It is true that HRSGs do not actually remove pollutants from a power plant's exhaust stream. The HRSGs pollution control value is its increased thermal efficiency, which when compared to a traditional simple-cycle turbine unit, reduces the fuel needs for the same power outputs, while resulting in lower air emissions. It is important to note that the lower fuel consumption associated with increased fuel conversion efficiency not only reduces criteria pollutants such as NOx, but also reduces emissions of hazardous air pollutants, as well as carbon dioxide, which EPA is currently in the process of regulating under the Federal Clean Air Act.

³² Executive Director Response Brief at 8.

³³ TEX. TAX CODE §11.31(b).

The U.S. Environmental Protection Agency ("EPA") recognizes the use of energy efficiency as a measure of pollution control and/or pollution prevention³⁴ and at least one other state using this method as part of their tax exemption programs.³⁵ Furthermore, many of the New Source Performance Standards ("NSPS"), which the TCEQ has incorporated into its own rules, use efficiency as a measure of compliance. If the installation of a HRSG allows a facility to meet its federal and state required emission performance standard, then by definition, the HRSG would be equipment that controls emissions.

2. Empirical Data Demonstrating Emissions Reductions Due to Use of HRSG

The Executive Director argues that the Applicant's avoided emission argument is inadequate because it requires a comparison between a combined-cycle unit and a hypothetical alternative unit. The Executive Director goes on to state that "No Applicant has provided sufficient information as to why these hypothetical comparisons should be done, not have they provided why the single-cycle plant or boiler are appropriate comparisons."³⁶

As a threshold matter, as discussed above, the clear language and structure of §11.31(k-m) assume the pollution control benefits of HRSGs. So, the information the Executive Director complains about being missing is simply not required.³⁷

Moreover, Applicant's appeal brief in Attachment I includes the very information the Executive Director seems to be looking for. That Attachment contains monitoring data from the Barney Davis Power Plant during both pre- and post- repowering of that plant. This data demonstrates the assumptions regarding the air emissions reductions per pound of fossil fuel use. As set out in the attached affidavit,³⁸ Robert Roland, Manager, Regional Engineering, at the Cottonwood Energy Center states that based on his industry experience and knowledge, the emission reduction assumptions used in the avoided emissions methodology, as described in Cottonwood's application, comply with the capabilities and historical performance of the Cottonwood plant.

The Executive Director does, however, acknowledge that HB 3732 provided for an expedited review of applications for equipment listed in §11.31(k) that exempted applicants from submitting information regarding the anticipated environmental benefit. The fact that the Legislature removed the requirement to submit information regarding the environmental benefit for those applications under §11.31(k) is of critical importance. Not only did the Legislature consider the items listed in §11.31(k) as equipment "for the control of air, water, or land

³⁴ See Memorandum from Brian McLean, Director of Office of Atmospheric Programs and Stephen Page, Director of Office of Air Quality Planning and Standards, *Guidance on SIP Credits for Emission Reductions from Electric-Sector Energy Efficiency and Renewable Energy Measures*, August 5, 2004, stating, "Energy efficiency ... inherently prevent[s] pollution from occurring." (See Attachment 2).

³⁵ See Ohio Revised Code, Section 5707.20(J)-(K) ("Thermal Efficiency Improvement" and "Thermal Efficiency Improvement Facility"), which qualifies HRSGs as an "Exempt Facility" under § 5707.20(E), which is eligible for an "exempt facility certificate" under § 5707.21. (See Attachment 3).

³⁶ Executive Director Response Brief at 8

³⁷ See 11.31(m) indicating that applicants for items listed in §11.31(k) are not required to submit environmental benefit information.

³⁸ Affidavit of Robert Roland (Attachment 4).

pollution,” but it determined that no information was required regarding the environmental benefit of these items because it has already determined that these items provided an environmental benefit.

The Executive Director states that the removal of the requirement to submit environmental benefit information puts the Executive Director in a precarious position in determining whether an environmental benefit exists. Actually, in removing this requirement the Legislature acknowledged that an environmental benefit exists and that the Executive Director did not have to review this information for these particular applications. Instead of causing a precarious position for the Executive Director, it merely streamlined the application process for those applications in which an environmental benefit was known to exist.

The Executive Director then argues that the Legislature cannot extend a tax exemption beyond what is provided in the Constitution; and because the Constitution requires that property eligible for a pollution control property tax exemption must provide an environmental benefit, this requirement cannot be waived. First, it is not within the Executive Director’s statutory charge or authority to determine whether the Legislature’s actions comply with the Constitution. Second, the requirement that property eligible for a pollution control property tax exemption must provide an environmental benefit has not been waived; the Legislature has already determined that equipment listed in §11.31(k) provides an environmental benefit. The Legislature has merely left it to the TCEQ’s discretion to determine what the percentage of a positive use determination should be.

C. Method of Pollution Control – TCEQ Precedent, the Attorney General’s Interpretation, and the Legislature’s Directive

As previously noted, the Executive Director argues that it has never recognized emissions avoidance as pollution control. This statement is not only patently untrue, but belies the fact that the Legislature has already determined that HRSGs do control pollution. Similarly, the Appraisal District argues that HRSGs are “a major component of production...[and are] installed to produce more electricity or steam to sell and not to reduce pollution.” Interestingly, the Appraisal District states that “[i]f a HRSG is added just to improve efficiency, the HRSG may qualify for an exemption.”

As noted in the Executive Director’s response brief, on May 1, 2008, the Executive Director issued 100% positive use determinations for 25 HRSGs many of which cited emissions avoidance as the pollution control provided by HRSGs. While six of those applications were appealed and are now the subject of an administrative appeal, the remaining 19 applications have been issued a final 100% positive use determination based on emissions avoidance. The Executive Director has since stated that all of the 100% positive use determinations for HRSGs were made in error, but this does not change the fact that the Executive Director and the Commission has previously recognized emissions avoidance as pollution control.

Furthermore, the TCEQ recently adopted a Permit By Rule (PBR) for Natural Gas-Fired Combined Heat and Power Units.³⁹ The preamble to the adoption of the Combined Heat and

³⁹ 30 TAC §106.513; 37 Tex.Reg. 6037-6049, August 10, 2012.

Power (CHP) PBR, the TCEQ states, "The Commission acknowledges the benefits and advantages of CHP as a means of providing efficient, reliable, and clean energy." As part of that PBR, TCEQ specifically provided that the emission limits for stationary natural gas engines would be measured in terms of air contaminant emissions per unit of total energy output.⁴⁰ HRSGs are recognized as a typical industrial CHP application. The fact that the TCEQ recognizes the pollution control benefits of this type of equipment in its permitting program should be given weight when evaluating the Executive Director's arguments in this case that similar equipment does not have pollution control benefits.

Furthermore, even if the Executive Director had never actually recognized emissions avoidance as pollution control, that does not change the fact that HRSGs are specifically listed in §11.31(k) as equipment "for the control of air, water, or land pollution."

The Attorney General's Office, in response to prior TCEQ requests for guidance regarding Section 11.31 has made it clear that equipment can serve as a method of pollution control, while also serving as production equipment. The Executive Director summarily dismisses Applicant's reliance on this opinion by stating, "Applicants misinterpret Attorney General Opinion JC-0372." Merely stating that the Applicant has misinterpreted the Attorney General opinion does not actually make it so. Furthermore, the arguments made by the Executive Director and the Appraisal District that §11.31 only applies to "traditional" or "add-on" pollution control devices are directly refuted by the Attorney General's opinion.

Texas Attorney General Opinion JC-0372 (2001) expressly opined to the Chair of the Texas Natural Resource Conservation Commission that "methods of production" can and do qualify as exempt pollution control property:

"Section 11.31 is broadly written, and we believe its plain meaning is clear. It embraces any property, real or personal, "that is used wholly or partly as a facility, device, or method for the control of air, water or land pollution. . . ." (emphasis added).

"Next, we consider whether section 11.31 excludes from its scope pollution-reducing production equipment. Significantly, the statute applies to property used "wholly or partly" for pollution control. See *id.* §11.31(a). To qualify for the exemption, property must be used "wholly or partly" to meet or exceed environmental rules. See *id.* §11.31(b). The term "wholly" clearly refers to property that is used only for pollution control, such as an add-on device. See Merriam Webster's Collegiate Dictionary 1351 (10th Executive Director. 1993) (defining "wholly" to mean "to the full or entire extent: ... to the exclusion of other things"). The term "partly," however, embraces property that has only some pollution-control use. See *id.* at 848 (defining "partly" to mean "in some measure or degree"). This broad formulation clearly embraces more than just add-on devices. Furthermore, that statute clearly embraces not only "facilities" and "devices" but also "methods" that prevent, monitor, control, or reduce pollution. "Methods" is an extremely broad term that clearly embraces means of production

⁴⁰ 30 TAC §106.513(d).

designed, at least in part, to reduce pollution. See *id.* at 732 (defining “method” to include “a way, technique, or process of or for doing something”).⁴¹

This opinion refutes the arguments made by the Executive Director and the Appraisal District that production equipment cannot also serve to reduce pollution. It also fundamentally disproves the Executive Director and Appraisal District arguments that only “traditional” pollution control equipment or equipment that is “added” to a facility can qualify as pollution control property. The HRSGs are clearly used as engineering methods to comply with environmental laws and to control pollution and therefore, qualify for exemption under any valid rule or convention of statutory construction.

Significant reliance is placed by the Executive Director and OPIC on the *Mont Belvieu* opinion. Yet, there are three fundamental differences between the current appeal and the *Mont Belvieu* situation that make it clear that it does not support the Executive Director’s position and, in fact, conflicts with it.

To begin with, the procedural posture of the appeal was fundamentally different in *Mont Belvieu*. As the *Mont Belvieu* Court emphasized, *Mont Belvieu* sought “a 100% positive use determination” for its brine storage pond system” and it “opted to stand or fall based on a claimed entitlement to a 100% positive use determination. . . .”⁴² That is a very different situation than the current appeal where the question is not whether 100% is appropriate, but whether 0% is appropriate.

The distinct procedural posture leads to two different burdens of proof. All the TCEQ needed to demonstrate in *Mont Belvieu* is whether there was any productive value and then it could contend that 100% was inappropriate. The Court emphasized that *Mont Belvieu* acknowledged that its brine pond system was only “part” of the process by which it produces gas storage services for customers and that “subsections within section 11.31 contemplate – indeed require – that if property is not ‘wholly’ used for pollution control, TCEQ will limit any positive use determination to the proportion of the property that is.”⁴³

This is much different than the pending appeal where the TCEQ is claiming no pollution control benefit and all production benefit – the reverse of the *Mont Belvieu* situation. The TCEQ can no more dismiss the pollution control benefits of the HRSGs than *Mont Belvieu* could dismiss the productive value of its brine ponds.

A third distinguishing factor between *Mont Belvieu* and the current appeal is that the brine ponds in that case are not included on the 11.31(k) list like the HRSGs are. Therefore, the legislatively-established pollution control benefits of the equipment in question were not as clearly demonstrated as they are for HRSGs in the current appeal.

⁴¹ Texas Attorney General Opinion JC-0372 (2001) (emphasis added).

⁴² *Mont Belvieu Caverns, LLC. Tex. Comm’n on Envtl. Quality*, No. 03-11-00442 CV, 2012 WL 3155763 at 10 (Tex. App.—Austin 2012).

⁴³ *Id.* at 15.

Therefore, read correctly, *Mont Belvieu* does not support the Executive Director's position. In fact, it actually contradicts it because it makes clear that the TCEQ is to distinguish the proportion of the property at issue that is used to control, monitor, prevent or reduce pollution from the proportion of the property that is used to produce goods or services and the proportion that is used to control pollution qualifies for the tax exemption.⁴⁴ As discussed at length above and below, this proposition is clearly established by the statute and recognized in Attorney General Opinion JC-0372.

As discussed at length above in Section III, the Legislature's directive to TCEQ is set out very clearly in 11.31(k-m). The debate about whether production equipment can also be pollution control equipment is abruptly ended by the basic fact that many items of production-related equipment are included on the 11.31(k) list which the statute expressly recognizes as pollution control equipment. There is plenty of additional evidenced discussed above and below to support the clear statutory language, but nobody states it more clearly than the author of HB 3732 when he stated:

One of the goals of the legislation this session was to ensure that TCEQ had the authority and direction from the legislature to recognize that pollution control benefits can be derived from the manner in which fuel is prepared and used, and from increasing the efficiency of certain facilities. By doing so, the amount of fuel needed and the total amount of pollution emitted can be reduced. I did not intend, nor do I support, an interpretation of anything in HB 3732 to prevent electric generating facilities from receiving exemptions for equipment simply because they also derive profit from a given piece of equipment or process. If it reduces pollution, it qualifies.(emphasis added).⁴⁵

Although Appellant would not attempt to argue that a letter from an individual member of the legislature is controlling authority regarding legislative intent, the views of the author of the statute being interpreted are certainly worth considering. This is especially true in this case given that the Executive Director makes extensive legislative intent arguments that are in direct conflict with the written views of the bill's author.

D. HRSGs are Used to Meet/Exceed New Source Performance Standards (NSPS)

The Executive Director includes a number of arguments in its Response Brief that attempt to cast doubt on whether HRSGs are specifically required to be installed by an environmental regulation. To begin with, the test is not that an environmental regulation specifically calls for a specific piece of equipment. Rather, the Constitutional and statutory test is whether the equipment is "used, constructed, acquired, or installed wholly or partly to meet or exceed [environmental] rules or regulations." There are two phrases that are critical in that test: (1) "wholly or partly" and (2) "meet or exceed."

⁴⁴ *Id.* at 12.

⁴⁵ Letter from Rep. Rick Hardcastle to Grace Montgomery, Deputy Director of Administrative Services at the TCEQ, August 1, 2007 (See Attachment 5) (emphasis added).

By including the phrase “wholly or partly,” the Constitutional Amendment and implementing legislation make it clear that the equipment need not have been installed due solely to the existence of an environmental regulation. Moreover, by including the phrase “meet or exceed,” the Constitutional Amendment and legislation made it clear that the equipment in question may be more than the regulation calls for.

The Executive Director argues different things for different regulations that have applicability to the power plants impacted by the pending appeals, but the general basis of the Executive Director’s argument is that there is not a sufficient nexus between the cited environmental regulations and the pollution control claimed by the Applicant.

As an initial matter, it should not go unnoticed that the Executive Director previously thought that the regulatory citation of the same or similar provisions as relied upon in the pending appeals were relied upon by the 25 applications for which the Executive Director previously issued 100% positive use determination.

It is also important to note that none of the July 10, 2012 Negative Use determinations claim that the referenced environmental regulation was inapplicable or insufficient. Instead, the Executive Director waited until it filed its response brief to this appeal to provide copies of previously prepared “Application Review Summaries” which summarily state that “the cited regulations do not require the installation of a heat recovery steam generator or steam turbine.”⁴⁶ While the lack of any legal or technical evaluation is striking, what is even more egregious is the fact that the Executive Director’s Application Review Summary indicates that the Executive Director believes that an application for a positive use determination must cite to an environmental regulation that specifically requires the installation of a particular piece of equipment.

As noted above, the controlling statute says nothing of the sort. There is absolutely no requirement that before equipment is eligible for a tax exemption as pollution control property, an environmental regulation must specifically require that a specific piece of equipment be installed. Thus, the Executive Director’s “technical evaluation” completely misconstrues the statutory requirements and should be granted little weight.

Instead, the Commission must simply ask whether any environmental regulation exists that Applicant is meeting or exceeding through the use of the equipment for which an application for a use determination was submitted. That is the case here.

The Executive Director concedes that 40 CFR Part 60, Subpart KKKK includes an output-based emission limit on NOx that applies to an entire power plant. Rather than taking the logical step of acknowledging that HRSGs assist and, in fact, are essential to achieving the Subpart KKKK emission limit, the Executive Director makes a seemingly illogical leap to the conclusion that Subpart KKKK cannot be the qualifying environmental regulation because that Subpart would not apply until “after an applicant affirmatively decides to build a combined cycle plant.” Whatever that statement is intended to convey, it does not accurately reflect the regulatory framework.

⁴⁶ Executive Director’s Application Review Summary for the Cottonwood Energy Center (Attachment 1).

The "Applicability" section of 40 CFR Part 60, Subpart KKKK states "if you are the owner or operator of a stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10MBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005," your turbine is subject to this subpart."⁴⁷ So, it is clear that this regulation applies to "stationary combustion turbines" without reference to what type of equipment is installed in conjunction with those turbines.

Therefore, 40 CFR Part 60, Subpart KKKK clearly and unambiguously creates an output-based NOx emission limit that HRSGs are "used, constructed, acquired, or installed wholly or partly to meet or exceed." The only reason NRG Cottonwood is not directly governed by Subpart KKKK is that it was not "constructed, modified, or reconstructed after February 18, 2005." However, its equipment serves the same purpose. It would be inequitable and illogical for the TCEQ to apply the statute to say that NRG Cottonwood's HRSGs are not eligible while nearly identical and equally efficient HRSGs at a Subpart KKKK facility would be eligible.

The bottom line is that an output-based emission limit exists and HRSGs help to meet or exceed those limits. To say that the equipment cannot be exempt, in whole or in part, because it is not specifically designated by regulation is a misreading of the statute. And to implement the statute in a way that would grant an exemption to KKKK facilities but reject facilities that have not yet become subject to that provision would be inequitable and ignore the statutory criteria that affords the pollution control exemption not just to those who meet regulations, but those that exceed what is required of them as well.

VI. Equal and Uniform Taxation

The Executive Director's and OPIC's Responses state that the TCEQ's prior HRSG exemption authorizations were in error; that the TCEQ is at liberty to correct its prior interpretation; and that any resulting difference in ad valorem tax impact is not in violation of the Texas Constitution's equal and uniform tax mandate. As a threshold matter, the argument requires that the prior interpretations were incorrect, which they were not. It is next necessary to walk through the myriad of cases cited in the Response Briefs to better understand what those cases stand for and what they do not and how they in no way support the Negative Use determinations in this case.

The Executive Director cites *1756, Inc. vs. Attorney General*⁴⁸ for the proposition that "Agencies may, indeed are expected to, alter and refine their interpretation of what fills such gaps [in statutes] through the exercise of their technical expertise . . ." *1756, Inc.* is based entirely on federal administrative law, not Texas, but more importantly, neither the case nor the quote supports the Executive Director's position in this case. *1756, Inc.* argued that an Immigration and Naturalization Service ("INS") Rule⁴⁹ was promulgated improperly. After a thorough analysis of legislative history supporting the INS's rule, and expressly finding that "The meaning of the [underlying federal] statute *remains ambiguous* after the 'traditional tools of statutory

⁴⁷ 40 CFR §60.4305.

⁴⁸ *1756, Inc. vs. Attorney General of the United States*, 745 F. Supp. 9 (D.Ct. D.C. 1990).

⁴⁹ 8 C.F.R. 214.(1)(1)(ii)(D).

construction' have been applied," the 1756 Court upheld the agency's formally adopted rule.⁵⁰ The TCEQ has chosen not to comply with the Texas Administrative Procedures Act with respect to its new position on HRSGs. Legislative history does not support the agency's new position, and §11.31 is not ambiguous as applied to the facts of this case.

Moreover, 1756 requires that an agency bears "the burden of rationally explaining its departure from its previous interpretation", which the Executive Director has not even made an attempt to do in this case. Finally, while the Executive Director champions federal law seeming to allow inconsistent agency action, Texas law is to the contrary.

In *TGS-NOPEC Geophysical Company vs. Combs*, the Supreme Court invalidated the Comptroller's interpretation of the applicable statute, noting that her "own administrative interpretation of the sourcing statute further contradicts her argument here," "conflicts with her rule regarding the licensing of software," and was "inconsistent."⁵¹ The court went on to say that "an agency's construction of a statute may be considered only if it is reasonable and not inconsistent with the statute."⁵² The Executive Director's ruling in this case is neither.

The Executive Director cites *Flores vs. Employees Retirement System of Texas* for the proposition that "[a]n agency is not bound to follow its decisions in *contested cases* in the same way that a court is bound by precedent,"⁵³ provided that the agency gives a reasonable explanation for apparent inconsistency in agency interpretation. The *Flores* case involved allegations by a state employee that the Employee Retirement System of Texas (i) failed to follow its own prior decisions in denying her certain disability benefits and (ii) "applied a new policy in the course of her contested case hearing without providing notice before the hearing."⁵⁴ The Austin Court of Appeals agreed with Ms. Flores:

"We hold that the Board acted arbitrarily and capriciously by: deciding this appeal before it arrived at its findings of fact and conclusions of law, reweighing adjudicative facts, changing findings of fact and conclusions of law for unauthorized and unexplained reasons, making findings of fact and conclusions of law without adequate support in the record, and failing to give notice before the hearing of its intention not to follow previous decisions and failing to adequately explain the reasoning for its change in position."⁵⁵

The *Flores* case fairly stands for the proposition that agencies may not internally arrive at a new policy during the course of a contested case and apply it to change the outcome of the case, which is what the Executive Director is attempting to do, without providing a reasonable explanation nor the inconsistency. The *Flores* case supports the Applicant's position.

⁵⁰ *1756 Inc.*, 745 F. Supp. at p. 15.

⁵¹ *TGS-NOPEC Geophysical Company vs. Combs*, 340 S.W.3d 432, 443 (Tex. 2011).

⁵² *Id.*

⁵³ *Flores vs. Employees Retirement System of Texas*, 74 S.W.3d 532, 544 (Tex. App.—Austin 2002) (emphasis added).

⁵⁴ *Flores vs. Employees Retirement System of Texas*, 74 S.W.3d 532 at 538.

⁵⁵ *Id.* at 545.

The actions of the Executive Director in this case are the essence of arbitrary and capricious agency action and “arbitrary action of an administrative action cannot stand”.⁵⁶ When those actions are compared to those of the agency in Flores, and the companion case of *Langford v. Employees Retirement System*, “serious due process concerns” are raised.⁵⁷

The Executive Director also cites the Austin Court of Appeals decision in *First American Title vs. Strayhorn*⁵⁸ for the position that an agency may change its interpretation of a statutory tax scheme as long as the new interpretation does not contradict the statute or a formally promulgated rule. In *First American*, the Texas Comptroller formally promulgated a new version of its Rule 3.831 that impacted the way foreign insurers were required to remit the Texas retaliatory tax. The Austin Court Appeals expressly found that the new rule did not “impose any additional restrictions, conditions, or burdens that [were] inconsistent with the [applicable] statute.”⁵⁹ The facts in *First American* are not consistent with this case. In the current case the Executive Director’s proposed policy change has not been promulgated as a formal rule pursuant to the requirements of the Texas Administrative Procedures Act. In addition, the policy change is away from a position that is consistent with §11.31 of the Texas Tax Code to one that is inconsistent⁶⁰ with it. The *First American* case supports the Applicant’s position given the facts in the current case.

The Executive Director cites *Grocer’s Supply Co. vs. Sharp*⁶¹ for the proposition that an agency can change its interpretation of a statute because the prior interpretation had not been adopted in a formal rule. The *Grocer Supply* Court stated the issue in the case as follows:

“What is at issue in this case, then, is the Comptroller’s substitution of one interpretation of his rule for another, not the Comptroller’s contravention of one of his rules promulgated under the notice-and-comment procedures of the Administrative Procedures Act.”⁶²

The *Grocer Supply* Court found that the Texas Comptroller had (i) correctly enforced one refund policy from 1965 through sometime in 1984, (ii) incorrectly changed the refund policy to one inconsistent with Texas Supreme Court precedent from 1984 through 1993; and (iii) from 1992 to 1997 enforced the new policy without promulgating a new rule on the issue. On these facts the Court found that the Comptroller should be allowed to correct and enforce his policy interpretation.

⁵⁶ *Lewis v. Metropolitan Savings and Loan Association*, 550 S.W.2d 11, 16 (Tex. 1977).

⁵⁷ *Langford v. Employees Retirement System*, 73 S.W.3d 560, 566 (Tex. App.—Austin 2002, pet. denied).

⁵⁸ *First American Title vs. Strayhorn*, 169 S.W.3d 298 (Tex. App.—Austin 2005), *aff’d* by *First American Title Ins. Co. vs. Combs*, 258 S.W. 627 (Tex. 2008).

⁵⁹ *First American Title Ins. Co. vs. Strayhorn*, 169 S.W.3d at 310.

⁶⁰ Page 15 of the Executive Director’s brief cites the following quote: “[Taxpayers] do not acquire a right to pay less in taxes . . . because a tax policy was incorrectly implemented” as stemming from a page “642,” which would be from the Dissent in the Texas Supreme Court’s *First American* decision. For clarification and future reference, the quote comes from the Austin Court of Appeals *First American* decision at page 313.

⁶¹ *Grocers Supply Co. v. Sharp*, 978 S.W.2d 638 (Tex. App.—Austin 1998, pet. denied).

⁶² *Id.* at 642.

The facts in *Grocer Supply* are not precedent for the current case. In this case the TCEQ had previously interpreted and enforced §11.31 according to its plain meaning. The Executive Director is now attempting to change that interpretation, inconsistent with the plain meaning of the statute and without complying with the Texas Administrative Procedures Act. *Grocers Supply* no longer has any precedential value on the point that an agency can change a policy interpretation of general applicability without promulgating a rule, because it is in direct opposition to the more recent opinion of *Combs vs. Entertainment Publications*,⁶³ which definitively holds that a change in a policy interpretation meeting the standards of a rule must to be promulgated under the Texas Administrative Procedures Act. Further, the conclusion of the *Grocer Supply* Court offers some insight into agency attempts to avoid established rulemaking procedures:

“In resolving the claims of Grocers Supply in favor of the Comptroller, we should not be construed as endorsing or approving the manner in which the Comptroller has dealt with exemption requests such as that of Grocers Supply. The record before us does not reflect why the Comptroller from time to time varied his position, particularly in light of the supreme court's straightforward pronouncement of legislative intent. These actions do not foster the confidence and certainty in government upon which the people of this State are entitled to rely.”⁶⁴

None of the cases cited by the Executive Director or OPIC in their equal and uniform tax arguments involve property taxes. Instead, they deal with changes: (a) from an agency position found by a court to be inconsistent with a statute or binding Texas Supreme Court precedent (b) to an agency interpretation found by the court to be consistent with a statute or other binding precedent. The exact opposite pattern is in play here where there is a proposed agency change from a position consistent with a statutory directive to one patently inconsistent with it. If sustained, the divergent property tax impact violates equal and uniform taxation.

The Texas Constitution's equal and uniform tax⁶⁵ mandate requires that all persons falling within the same class be taxed alike.⁶⁶ We are fortunate to have a contemporaneous description of the history and scope of the equal and uniform tax mandate as reported by the Texas Supreme Court.⁶⁷ In *In Re Nestle*, the Court reviewed statutory distinctions drawn between different taxpayers under the Texas franchise tax and confirmed that the Texas legislature may make distinctions between taxpayers, but that such distinction must be supported by more than mere rational classification.⁶⁸ And, while the Texas Legislature has broad authority to “pursue policy goals through tax legislation”⁶⁹ it must do so only with respect to “goals related to the taxation”

⁶³ *Combs v. Entertainment Publications, Inc.*, 292 S.W.3d 712 (Tex. App.—Austin 2009, *no pet.*).

⁶⁴ *Grocers Supply*, 978 S.W.2d at 645.

⁶⁵ See TEX. CONST. art. I, § 3; U.S. CONST. amend. XIV, § 1.

⁶⁶ *Id.*; citing *Sharp v. Caterpillar, Inc.*, 932 S.W.2d 230, 240 (Tex. App.—Austin 1996, writ denied) (citing *Hurt v. Cooper*, 110 S.W.2d 896, 901 (Tex. 1937)).

⁶⁷ *In Re Nestle USA, Inc.*, Cause No. 12-0518 (Tex. Oct. 19, 2012).

⁶⁸ *Id.* at 19.

⁶⁹ *Id.* at 20.

and “must attempt to group similar things and differentiate dissimilar things.”⁷⁰ The *Nestle* decision makes it clear that the equal and uniform tax mandate is more strict with respect to property taxes: “[t]he Legislature’s authority to make classifications in levying occupation, use and sales taxes unquestionably is broader than its authority to do so with respect to ad valorem taxes.”

If the Executive Director could sustain its incorrect new interpretation of §11.31, then it would violate the equal and uniform tax mandate as set forth in the *Nestle* decision, because there is no reasonable or even rational distinction between HRSGs the TCEQ has authorized 100% property tax exemptions for and the HRSGs the Executive Director now proposes to issue negative use determinations.

In *Calvert v. McLemore*, the Texas Supreme Court reasoned as follows:

“The courts can only interfere . . . when it is made clearly to appear that an attempted classification has *no reasonable basis* in the nature of the businesses classified, and that the law operates *unequally* upon *subjects between which there is no real difference* to justify the separate treatment of them undertaken by the Legislature The statute is plainly a revenue measure. It does not relate in any way to the public safety, morals, convenience or general welfare [A]nyone who exhibits a motion picture or play at a place other than a fixed and regularly established motion picture theater must pay a tax. Another person who exhibits the same picture or play to a similar audience in an adjoining building of the same construction escapes payment of the tax merely because he regularly shows motion pictures in that building. The discrimination is too plain to admit of argument, and we agree with the trial court that [the law] is unconstitutional.”⁷¹

Applying *McLemore’s* analysis to this case, there is no reasonable or rational basis for the discrimination proposed. The Executive Director’s position operates unequally upon subjects between which there is no real difference to justify separate treatment by the legislature. The distinction does not relate in any way to the public safety, morals, convenience or general welfare, and are void under the equal and uniform tax provisions of the Texas Constitution.

VII. Conclusion

The arguments made by the Executive Director, OPIC, and the Appraisal District are based on misapplications of the controlling statute, policy concerns outside of the Agency’s purview, and inadequate technical review. Texas Tax Code §11.31 provides a straightforward roadmap for how the TCEQ must process, evaluate, and resolve applications for use determinations. This process expressly contemplates that the pollution control aspects of “devices and methods” may also have productive value and instructs the TCEQ, not to dismiss applications with negative use determinations, but instead to acknowledge the legislatively-established pollution control benefits of items on the 11.31(k) list and then develop a full or partial positive use determination

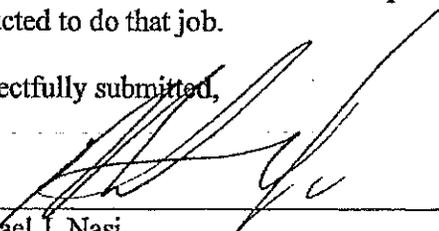
⁷⁰ *Id.*

⁷¹ *Calvert v. McLemore*, 358 S.W.2d at 552 (Tex. 1962) (emphasis added).

after factoring in the concurrent pollution control and production benefits of the equipment in question.

In the instant case, the Executive Director and the General Counsel did not follow the procedural requirements for processing these applications as laid out in §11.31 and failed to apply a consistent approach for all similarly situated applications. Again, the question on appeal is not whether 100% or another specific percentage is appropriate - the Commissioners need only evaluate whether any percentage above zero is appropriate and, if so, a remand is required. As set forth fully above, the express language of the statute demands that a percentage above zero be recognized so the only legally valid outcome is for the Commission to put things back on the right track by remanding the applications to the Executive Director to determine what percentage of a positive use determination is appropriate. The Executive Director has the staff expertise and tools to do this job. All that we ask that they be instructed to do that job.

Respectfully submitted,



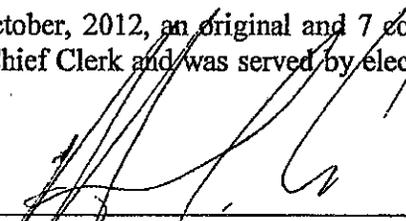
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ATTORNEYS FOR
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CERTIFICATE OF SERVICE

I hereby certify that on the 30th day of October, 2012, an original and 7 copies of the foregoing was filed with the TCEQ Office of the Chief Clerk and was served by electronic mail or U.S. First Class Mail to the attached mailing list.



Michael J. Nasi

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Attachment 1

Application Review Summary

Application Number: 15505
Company: Cottonwood Energy Company, LP
Facility: Cottonwood Energy Center
County: Newton
Tier: III
Estimated Cost of Property: \$26,043,320.00
Project Reviewer: Ronald Hatlett

Description of Property and Environmental Benefit

This project installed a heat recovery steam generator and dedicated ancillary systems. The equipment allows the facility to generate more electricity per unit of fuel burned. However, the equipment does not result in an actual reduction of emissions at the facility.

Rule Citation(s)

40 CFR 60.44Da: Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978; Standard for nitrogen oxides (NOX). This regulation does not require the installation of heat recovery steam generators. The applicant states that the use of this equipment allows the facility to meet Best Available Control Technology emission limitations established in their Federal Operating Permit. Neither of these are appropriate citations.

Final Determination

A negative determination for the heat recovery steam generator and its dedicated ancillary equipment are used for production not pollution control and therefore not eligible for tax relief. Further, the cited regulations do not require installation of the heat recovery steam generator.

Administrative Review

Administrative Review Chronology

Received Date: 07/05/2011

Date Application Was Declared Administratively Complete: 07/13/2011

Fee Information

Application Fee Paid: Yes

Fee Receipt Number: R128598

Does Applicant Have Past Due Fees: No

Technical Review

Technical Review Chronology

Technical Review Start Date: 11/14/2011

Technical Review Completion Date: 07/05/2012

Ronald Hatlett 7/5/12
Project Reviewer Date

[Signature] 7/9
Work Leader Date

Application Review Summary

Application Number: 16412
Company: Cottonwood Energy Compnay, LP
Facility: Cottonwood Energy Center
County: Newton
Tier: III
Estimated Cost of Property: \$60,584,465.00
Project Reviewer: Ronald Hatlett

Description of Property

Unit 2 heat recovery steam generator and dedicated ancillary system.

Tier III Partial Percentage: 42.99%

Environmental Benefit

Use of this equipment improves the thermal efficiency of the plant.

Rule Citation(s)

The applicant cites 40 Code of Federal Regulations (CFR) §60.44Da(a) – Standard for nitrogen oxides (NOx) for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978. This citation establishes NOx emission standards for certain power plants. In addition, the applicant cites 30 Texas Administrative Code §122.143(4). This citation requires the permit holder to comply with all terms and conditions codified in the permit. Neither citation requires the installation of heat recovery steam generators and dedicated ancillary systems.

Final Determination

A negative determination for the heat recovery steam generator and associated dedicated ancillary equipment.

Administrative Review

Administrative Review Chronology

Application Received: 12/02/11

Application Administrative Review Start: 04/19/12

Application Administrative Review Complete: 04/19/12

Fee Information

Application Fee Paid: \$2,500.00

Fee Receipt Number(s):

R211805

Does Applicant Have Past Due Fees: No.

Technical Review

Technical Review Chronology

Application Technical Review Started: 07/06/12

Application Number 16412

Page 2

Application Technical Review Complete: 07/06/12

Ronald H. [Signature] 7/6/12
Project Reviewer Date

[Signature] 7/9
Work Leader Date

Application Review Summary

Application Number: 16411
Company: Cottonwood Energy Compnay, LP
Facility: Cottonwood Energy Center
County: Newton
Tier: III
Estimated Cost of Property: \$26,043,320.00
Project Reviewer: Ronald Hatlett

Description of Property

Unit 3 heat recovery steam generator and dedicated ancillary system.

Tier III Partial Percentage: 42.99%

Environmental Benefit

Use of this equipment improves the thermal efficiency of the plant.

Rule Citation(s)

The applicant cites 40 Code of Federal Regulations (CFR) §60.44Da(a) – Standard for nitrogen oxides (NOx) for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978. This citation establishes NOx emission standards for certain power plants. In addition, the applicant cites 30 Texas Administrative Code §122.143(4). This citation requires the permit holder to comply with all terms and conditions codified in the permit. Neither citation requires the installation of heat recovery steam generators and dedicated ancillary systems.

Final Determination

A negative determination for the heat recovery steam generator and associated dedicated ancillary equipment.

Administrative Review

Administrative Review Chronology

Application Received: 12/02/11

Application Administrative Review Start: 04/19/12

Application Administrative Review Complete: 04/19/12

Fee Information

Application Fee Paid: \$2,500.00

Fee Receipt Number(s):

R211804

Does Applicant Have Past Due Fees: No.

Technical Review

Technical Review Chronology

Application Technical Review Started: 07/06/12

Application Number 16411

Page 2

Application Technical Review Complete: 07/06/12

Ronald H. [Signature] 7/6/12
Project Reviewer Date

[Signature] 5/9/12
Work Leader Date

Application Review Summary

Application Number: 16410
Company: Cottonwood Energy Compnay, LP
Facility: Cottonwood Energy Center
County: Newton
Tier: III
Estimated Cost of Property: \$60,584,645.00
Project Reviewer: Ronald Hatlett

Description of Property

Unit 4 heat recovery steam generator and dedicated ancillary system.

Tier III Partial Percentage: 42.99%

Environmental Benefit

Use of this equipment improves the thermal efficiency of the plant.

Rule Citation(s)

The applicant cites 40 Code of Federal Regulations (CFR) §60.44Da(a) -- Standard for nitrogen oxides (NOx) for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978. This citation establishes NOx emission standards for certain power plants. In addition, the applicant cites 30 Texas Administrative Code §122.143(4). This citation requires the permit holder to comply with all terms and conditions codified in the permit. Neither citation requires the installation of heat recovery steam generators and dedicated ancillary systems.

Final Determination

A negative determination for the heat recovery steam generator and associated dedicated ancillary equipment.

Administrative Review

Administrative Review Chronology

Application Received: 12/02/11

Application Administrative Review Start: 04/19/12

Application Administrative Review Complete: 04/19/12

Fee Information

Application Fee Paid: \$2,500.00

Fee Receipt Number(s):

R211803

Does Applicant Have Past Due Fees: No.

Technical Review

Technical Review Chronology

Application Technical Review Started: 07/06/12

Application Number 16410

Page 2

Application Technical Review Complete: 07/06/12

Ronald H. Holt 7/6/12
Project Reviewer Date

Spencer 7/9/12
Work Leader Date

Attachment 2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG - 5 2004

OFFICE OF
AIR AND RADIATION

MEMORANDUM

SUBJECT: Guidance on SIP Credits for Emission Reductions from Electric-Sector Energy Efficiency and Renewable Energy Measures

FROM: Brian McLean, Director
Office of Atmospheric Programs *Brian McLean*

Steve Page, Director
Office of Air Quality Planning and Standards *Steve Page*

TO: Regional Air Division Directors

Attached is a final document that provides guidance to States and local areas on quantifying and including emission reductions from energy efficiency and renewable energy measures in State Implementation Plans (SIPs). The guidance has been developed jointly by the Office of Air Quality Planning and Standards (OAQPS) and the Office of Atmospheric Programs (OAP).

Energy efficiency and renewable energy measures have many benefits. Energy efficiency measures reduce electricity consumption and renewable energy can supply energy from non- or less-polluting sources. These measures can save money, have other economic benefits, reduce dependence on foreign sources of fuel, increase the reliability of the electricity grid, enhance energy security, and, most importantly for air quality purposes, reduce air emissions from electric generating power plants. Energy efficiency and renewable energy inherently prevent pollution from occurring. Additionally, in many areas, the peak demand for electricity frequently coincides with periods of poor air quality. It is therefore desirable to encourage and reward greater application of energy efficiency and renewable energy measures and incorporate the emission reductions that these measures will accrue into the air quality planning process.

Please distribute this guidance to your state and local air pollution control agencies, interested members of the regulated community and the public. An electronic version of this final guidance can be found at <http://www.epa.gov/ttn/oarpg> under "Recent Additions." If your staff have any questions regarding this guidance please have them contact Art Diem of OAP at (202) 343-9340 or David Solomon of OAQPS at (919) 541-5375.

Attachment

Attachment 3

TAX EXEMPTION PROGRAM

Ohio Revised Code (ORC) Sections 5709.20 through 5709.27

5709.20 Definitions

5709.201 Continuing validity of certificates; transfer of pending applications.

5709.21 Certification procedure

5709.211 Opinion of EPA director or development director to be obtained prior to issuance of certificate.

5709.212. Application fee.

5709.22 Powers and duties of tax commissioner

5709.23 Notice to applicant and county auditor

5709.24 Appeal

5709.25 Exemption of pollution control facilities

5709.26 Liability in case of fraud

5709.27 Exemption certificate transfer

§ 5709.20 Definitions.

(A) "Air contaminant" means particulate matter, dust, fumes, gas, mist, smoke, vapor, or odorous substances, or any combination thereof.

(B) "Air pollution control facility" means any property designed, constructed, or installed for the primary purpose of eliminating or reducing the emission of, or ground level concentration of, air contaminants generated at an industrial or commercial plant or site that renders air harmful or inimical to the public health or to property within this state, or such property installed on or after November 1, 1993, at a petroleum refinery for the primary purpose of eliminating or reducing substances within fuel that otherwise would create the emission of air contaminants upon the combustion of fuel.

(C) "Energy conversion" means the conversion of fuel or power usage and consumption from natural gas to an alternate fuel or power source other than propane, butane, naphtha, or fuel oil; or the conversion of fuel or power usage and consumption from fuel oil to an alternate fuel or power source other than natural gas, propane, butane, or naphtha.

(D) "Energy conversion facility" means any additional property or equipment designed, constructed, or installed after December 31, 1974, for use at an industrial or commercial plant or site for the primary purpose of energy conversion.

(E) "Exempt facility" means any of the facilities defined in division (B), (D), (F), (I), (K) or (L) of this section for which an exempt facility certificate is issued pursuant to section 5709.21 or for which a certificate remains valid under section 5709.201 [5709.20.1] of the Revised Code.

(F) "Noise pollution control facility" means any property designed, constructed, or installed for use at an industrial or commercial plant or site for the primary purpose of eliminating or reducing, at that plant or site, the emission of sound which is harmful or inimical to persons or property, or materially reduces the quality of the environment, as shall be determined by the director of environmental protection within such standards for noise pollution control facilities and standards for environmental noise necessary to protect public health and welfare as may be promulgated by the United States environmental protection agency. In the absence of such United States environmental protection agency standards, the determination shall be made in accordance with generally accepted current standards of good engineering practice in environmental noise control.

(G) "Solid waste" means such unwanted residual solid or semi-solid material as results from industrial operations, including those of public utility companies, and commercial, distribution, research, agricultural, and community operations, including garbage, combustible or noncombustible, street dirt, and debris.

(H) "Solid waste energy conversion" means the conversion of solid waste into energy and the utilization of such energy for some useful purpose.

(I) "Solid waste energy conversion facility" means any property or equipment designed, constructed, or installed after December 31, 1974, for use at an industrial or a commercial plant or site for the primary purpose of solid waste energy conversion.

(J) "Thermal efficiency improvement" means the recovery and use of waste heat or waste steam produced incidental to electric power generation, industrial process heat generation, lighting, refrigeration, or space heating.

(K) "Thermal efficiency improvement facility" means any property or equipment designed, constructed, or installed after December 31, 1974, for use at an industrial or a commercial plant or site for the primary purpose of thermal efficiency improvement.

(L) "Industrial water pollution control facility" means any property designed, constructed, or installed for the primary purpose of collecting or conducting industrial waste to a point of disposal or treatment; reducing, controlling, or eliminating water pollution caused by industrial waste; or reducing, controlling, or eliminating the discharge into a disposal system of industrial waste or what would be industrial waste if discharged into the waters of this state. This division applies only to property related to an industrial water pollution control facility placed into operation or initially capable of operation after December 31, 1965, and installed pursuant to the approval of the environmental protection agency or any other governmental agency having authority to approve the installation of industrial water pollution control facilities. The definitions in section 6111.01 of the Revised Code, as applicable, apply to the terms used in this division.

(M) Property designed, constructed, installed, used, or placed in operation primarily for the safety, health, protection, or benefit, or any combination thereof, of personnel of a business, or primarily for a business's own benefit, is not an "exempt facility."

HISTORY: 130 v 1304 (Eff 10-14-63); 133 v S 169 (Eff 10-2-69); 135 v H 621 (Eff 11-22-73); 136 v S 498. Eff 1-17-77; 150 v H 95, § 1, eff. 6-26-03.

§ 5709.201. Continuing validity of certificates; transfer of pending applications.

(A) Except as provided in divisions (C)(4)(a) and (c) of section 5709.22 and division (F) of section 5709.25 of the Revised Code, a certificate issued under section 5709.21, 5709.31, 5709.46, or 6111.31 of the Revised Code that was valid and in effect on the effective date of this section shall continue in effect subject to the law as it existed before that effective date. Division (C)(4)(b) of section 5709.22 of the Revised Code does not apply to any certificate issued by the tax commissioner before July 1, 2003.

(B) Any applications pending on the effective date of this section for which a certificate had not been issued on or before that effective date under section 6111.31 of the Revised Code shall be transferred to the tax commissioner for further administering. Sections 5709.20 to 5709.27 of the Revised Code apply to such pending applications, excluding the requirement of section 5709.212 [5709.21.2] of the Revised Code that applicants must pay the fee.

(C) For applications pending on the effective date of this section, division (D) of section 5709.25 of the Revised Code allowing the commissioner to assess any additional tax notwithstanding any other time

limitations imposed by law on the denied portion of the applicant's claim applies only to tax periods that would otherwise be open to assessment on that effective date.

HISTORY: 150 v H 95, § 1, eff. 6-26-03.

← Back to Top

§ 5709.21 Certification procedure.

(A) As used in this section:

(1) "Exclusive property" means real and personal property that is installed, used, and necessary for the operation of an exempt facility, and that is not auxiliary property unless the auxiliary property exempt cost equals or exceeds eighty-five per cent of the total cost of the property.

(2) "Auxiliary property" means personal property installed, used, and necessary for the operation of an exempt facility that is also used in other operations of the business other than an exempt facility purpose described in section 5709.20 of the Revised Code. "Auxiliary property" does not include property with an auxiliary property exempt cost that is less than or equal to fifteen per cent of the total cost of such property.

(3) "Auxiliary property exempt cost" means the cost of auxiliary property calculated as follows:

(a) If the auxiliary property is used for an exempt facility purpose for discrete periods of time, the exempt cost shall be determined by the ratio of time the auxiliary property is in use in such exempt capacity to the total time it is in use. Division (A)(3)(a) of this section does not apply if the property is concurrently used for an exempt facility purpose and a nonexempt facility purpose.

(b) The applicant has the burden of proving the exempt cost of all auxiliary property not described in division (A)(3)(a) of this section.

(c) Any cost related to an expansion of the commercial or industrial site that is not related to the operation of the exempt facility shall not be included as an auxiliary exempt cost under division (A)(3) of this section.

(B) Application for an exempt facility certificate shall be filed with the tax commissioner in such manner and in such form as prescribed by the tax commissioner. The application shall contain plans and specifications of the property, including all materials incorporated or to be incorporated therein and their associated costs, and a descriptive list of all equipment acquired or to be acquired by the applicant for the exempt facility and its associated cost. If the commissioner finds that the property was designed primarily as an exempt facility and is suitable and reasonably adequate for such purpose and is intended for such purpose, the commissioner shall enter a finding and issue a certificate to that effect. The effective date of the certificate shall be the date the application was made for such certificate or the date of the construction of the facility, whichever is earlier.

Nothing in this section shall be construed to extend the time period to file, to keep the time period to file open, or supersede the requirement of filing a tax refund or other tax reduction request in the manner and within the time prescribed by law.

(C) (1) Except as provided in division (C)(2) of this section, the certificate shall permit tax exemption pursuant to section 5709.25 of the Revised Code only for that portion of such exempt facility that is exclusive property used for a purpose enumerated in section 5709.20 of the Revised Code. . . .

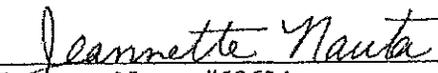
Attachment 4

6. FURTHER AFFIANT SAYETH NOT."



Robert Roland

BEFORE ME, the undersigned authority, on this the 29th day of October 2012, personally appeared Robert Roland, who being duly sworn on his oath, deposed and said that he has read the foregoing and that every factual statement made therein is within his knowledge and is true and correct.



Jeannette Nauta, #58634
Notary Public in and for the State of Louisiana
My Commission is for life

DUFF & PHELPS

TCEQ Cashier's Office - MC-214
Building A
12100 Park 35 Circle
Austin, TX 78753

June 30, 2011

Re: Application for Use Determination for Air Pollution Control Property Located at Cottonwood Energy Center in Newton County, Texas

Enclosed please find one application (the "Application") for property tax exemption for Air Pollution Control Property located at Cottonwood Energy Center (the "Facility") in Newton County, Texas. A copy of the Application has been provided for the appraisal district.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier III Application. Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier III Application is \$2,500. Please find enclosed a check for the \$2,500 Tier III Application Fee.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier III	Unit 1 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	\$ 28,043,320

Please send one copy of the completed property tax exemption Use Determination to the following address:

Mr. Greg Maxim
Duff & Phelps LLC
919 Congress Avenue, Suite 1450
Austin, TX 78701

Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, TX 78701

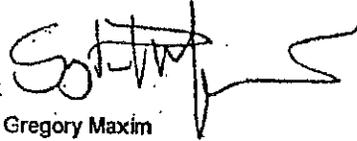
T +1 512 671 6580
F +1 512 351 7811

gregory.maxim@duffandphelps.com
www.duffandphelps.com

TCEQ Cashier's Office
June 30, 2011
Page 2 of 2

If you have any questions regarding the Application or the information supplied within the Application, please contact me, Greg Maxim, Director, Duff & Phelps LLC, at (512) 671-5580 or by e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,



Gregory Maxim
Director
Specialty Tax

Enclosures

cc: Ms. Kathryn Tronsberg Macciocca (Duff & Phelps, LLC)

Texas Commission on Environmental Quality

Use Determination for Pollution Control Property Application

A person seeking a use determination must complete this application form. For assistance in completing the application form please refer to the *Instructions for Use Determination for Pollution Control Property Application Form TCEQ-00611*, as well as the rules governing the Tax Relief Program in Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Information relating to completing this application form is also available in the TCEQ regulatory guidance document, *Property-Tax Exemptions for Pollution Control Property, RG-461*. For additional assistance, please call the Tax Relief Program at 512-239-4900.

You must supply information for each field of this application form unless otherwise noted.

Section 1. Eligibility

1. Is the property/equipment subject to any lease, lease-to-own agreement, or environmental incentive grant? Yes No
2. Is the property/equipment used solely to manufacture or produce a product or provide a service that prevents, monitors, controls, or reduces air, water or land pollution?
Yes No
3. Was the property/equipment acquired, constructed, installed, or replaced before January 1, 1994? Yes No

If the answer to any of these questions is 'Yes', then the property/equipment is not eligible for a tax exemption under this program.

Section 2. General Information

1. What is the type of ownership of this facility?
Corporation Partnership Utility
Sole Proprietor Limited Partner Other: **Limited Liability**
2. Size of Company: Number of Employees
1 to 99 500 to 999 2,000 to 4,999
100 to 499 1,000 to 1,999 5,000 or more
3. Business Description: (Briefly describe the type of business or activity at the facility)
Natural Gas-Fired Electric Power Generation
4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility. **221122 - Electric Power Generation, fossil fuel**

Section 3. Type of Application and Fee

1. Select only one:

Tier I - Fee: \$150

Tier II - Fee: \$1,000

Tier III - Fee: \$2,500

2. Payment Information:

Check/Money Order/Electronic Payment Receipt Number:

Payment Type: Check

Payment Amount: \$2,500

Name on payment: Duff & Phelps

Total Amount: \$2,500

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

Section 4. Property/Equipment Owner Information

1. Company Name of Owner: Cottonwood Energy Company LP

2. Mailing Address: 976 County Road 4213

3. City, State, Zip: Deweyville, TX 77614

4. Customer Number (CN): CN602765687

5. Regulated Entity Number (RN):RN100226109

6. Is this property/equipment owned by the CN listed in Question 4? Yes No

If the answer is 'No,' please explain: N/A

7. Is this property/equipment leased from a third party? Yes No

If the answer is 'Yes,' please explain: N/A

8. Is this property/equipment operated by the RN listed in Question 5? Yes No

If the answer is 'No,' please explain: N/A

Section 5. Name of Property/Equipment Operator (If different from Owner)

1. Company Name: N/A

2. Mailing Address: N/A

3. City, State, Zip: N/A

4. Customer Number (CN): N/A

5. Regulated Entity Number (RN):N/A

Section 6. Physical Location of Property/Equipment

1. Name of Facility or Unit where the property/equipment is physically located:

Cottonwood Energy Center

2. Type of Mfg. Process or Service: Natural Gas-Fired Electric Power Generation

3. Street Address: 976 County Road 4213
4. City, State, Zip: Deweyville, TX 77614

Section 7. Appraisal District with Taxing Authority

1. Appraisal District: Newton County
2. District Account Number(s): 9900015-0805153

Section 8. Contact Name

1. Company Name: Duff & Phelps, LLC
2. First Name of Contact: Greg
3. Last Name of Contact: Maxim
4. Salutation: Mr. Mrs. Ms. Dr. Other:
5. Title: Director
6. Mailing Address: 919 Congress Avenue, Suite 1450
7. City, State, Zip: Austin, TX 78701
8. Phone Number/Fax Number: (P) 512-671-5580; (F) 512-351-7911
9. Email Address: Gregory.maxim@duffandphelps.com
10. Tracking Number (optional): CC-2011-48

Section 9. Property/Equipment Description, Applicable Rule, and Environmental Benefit

For each piece, or each category, of pollution control property/equipment for which a use determination is being sought, answer the following questions.

Attach additional response sheets to the application for each piece of integrated pollution control property/equipment if a use determination is being sought for more than one (1) piece.

General Information

1. Name the property/equipment:
Unit 1 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems
2. Is the property/equipment used 100% as pollution control equipment? Yes No
If the answer is 'Yes,' explain how it was determined that the equipment is used 100% for pollution control: N/A. See Calculation of Percentage of pollution control Property in attached Cost Analysis Procedure ("CAP") Model.
3. Does the property/equipment generate a Marketable Product? Yes No
If the answer is 'Yes,' describe the marketable product: Electricity
4. What is the appropriate Tier I Table or Expedited Review List number? ERL #8
5. Is the property/equipment integrated pollution control equipment? Yes No

If the answer is 'No,' separate applications must be filed for each piece of property/equipment.

6. List applicable permit number(s) for the property/equipment: Title V Operating Permit O2338

Incremental Cost Difference

7. Is the Tier I Table percentage based on the incremental cost difference? Yes No N/A

If the answer is 'Yes,' answer the following questions:

8. What is the cost of the new piece of property/equipment? N/A
9. What is the cost of the comparable property/equipment? N/A
10. How was the value of the comparable property/equipment calculated? N/A

Property/Equipment Description

11. Describe the property/equipment. (What is it? Where is it? How is it used?)

Background: Cottonwood Energy Center

The Cottonwood Energy Center (the "Facility") is a natural gas-fired, combined cycle power generating facility located in Deweyville, Newton County, Texas. Four GE 7-FA combustion turbines are routed to four Foster Wheeler heat recovery steam generators ("HRSGs"), which provide steam to four Alstom steam turbine-generator sets. The Facility began commercial operation in December 2003. It has a base load capacity of 1,260 MW. The Facility serves the SERC Reliability Corporation region.

Pollution Control Property Description -- Cottonwood Unit 1 HRSG

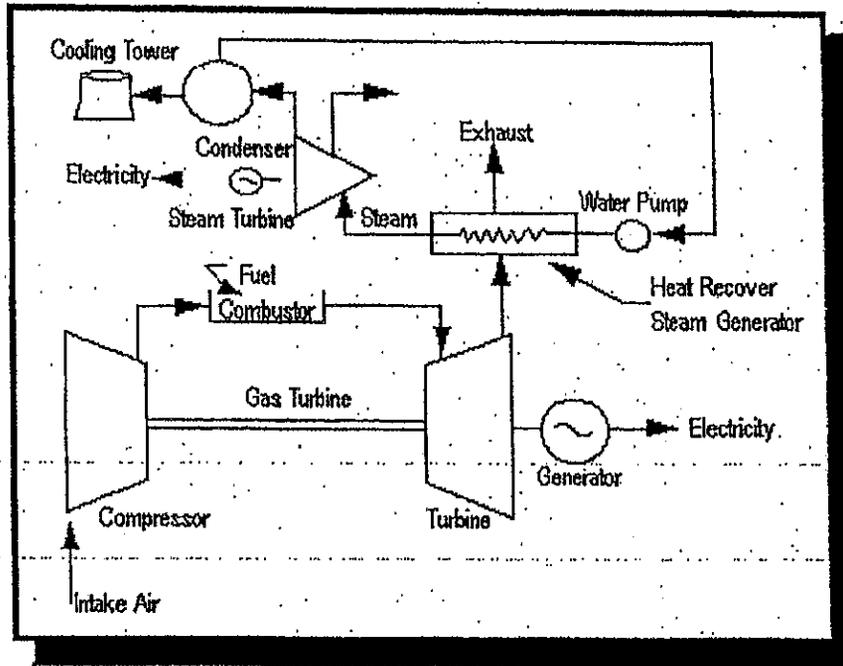
The pollution control property described in this Application is the Unit 1 HRSG and dedicated ancillary system (the "PC Property") installations.

Cottonwood Unit 1 HRSG

The Facility consists of a combined-cycle gas turbine power plant with four (4) gas Combustion Turbines ("CTs") each equipped with HRSGs and dedicated ancillary systems necessary to capture heat from the CTs' exhaust and convert it into electrical power. The Unit 1 HRSG captures and utilizes the waste heat of combustion from the Unit 1 CT exhaust gas and utilizes this waste heat to produce steam, which in turn powers a steam turbine-generator set to produce electric power at the Facility in addition to the electric power generated by the CT alone.

The Facility gains both production and pollution control benefits from the subject PC Property. First, the use of this waste heat of combustion by the Unit 1 HRSG creates a thermal efficiency benefit for the Facility. Specifically, the use of waste heat in the Unit 1 CT exhaust gas results in the conversion of approximately 50% of the chemical energy of the natural gas utilized at the Facility into electricity (HHV basis), a gain over the CT's alone's use of the fuel. Secondly, due to this efficiency gain, the Facility is able to generate fewer emissions (particularly NO_x emissions) than a traditional power generation facility utilizing a single thermodynamic cycle; and allowing the subject PC Property to appear on the Expedited Review List.

The Figure below is representative of a simplified combined-cycle plant process flow.



Please see the Cost Analysis Procedure ("CAP") Model attached for the calculation of the percentage of the subject pollution control property eligible for property tax exemption.

Applicable Rule

12. What adopted environmental rule or regulation is being met by the construction or installation of the property/equipment? The citation must be to the subsection level.

The PC Property was installed to meet the requirements of 40 CFR Part 60.44da(a) "Standards for nitrogen oxides ("NOx") for Electric Utility Steam generating units for New Source Performance Standards ("NSPS").

As well, the PC Property allows emissions to meet or exceed Best Available Control Technology emission limitations established in Federal Operating Permit #O2338. Per 30 Texas Administrative Code ("TAC") §122.143(4), the permit holder must comply with all terms and conditions codified in the permit and any provisional terms and conditions required to be included with the permit.

Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property/equipment?

The PC Property reduces the formation of and/or controls the emission of NO_x and other air emissions associated with the combustion of natural gas used in combined cycle power generation at the Facility.

Section 10. Process Flow Diagram (Optional)

Attach documentation to the application showing a Process Flow Diagram for the property/equipment.

Please see the simplified Process Flow Diagram above for a representation of the combined-cycle power plant.

Section 11. Partial-Use Percentage Calculation

This section must be completed for all Tier III applications. Attach documentation to the application showing the calculations used to determine the partial-use percentage for the property/equipment.

Please see the attachment to this application for the Cost Analysis Procedure ("CAP") Calculations.

Section 12. Property Categories and Costs

List each piece of property/equipment of integrated pollution control property/equipment for which a use determination is being sought.

Property/Equipment Name	Tier 1 Table No. or Expedited Review List No.	Use Percent	Estimated Dollar Value
Land:			
Property: Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	N/A	42.99%	\$ 60,584,465
Property:			
Property:			
Total:			\$ 26,043,320

Attach additional response sheets to the application if more than three (3) pieces.

NOTE: Separate applications must be filed for each piece of nonintegrated pollution control property/equipment.

Section 13. Certification Signature

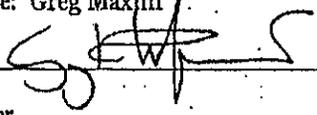
Must be signed by owner or designated representative.

By signing this application, I certify that I am duly authorized to submit this application form to the TCEQ and that the information supplied here is true and accurate to the best of my knowledge and belief.

Printed Name: Greg Maxim

Date: 6/30/2011

Signature: _____



Title: Director

Company Name: Duff & Phelps, LLC

Under Texas Penal Code 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to \$2,000, or a prison term of two to 10 years and a fine of up to \$5,000.

Target: Coltwood Energy Company, LP
Plant: Coltwood Energy Center
Plant Summary: 1,300 MW and Dispatchable Combined Cycle Power Plant (CCD)
Plant Location: Monroe County, Texas
Project: The Net Cost Analysis Procedure (CAP) Calculations
Date: June 06, 2011
Rev: 7

I. Cost Analysis Procedure (CAP)

Formula:

$$\frac{IPCF \times CCM + CCO + NPVMP}{CCN}$$

A. Definitions (provided by TCEQ)¹

1. Production Capacity Factor (PCF)
 The ratio of the capacity of the existing equipment or process to the capacity of the new equipment or process.

2. Capital Cost New (CCN)
 CCN is the estimated total capital cost of the new equipment or process.

3. Capital Cost Old (CCO)
 CCO is the cost of comparable equipment or a comparable process offered by the polluter control.

- The standards for estimating CCO are:
1. If comparable equipment within the polluter control exists in the market in the U.S., that has the average market price of the most recent generation of technology must be used.
 2. If the conditions in variable 2.1 do not apply and the company is replacing an existing unit that already has received a previous use determination, the company shall use the CCO from the application for the previous use determination.
 3. If the conditions in variable 2.1 and 2.2 do not apply and the company is replacing an existing unit, then the company shall convert the original cost of the unit by applying a deflator by using a published industry specific standard. If the production capacity of the new equipment or process is lower than the production capacity of the old equipment or process CCO is divided by the PCF to adjust CCO to reflect the same capacity as CCO.
 4. If the conditions in variable 2.1, 2.2 and 2.3 do not apply, and the company can obtain an estimate to manufacture the alternative equipment without the pollution control factors, then an average published cost to manufacture the unit must be used. The comparable unit must be the most recent generation of technology. A copy of the estimate used to provide with the worksheet including the specific source of the information.

4. Marketable Product (MP)
 Anything produced or recovered using pollution control property that is sold as a product, is accumulated for later use, or is used as raw material for a manufacturing process, marketable product includes, but is not limited to, anything recovered or produced using the pollution control property sold, traded, transferred for later use, or used in a manufacturing process (existing at a different facility). Marketable product does not include any credits or other allowances that result from facilities of the pollution control property.

5. Marketable Product Value (MPV)
 The marketable product value may be calculated by one of two ways:

1. The total value of the product produced by the equipment for one year period. Typically, the most recent three-year average price of the material to sell on the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average and report how the figures were determined.
2. If the material is used as an intermediate material in a production process, then the value assigned to the material for internal accounting purposes may be used. It is the responsibility of the applicant to show that the internally assigned value is comparable to the value assigned by other similar producers of the product.

6. Direct Costs of Production (DCP)
 The costs directly attributed to the production of the product, including raw materials, storage, transportation, and personnel, but excluding raw water costs, such as treatment and depreciation.

7. n Factor
 The estimated useful life in years of the equipment that is being evaluated for a use determination.

8. f Factor
 Year One.

9. Interest Rate
 10%.

¹ Title 30, Texas Administrative Code, Chapter 17

B. CAP Formulas (provided by TCEQ)

Plant Use Determination = $\frac{IPCF \times CCM + CCO + NPVMP}{CCN}$

Where:
 Production Capacity Factor (PCF) = $\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}}$

And where:
 NPVMP = $\sum_{t=1}^n \frac{MPV_t \cdot PCF}{(1 + \text{Interest Rate})^t}$

C. CAP Formulas for PC Property

Marketable Product Value (MPV) = Daily Price (\$/MWh) x 1046 hrs/Year

Direct Cost of Production (DCP) = LCDE x kWh per year

LCDE = $\left(\frac{\text{Capital Cost}}{\text{Hours per Year}} \times \text{Capital Recovery Factor} \right) + \frac{\text{Fixed O\&M Costs}}{\text{Capacity Factor}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$

Facility: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW Gas Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: The H Coal Analysis Procedure ("CAP") Calculations
Date: June 30, 2011
Rev: 7

VI. Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 1 HRSG

Formula:
$$\frac{(PC \times CCN) - CCO - NPVMP}{CCN}$$

A. Marketable Product Value ("MPV")

$$\text{Electricity Price} \times \frac{\text{Plant MWh}}{\text{MWh}} \times \frac{\text{Year}}{\text{Year}} = (\$) \text{ MPV}$$

$$135.32 \times \frac{\$}{\text{MWh}} \times 608,409 \frac{\text{MWh}}{\text{Year}} = \$28,557,781$$

B. Production Cost ("PC")

$$\text{Levelized Cost of Energy ("COE")} \times \frac{\text{Plant MWh}}{\text{MWh}} \times \frac{\text{Year}}{\text{Year}} = (\$) \text{ PC}$$

$$10.0308 \times \frac{\$}{\text{MWh}} \times 608,405,136 \frac{\text{MWh}}{\text{Year}} = \$24,803,882$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) \text{ MPV} - (\$) \text{ PC}}{(1 + \text{Interest Rate})^t} = \text{NPVMP } (\$)$$

$$\sum_{t=1}^n \frac{\$28,557,781 - \$24,803,882}{(1 + 10\%)^t} = \$34,541,145 = \text{NPVMP } \$34,541,146$$

* If MPV is < 0, then MPV = 0.

Facility: Coltonwood Energy Company, LP
 Plant: Coltonwood Energy Center
 Plant Summary: 1,260 MW (6) Configuration Combined Cycle Power Plant (CCG)
 Plant Location: Newton County, Texas
 Project: Tier II Cost Analysis Procedure ("CAP") Calculations
 Date: June 30, 2011
 Rev: 7

C. Production Capacity Factor ("PCF")

$$\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}}$$

0
102 MW * 31.86%

PCF

PCF
1.000

D. Capital Cost New ("CCN")
PC Property

CCN
\$60,584,406

E. Capital Cost Old ("CCO")
Comparable Technology

CCO
\$0

Partial Use Determination Calculation

(PCF x CCN)	CCO	MP	Partial Use Determination %
1.000 x \$60,584,406	\$0	\$34,511,146	56.81%
	\$60,584,406		

TCEQ Use Determination Application Section 17.03(b)
 Use Percent 42.90%
 Estimated Dollar Value \$ 26,634,485

Eligible HRSG Costs * 3 26,043,320
 (Partial Use Determination % x PC Property Cost)

ATTACHMENT A

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 30, 2011
Rev: 7

Levelized Cost of Energy ("LCOE") Model⁽¹⁾

Formulas

$$\text{Capital Recovery Factor ("CRF")} = \frac{i \times (1 + i)^n}{(1 + i)^n - 1}$$

$$\text{LCOE} = \left(\frac{\text{Capital Cost} \times \text{CRF}}{\text{Hours per Year} \times \text{Capacity Factor}} \right) + \frac{\text{Fixed O\&M Costs}}{\text{Capacity Factor}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$$

Calculations

Capital Recovery Factor	10.23%
LCOE (\$/kWh)	\$ 0.03079

⁽¹⁾ http://www.nrel.gov/analysis/lcoe_documentation.html

Note: The Levelized Cost of Energy is a calculation developed by the United States Department of Energy's National Renewable Energy Lab to determine the cost of generating energy (electricity) using the design or performance criteria for a specific power generation unit. The website above gives a more detailed description of the model and its development.

ATTACHMENT B

Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$3,664,099	1	1.10	\$ 3,330,999
\$3,664,099	2	1.21	\$ 3,028,181
\$3,664,099	3	1.331	\$ 2,752,892
\$3,664,099	4	1.4641	\$ 2,502,829
\$3,664,099	5	1.61051	\$ 2,275,117
\$3,664,099	6	1.771661	\$ 2,068,268
\$3,664,099	7	1.9487171	\$ 1,880,282
\$3,664,099	8	2.14358861	\$ 1,709,329
\$3,664,099	9	2.357947691	\$ 1,553,936
\$3,664,099	10	2.59374248	\$ 1,412,689
\$3,664,099	11	2.853116708	\$ 1,284,244
\$3,664,099	12	3.138426377	\$ 1,167,495
\$3,664,099	13	3.452271214	\$ 1,061,359
\$3,664,099	14	3.797499336	\$ 964,872
\$3,664,099	15	4.177248169	\$ 877,158
\$3,664,099	16	4.594972986	\$ 797,415
\$3,664,099	17	5.054470285	\$ 724,922
\$3,664,099	18	5.559917313	\$ 658,020
\$3,664,099	19	6.115909045	\$ 596,109
\$3,664,099	20	6.727499949	\$ 544,645
\$3,664,099	21	7.400249944	\$ 496,132
\$3,664,099	22	8.140274939	\$ 450,120
\$3,664,099	23	8.954302433	\$ 408,200
\$3,664,099	24	9.849732678	\$ 372,000
\$3,664,099	25	10.83470584	\$ 338,182
\$3,664,099	26	11.91817654	\$ 307,438
\$3,664,099	27	13.10999419	\$ 279,499
\$3,664,099	28	14.42099381	\$ 254,081
\$3,664,099	29	15.86308297	\$ 230,983
\$3,664,099	30	17.44940227	\$ 209,984
NPVMP:			\$ 34,541,146

DUFF & PHELPS

TCEQ Cashier's Office - MC-214
Building A
12100 Park JS Circle
Austin, TX 78753

December 2, 2011

Re: Application for Use Determination for Air Pollution Control Property Located at
Cottonwood Energy Center in Newton County, Texas

Enclosed please find one application (the "Application") for property tax exemption for Air
Pollution Control Property located at Cottonwood Energy Center (the "Facility") in Newton County,
Texas. A copy of the Application has been provided for the appraisal district.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been
prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use
Determination for Pollution Control Property. The enclosed application is a Tier III Application.
Submission of this Application is required as a process step in the TCEQ's pollution control
certification process for tax exemption of certain assets used in pollution control capacities within
the Facility. As outlined by the application instructions, the fee for this Tier III Application is
\$2,500. Please find enclosed a check for the \$2,500 Tier III Application Fee.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier III	Unit 2 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	\$ 26,043,320

Please send one copy of the completed property tax exemption Use Determination to the
following address:

Mr. Greg Maxim
Duff & Phelps LLC
919 Congress Avenue, Suite 1450
Austin, TX 78701

Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, TX 78701

+1 512 671 5580
+1 512 351 7911

gregory.maxim@duffandphelps.com
www.duffandphelps.com

TCEQ Cashier's Office
June 30, 2011
Page 2 of 2

If you have any questions regarding the Application or the information supplied within the Application, please contact me, Greg Maxim, Director, Duff & Phelps LLC, at (512) 671-5590 or by e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

A handwritten signature in black ink, appearing to read "Greg Maxim", with a horizontal line extending to the right.

Gregory Maxim
Director
Specialty Tax

Enclosures

cc: Ms. Kathryn Tronsberg Macciocca (Duff & Phelps, LLC)

Texas Commission on Environmental Quality

Use Determination for Pollution Control Property Application

A person seeking a use determination must complete this application form. For assistance in completing the application form please refer to the *Instructions for Use Determination for Pollution Control Property Application Form TCEQ-00611*, as well as the rules governing the Tax Relief Program in Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Information relating to completing this application form is also available in the TCEQ regulatory guidance document, *Property-Tax Exemptions for Pollution Control Property, RG-461*. For additional assistance, please call the Tax Relief Program at 512-239-4900.

You must supply information for each field of this application form unless otherwise noted.

Section 1. Eligibility

1. Is the property/equipment subject to any lease, lease-to-own agreement, or environmental incentive grant? Yes No
2. Is the property/equipment used solely to manufacture or produce a product or provide a service that prevents, monitors, controls, or reduces air, water or land pollution?
Yes No
3. Was the property/equipment acquired, constructed, installed, or replaced before January 1, 1994? Yes No

If the answer to any of these questions is 'Yes', then the property/equipment is not eligible for a tax exemption under this program.

Section 2. General Information

1. What is the type of ownership of this facility?
Corporation Partnership Utility
Sole Proprietor Limited Partner Other: **Limited Liability**
2. Size of Company: Number of Employees
1 to 99 500 to 999 2,000 to 4,999
100 to 499 1,000 to 1,999 5,000 or more
3. Business Description: (Briefly describe the type of business or activity at the facility)
Natural Gas-Fired Electric Power Generation
4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility. **221122 - Electric Power Generation, fossil fuel**

Section 3. Type of Application and Fee

1. Select only one:

Tier I – Fee: \$150

Tier II – Fee: \$1,000

Tier III – Fee: \$2,500

2. Payment Information:

Check/Money Order/Electronic Payment Receipt Number:

Payment Type: Check

Payment Amount: \$2,500

Name on payment: Duff & Phelps

Total Amount: \$2,500

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

Section 4. Property/Equipment Owner Information

1. Company Name of Owner: Cottonwood Energy Company LP

2. Mailing Address: 976 County Road 4213

3. City, State, Zip: Deweyville, TX 77614

4. Customer Number (CN): CN602765687

5. Regulated Entity Number (RN):RN100226109

6. Is this property/equipment owned by the CN listed in Question 4? Yes No

If the answer is 'No,' please explain: N/A

7. Is this property/equipment leased from a third party? Yes No

If the answer is 'Yes,' please explain: N/A

8. Is this property/equipment operated by the RN listed in Question 5? Yes No

If the answer is 'No,' please explain: N/A

Section 5. Name of Property/Equipment Operator (If different from Owner)

1. Company Name: N/A

2. Mailing Address: N/A

3. City, State, Zip: N/A

4. Customer Number (CN): N/A

5. Regulated Entity Number (RN):N/A

Section 6. Physical Location of Property/Equipment

1. Name of Facility or Unit where the property/equipment is physically located:

Cottonwood Energy Center

2. Type of Mfg. Process or Service: **Natural Gas-Fired Electric Power Generation**

3. Street Address: 976 County Road 4213
4. City, State, Zip: Deweyville, TX 77614

Section 7. Appraisal District with Taxing Authority

1. Appraisal District: Newton County
2. District Account Number(s): 9900015-0805153

Section 8. Contact Name

1. Company Name: Duff & Phelps, LLC
2. First Name of Contact: Greg
3. Last Name of Contact: Maxim
4. Salutation: Mr. Mrs. Ms. Dr. Other:
5. Title: Director
6. Mailing Address: 919 Congress Avenue, Suite 1450
7. City, State, Zip: Austin, TX 78701
8. Phone Number/Fax Number: (P) 512-671-5580; (F) 512-351-7911
9. Email Address: Gregory.maxim@duffandphelps.com
10. Tracking Number (optional): CC-2011-48
2012-02

Section 9. Property/Equipment Description, Applicable Rule, and Environmental Benefit

For each piece, or each category, of pollution control property/equipment for which a use determination is being sought, answer the following questions.

Attach additional response sheets to the application for each piece of integrated pollution control property/equipment if a use determination is being sought for more than one (1) piece.

General Information

1. Name the property/equipment:
Unit 1 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems
2. Is the property/equipment used 100% as pollution control equipment? Yes No
If the answer is 'Yes,' explain how it was determined that the equipment is used 100% for pollution control: N/A. See Calculation of Percentage of pollution control Property in attached Cost Analysis Procedure ("CAP") Model.
3. Does the property/equipment generate a Marketable Product? Yes No
If the answer is 'Yes,' describe the marketable product: Electricity
4. What is the appropriate Tier I Table or Expedited Review List number? ERL #8
5. Is the property/equipment integrated pollution control equipment? Yes No

If the answer is 'No,' separate applications must be filed for each piece of property/equipment.

6. List applicable permit number(s) for the property/equipment: Title V Operating Permit O2338

Incremental Cost Difference

7. Is the Tier I Table percentage based on the incremental cost difference? Yes No N/A

If the answer is 'Yes,' answer the following questions:

8. What is the cost of the new piece of property/equipment? N/A
9. What is the cost of the comparable property/equipment? N/A
10. How was the value of the comparable property/equipment calculated? N/A

Property/Equipment Description

11. Describe the property/equipment. (What is it? Where is it? How is it used?)

Background: Cottonwood Energy Center

The Cottonwood Energy Center (the "Facility") is a natural gas-fired, combined cycle power generating facility located in Deweyville, Newton County, Texas. Four GE 7-FA combustion turbines are routed to four Foster Wheeler heat recovery steam generators ("HRSGs"), which provide steam to four Alstom steam turbine-generator sets. The Facility began commercial operation in December 2003. It has a base load capacity of 1,260 MW. The Facility serves the SERC Reliability Corporation region.

Pollution Control Property Description – Cottonwood Unit 2 HRSG

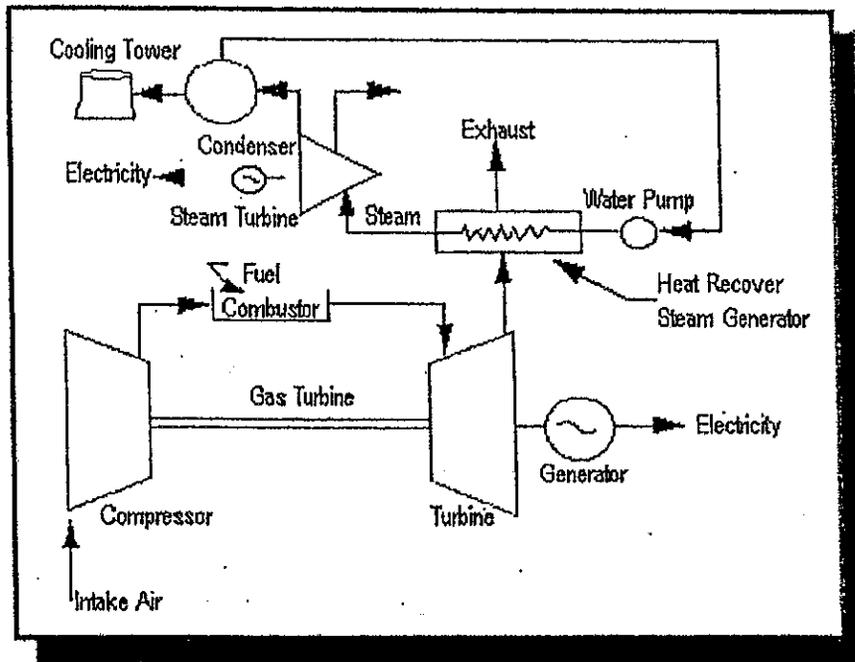
The pollution control property described in this Application is the Unit 2 HRSG and dedicated ancillary system (the "PC Property") installations.

Cottonwood Unit 2 HRSG

The Facility consists of a combined-cycle gas turbine power plant with four (4) gas Combustion Turbines ("CTs") each equipped with HRSGs and dedicated ancillary systems necessary to capture heat from the CTs' exhaust and convert it into electrical power. The Unit 2 HRSG captures the waste heat of combustion from the Unit 2 CT exhaust gas and utilizes this waste heat to produce steam, which in turn powers a steam turbine-generator set to produce electric power at the Facility in addition to the electric power generated by the CT alone.

The Facility gains both production and pollution control benefits from the subject PC Property. First, the use of this waste heat of combustion by the Unit 2 HRSG creates a thermal efficiency benefit for the Facility. Specifically, the use of waste heat in the Unit 2 CT exhaust gas results in the conversion of approximately 50% of the chemical energy of the natural gas utilized at the Facility into electricity (HHV basis), a gain over the use of the fuel by these CTs alone. Secondly, due to this efficiency gain, the Facility is able to generate fewer emissions (particularly NO_x emissions) than a traditional power generation facility utilizing a single thermodynamic cycle; thus supporting the subject PC Property's inclusion on the Expedited Review List.

The Figure below is representative of a simplified combined-cycle plant process flow.



Please see the Cost Analysis Procedure ("CAP") Model attached for the calculation of the percentage of the subject pollution control property eligible for property tax exemption.

Applicable Rule

12. What adopted environmental rule or regulation is being met by the construction or installation of the property/equipment? The citation must be to the subsection level.

The PC Property was installed to meet the requirements of 40 CFR Part 60.44da(a) "Standards for nitrogen oxides ("NO_x") for Electric Utility Steam generating units for New Source Performance Standards ("NSPS").

As well, the PC Property allows emissions to meet or exceed Best Available Control Technology emission limitations established in Federal Operating Permit #O2338. Per 30 Texas Administrative Code ("TAC") §122.143(4), the permit holder must comply with all terms and conditions codified in the permit and any provisional terms and conditions required to be included with the permit.

Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property/equipment?

The PC Property reduces the formation of and/or controls the emission of NO_x and other air emissions associated with the combustion of natural gas used in combined cycle power generation at the Facility.

Section 10. Process Flow Diagram (Optional)

Attach documentation to the application showing a Process Flow Diagram for the property/equipment.

Please see the simplified Process Flow Diagram above for a representation of the combined-cycle power plant.

Section 11. Partial-Use Percentage Calculation

This section must be completed for all Tier III applications. Attach documentation to the application showing the calculations used to determine the partial-use percentage for the property/equipment.

Please see the attachment to this application for the Cost Analysis Procedure ("CAP") Calculations.

Section 12. Property Categories and Costs

List each piece of property/equipment of integrated pollution control property/equipment for which a use determination is being sought.

Property/Equipment Name	Tier I Table No. or Expedited Review List No.	Use Percent	Estimated Dollar Value
Land:			
Property: Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	N/A	42.99%	\$ 60,584,465
Property:			
Property:			
Total:			\$ 26,043,320

Attach additional response sheets to the application if more than three (3) pieces.

NOTE: Separate applications must be filed for each piece of nonintegrated pollution control property/equipment.

Section 13. Certification Signature

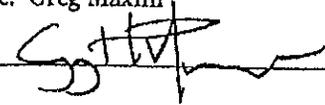
Must be signed by owner or designated representative.

By signing this application, I certify that I am duly authorized to submit this application form to the TCEQ and that the information supplied here is true and accurate to the best of my knowledge and belief.

Printed Name: Greg Maxim

Date: 12/2/2011

Signature: _____



Title: Director

Company Name: Duff & Phelps, LLC

Under Texas Penal Code 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to \$2,000, or a prison term of two to 10 years and a fine of up to \$5,000.

Technology: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Size: 2,000 MW
Plant Location: Henderson County, Tennessee
Project: The 3rd Coal Ashland Procedure (CA-PT) Calculations
Date: December 2, 2011
Rev: 0

Sources Legend

C	Calculated Assumptions
DLP	DLP VAS Standard Estimate
CW	Cottonwood Client-Provided Data
HH	Henry Hub Natural Gas Pricing
SNL	SNL E&P Database

1. Assumptions

Plant Design Profile

		Source
PC Property		
PC Property Capital Cost (\$M)	60,584,465	CW
PC Property Capacity (MW)	208	CW
PC Property Net Annual Generation Capacity (MWh)	608,433,135	CW
PC Property Net Annual Generation Capacity (MW)	696,493	CW
Plant Capacity Factor	31.85%	CW
Plant Heat Rate (Btu/kWh)	7,503	CW
Plant Heat Rate (MMBtu/MWh)	6.01	CW
Capital Cost Old ("CCO")		
Comparable Technology Cost		
Capacity Factor	0%	DN
Design Capacity Factor	1	

Conversion Factors

Hours/Year	\$/750
MWh/Year	1,000
\$/MWh	2.20
\$/MWh	3,850
\$/MWh	1,000,000

Economic Assumptions

Discount Rate	Periods	PC Property Fixed O&M Cost (\$/MWh)	Fuel Cost (\$/MMBtu)	PC Property Variable Cost (\$/MWh)	PC Property Variable Cost (\$/MWh)	SERC Electricity Pricing (\$/MWh) ⁽¹⁾	Interest Rate
10.0%	40	4.53	2.04	0.48	0.06	SNL	10%
							30 TAC

Levelized Cost of Energy ("LCOE") Model Outputs*

Capital Recovery Factor (CRF)	10.23%
LCOE (\$/MWh)	\$ 0.02078

*See Levelized Cost of Energy Assumptions in Attachment A.

⁽¹⁾ Three-year average daily individual electricity rates for SERC Reliability Corporation.

Cottonwood Energy Company, LP

Transaction: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center
 Plant Summary: 1,200 MW Gas Configuration Combined Cycle Power Plant (CCPP)
 Plant Location: Newton County, Texas
 Project: Tar Hill Cost Analysis Procedure ("CAP") Calculations
 Date: December 2, 2011
 Rev: 0

II. Cost Analysis Procedure ("CAP")
 Formula:
$$\frac{[(PCF \times CCN) - (CCO - MPV)]}{CCN}$$

A. Definitions (provided by TCERG)H

1. Production Capacity Factor ("PCF")
 The ratio of the capacity of the existing equipment or process to the capacity of the new equipment or process.

2. Capital Cost New ("CCN")
 CCN is the estimated total capital cost of the new equipment or process.

3. Capital Cost Old ("CCO")
 CCO is the cost of comparable equipment or a comparable process without the pollution control.
 The standards for calculating CCO are:

- 2.1 If comparable equipment without the pollution control feature is on the market in the U.S., then use the average market price of the most recent generation of technology must be used.
- 2.2 If the conditions in variable 3.1 do not apply and the company is replacing an existing unit that already has received a positive use determination, the company shall use the CCO from the application for the previous use determination.
- 2.3 If the conditions in variable 3.1 and 3.2 do not apply and the company is replacing an existing unit, then the company shall convert the original cost of the unit to today's costs by using a published industry specific standard. If the production capacity of the new equipment or process is lower than the production capacity of the old equipment or process CCO is divided by the PCF to adjust CCO to reflect the same capacity as CCN.
- 2.4 If the conditions in variables 3.1, 3.2 and 3.3 do not apply, and the company can obtain an estimate to manufacture the alternative equipment without the pollution control feature, then an average estimated cost to manufacture the unit shall be used. The comparable unit must be the most recent generation of technology. A copy of the estimate must be provided with the worksheets including the specific source of the information.

4. Marketable Product Value ("MPV")
 Anything produced or recovered using pollution control property that's sold as a product, is accumulated for later use, or is used as raw material in a manufacturing process. Marketable product includes, but is not limited to, anything recovered or produced using the pollution control property sold, stored, or otherwise used in a manufacturing process (including all different markets). Marketable product does not include any residual credits or emission allowances that result from installation of the pollution control property.

5. Marketable Product Value ("MPV")
 The marketable product value may be calculated in one of two ways
 1. The retail value of the product produced by the equipment for one year periods. Typically, the most recent three-year average price of the material as sold on the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average and explain how the figures were determined.
 2. If the material is used as an intermediate material in a production process, then the value assigned to the material for internal accounting purposes may be used. It is the responsibility of the applicant to show that the internally assigned value is comparable to the value assigned by other similar producers of the product.

6. Direct Costs of Production ("DCOP")
 The costs directly attributed to the production of the product, including raw materials, storage, transportation, and personnel, but excluding non-cash costs, such as overhead and depreciation.

7. n Factor
 The estimated useful life in years of the equipment that is being evaluated for a use determination.

8. i Factor
 Year One.

9. Interest Rate
 10%.

R. Tar Hill 30, Texas Administrative Code, Chapter 17

B. CAP Formulas (provided by TCERG)

Payoff Use Determination =
$$\frac{[(PCF \times CCN) - (CCO - MPV)]}{CCN}$$

Where:

Production Capacity Factor (PCF) =
$$\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}}$$

And where:

MPV =
$$\sum_{t=1}^n \frac{MPV - PC}{(1 + \text{Interest Rate})^t}$$

C. CAP Formulas for PC Property

Marketable Product Value (MPV) = Electricity Price (\$/MWh) x MWh per Year

Direct Cost of Production (DCOP) = LCDE x MWh per year

LCDE =
$$\left(\frac{\text{Capital Cost} \times \text{Capital Recovery Factor}}{\text{Hours per Year}} \right) + \frac{\text{Fixed O&M Costs}}{\text{Capacity Factor}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$$

Cottonwood Energy Company, LP

Topic: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,200 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

III. Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 2 HRSG

Formula:
$$\frac{[PCF \times CCN] - CCO - NPVMP}{CCN}$$

A. Marketable Product Value ("MPV")

$$\begin{aligned} \text{Electricity Price} \frac{\$}{\text{MWh}} \times \frac{\text{Plant MWh}}{\text{Year}} &= (\$) \text{ MPV} \\ \$35.32 \frac{\$}{\text{MWh}} \times 808,493 \frac{\text{MWh}}{\text{Year}} &= \$28,557,781 \end{aligned}$$

B. Production Cost ("PC")

$$\begin{aligned} \text{Levelized Cost of Energy ("LCOE")} \frac{\$}{\text{kWh}} \times \frac{\text{Plant MWh}}{\text{Year}} &= (\$) \text{ PC} \\ \$0.0008 \frac{\$}{\text{kWh}} \times 808,493,135 \frac{\text{kWh}}{\text{Year}} &= \$24,693,862 \end{aligned}$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) \text{ MPV}}{(1 + \text{Interest Rate})^t} = (\$) \text{ PC}$$

$$\sum_{t=1}^n \frac{\$28,557,781}{(1 + 10\%)^t} = \$34,541,145$$

$$\sum_{t=1}^n \frac{\$24,693,862}{(1 + 10\%)^t} = \$24,693,862$$

$$\text{NPVMP} = \$34,541,145 - \$24,693,862 = \$9,847,283$$

* If MP is < 0, then MP = 0.

Cottonwood Energy Company, LP

Taxpayer: Cottonwood Energy Company, LP
 Plants: Cottonwood Energy Center
 Plant Summary: 7,200 MW-Net Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedure (CAP) Calculations
 Date: December 2, 2011
 Rev: 0

C. Production Capacity Factor ("PCF")

$$\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}} = \text{PCF}$$

$$\frac{0}{292 \text{ MW} \times 31.65\%} = 1,000$$

D. Capital Cost New ("CCN")

$$= \$60,584,465$$

E. Capital Cost Old ("CCO")

$$= \$0$$

Partial Use Determination Calculation

$$\frac{\text{CCO}}{\text{CCN}} = \text{MIP}$$

$$\frac{\$0}{\$60,584,465} = 0.000\%$$

$$\frac{\text{CCN}}{\text{CCN} + \text{MIP}} = \text{Partial Use Determination \%}$$

$$\frac{\$60,584,465}{\$60,584,465 + \$34,541,145} = 63.59\%$$

TCEQ Use Determination Application Section 12. Use:	
Use Percent	42.99%
Estimated Dollar Value	\$ 60,584,465

ATTACHMENT B

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

Levelized Cost of Energy ("LCOE") Model⁽¹⁾

Formulas

$$\text{Capital Recovery Factor ("CRF")} = \frac{i \times (1 + i)^n}{(1 + i)^n - 1}$$

$$\text{LCOE} = \left(\frac{\text{Capital Cost} \times \text{CRF}}{\text{Hours per Year} \times \text{Capacity Factor}} \right) + \frac{\text{Fixed O\&M Costs}}{\text{Capacity Factor}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$$

Calculations

Capital Recovery Factor	10.23%
LCOE (\$/kWh)	\$ 0.03079

⁽¹⁾ http://www.nrel.gov/analysis/lcoe_documentation.html

Note: The Levelized Cost of Energy is a calculation developed by the United States Department of Energy's National Renewable Energy Lab to determine the cost of generating energy (electricity) using the design or performance criteria for a specific power generation unit. The website above gives a more detailed description of the model and its development.

ATTACHMENT B

Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$3,664,099	1	1.10	\$ 3,330,999
\$3,664,099	2	1.21	\$ 3,028,181
\$3,664,099	3	1.331	\$ 2,752,892
\$3,664,099	4	1.4641	\$ 2,502,629
\$3,664,099	5	1.61051	\$ 2,275,117
\$3,664,099	6	1.771561	\$ 2,068,288
\$3,664,099	7	1.9487171	\$ 1,880,262
\$3,664,099	8	2.14358881	\$ 1,709,329
\$3,664,099	9	2.357947691	\$ 1,553,936
\$3,664,099	10	2.59374246	\$ 1,412,669
\$3,664,099	11	2.853116706	\$ 1,284,244
\$3,664,099	12	3.138428377	\$ 1,167,495
\$3,664,099	13	3.452271214	\$ 1,061,359
\$3,664,099	14	3.797498336	\$ 964,872
\$3,664,099	15	4.177248169	\$ 877,156
\$3,664,099	16	4.594972986	\$ 797,415
\$3,664,099	17	5.054470285	\$ 724,922
\$3,664,099	18	5.559917313	\$ 659,020
\$3,664,099	19	6.115909045	\$ 599,109
\$3,664,099	20	6.727499949	\$ 544,645
\$3,664,099	21	7.400249944	\$ 495,132
\$3,664,099	22	8.140274939	\$ 450,120
\$3,664,099	23	8.954302433	\$ 409,200
\$3,664,099	24	9.849732676	\$ 372,000
\$3,664,099	25	10.83470594	\$ 338,182
\$3,664,099	26	11.91817654	\$ 307,438
\$3,664,099	27	13.10999419	\$ 279,489
\$3,664,099	28	14.42099361	\$ 254,081
\$3,664,099	29	15.86309297	\$ 230,983
\$3,664,099	30	17.44940227	\$ 209,984
NPVMP:			\$ 34,541,145

5117

DUFF & PHELPS LLC
ACCOUNTS PAYABLE
300 HEADQUARTERS PLAZA
EAST TOWER, 12TH FLOOR
MORRISTOWN, NJ 07960

2-9710 L
CT255

DATE Nov 29, 2011

\$ 2,500.00



DOLLARS

PAY TO THE ORDER OF TCEQ

Two thousand five hundred

Bank of America

Chicago, Illinois

[Signature]

FOR

⑆005117⑆ ⑆071000039⑆ 88885⑆08888⑆

DUFF & PHELPS

TCEQ Cashier's Office - MC-214
Building A
12100 Park 35 Circle
Austin, TX 78753

December 2, 2011

Re: Application for Use Determination for Air Pollution Control Property Located at
Cottonwood Energy Center in Newton County, Texas

Enclosed please find one application (the "Application") for property tax exemption for Air Pollution Control Property located at Cottonwood Energy Center (the "Facility") in Newton County, Texas. A copy of the Application has been provided for the appraisal district.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier III Application. Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier III Application is \$2,500. Please find enclosed a check for the \$2,500 Tier III Application Fee.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier III	Unit 3 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	\$ 26,043,320

Please send one copy of the completed property tax exemption Use Determination to the following address:

Mr. Greg Maxim
Duff & Phelps LLC
919 Congress Avenue, Suite 1450
Austin, TX 78701

Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, TX 78701

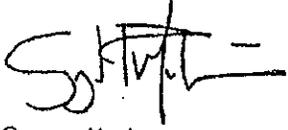
T +1 512 671 5580
F +1 512 351 7911

gregory.maxim@duffandphelps.com
www.duffandphelps.com

TCEQ Cashier's Office
December 2, 2011
Page 2 of 2

If you have any questions regarding the Application or the information supplied within the Application, please contact me, Greg Maxim, Director, Duff & Phelps LLC, at (512) 671-5580 or by e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Greg Maxim', with a horizontal line extending to the right.

Gregory Maxim
Director
Specialty Tax

Enclosures

cc: Ms. Kathryn Tronsberg Macclocca (Duff & Phelps, LLC)

Texas Commission on Environmental Quality

Use Determination for Pollution Control Property Application

A person seeking a use determination must complete this application form. For assistance in completing the application form please refer to the *Instructions for Use Determination for Pollution Control Property Application Form TCEQ-00611*, as well as the rules governing the Tax Relief Program in Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Information relating to completing this application form is also available in the TCEQ regulatory guidance document, *Property-Tax Exemptions for Pollution Control Property, RG-461*. For additional assistance, please call the Tax Relief Program at 512-239-4900.

You must supply information for each field of this application form unless otherwise noted.

Section 1. Eligibility

1. Is the property/equipment subject to any lease, lease-to-own agreement, or environmental incentive grant? Yes No
2. Is the property/equipment used solely to manufacture or produce a product or provide a service that prevents, monitors, controls, or reduces air, water or land pollution?
Yes No
3. Was the property/equipment acquired, constructed, installed, or replaced before January 1, 1994? Yes No

If the answer to any of these questions is 'Yes', then the property/equipment is not eligible for a tax exemption under this program.

Section 2. General Information

1. What is the type of ownership of this facility?
Corporation Limited Partner Other: **Limited Liability Corporation**
Sole Proprietor Utility
Partnership
2. Size of Company: Number of Employees
1 to 99 500 to 999 2,000 to 4,999
100 to 499 1,000 to 1,999 5,000 or more
3. Business Description: (Briefly describe the type of business or activity at the facility)
Natural Gas-Fired Electric Power Generation
4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility. **221122 - Electric Power Generation, fossil fuel**

Section 3. Type of Application and Fee

1. Select only one:

Tier I – Fee: \$150

Tier II – Fee: \$1,000

Tier III – Fee: \$2,500

2. Payment Information:

Check/Money Order/Electronic Payment Receipt Number:

Payment Type: Check 5118

Payment Amount: \$2,500

Name on payment: Duff & Phelps

Total Amount: \$2,500

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

Section 4. Property/Equipment Owner Information

1. Company Name of Owner: Cottonwood Energy Company LP

2. Mailing Address: 976 County Road 4213

3. City, State, Zip: Deweyville, TX 77614

4. Customer Number (CN): CN602765687

5. Regulated Entity Number (RN):RN100226109

6. Is this property/equipment owned by the CN listed in Question 4? Yes No

If the answer is 'No,' please explain: N/A

7. Is this property/equipment leased from a third party? Yes No

If the answer is 'Yes,' please explain: N/A

8. Is this property/equipment operated by the RN listed in Question 5? Yes No

If the answer is 'No,' please explain: N/A

Section 5. Name of Property/Equipment Operator (If different from Owner)

1. Company Name: N/A

2. Mailing Address: N/A

3. City, State, Zip: N/A

4. Customer Number (CN): N/A

5. Regulated Entity Number (RN):N/A

Section 6. Physical Location of Property/Equipment

1. Name of Facility or Unit where the property/equipment is physically located:

Cottonwood Energy Center

2. Type of Mfg. Process or Service: **Natural Gas-Fired Electric Power Generation**

3. Street Address: 976 County Road 4213
4. City, State, Zip: Deweyville, TX 77614

Section 7. Appraisal District with Taxing Authority

1. Appraisal District: Newton County
2. District Account Number(s): 9900015-0805153

Section 8. Contact Name

1. Company Name: Duff & Phelps, LLC
2. First Name of Contact: Greg
3. Last Name of Contact: Maxim
4. Salutation: Mr. Mrs. Ms. Dr. Other:
5. Title: Director
6. Mailing Address: 919 Congress Avenue, Suite 1450
7. City, State, Zip: Austin, TX 78701
8. Phone Number/Fax Number: (P) 512-671-5580; (F) 512-351-7911
9. Email Address: Gregory.maxim@duffandphelps.com
10. Tracking Number (optional): CC-2012-03

Section 9. Property/Equipment Description, Applicable Rule, and Environmental Benefit

For each piece, or each category, of pollution control property/equipment for which a use determination is being sought, answer the following questions.

Attach additional response sheets to the application for each piece of integrated pollution control property/equipment if a use determination is being sought for more than one (1) piece.

General Information

1. Name the property/equipment:
Unit 3 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems
2. Is the property/equipment used 100% as pollution control equipment? Yes No
If the answer is 'Yes,' explain how it was determined that the equipment is used 100% for pollution control: N/A. See Calculation of Percentage of pollution control Property in attached Cost Analysis Procedure ("CAP") Model.
3. Does the property/equipment generate a Marketable Product? Yes No
If the answer is 'Yes,' describe the marketable product: Electricity
4. What is the appropriate Tier I Table or Expedited Review List number? ERL #8
5. Is the property/equipment integrated pollution control equipment? Yes No

If the answer is 'No,' separate applications must be filed for each piece of property/equipment.

6. List applicable permit number(s) for the property/equipment: Title V Operating Permit O2338

Incremental Cost Difference

7. Is the Tier I Table percentage based on the incremental cost difference? Yes No N/A

If the answer is 'Yes,' answer the following questions:

8. What is the cost of the new piece of property/equipment? N/A
9. What is the cost of the comparable property/equipment? N/A
10. How was the value of the comparable property/equipment calculated? N/A

Property/Equipment Description

11. Describe the property/equipment. (What is it? Where is it? How is it used?)

Background: Cottonwood Energy Center

The Cottonwood Energy Center (the "Facility") is a natural gas-fired, combined cycle power generating facility located in Deweyville, Newton County, Texas. Four GE 7-FA combustion turbines are routed to four Foster Wheeler heat recovery steam generators ("HRSGs"), which provide steam to four Alstom steam turbine-generator sets. The Facility began commercial operation in December 2003. It has a base load capacity of 1,260 MW. The Facility serves the SERC Reliability Corporation region.

Pollution Control Property Description – Cottonwood Unit 3 HRSG

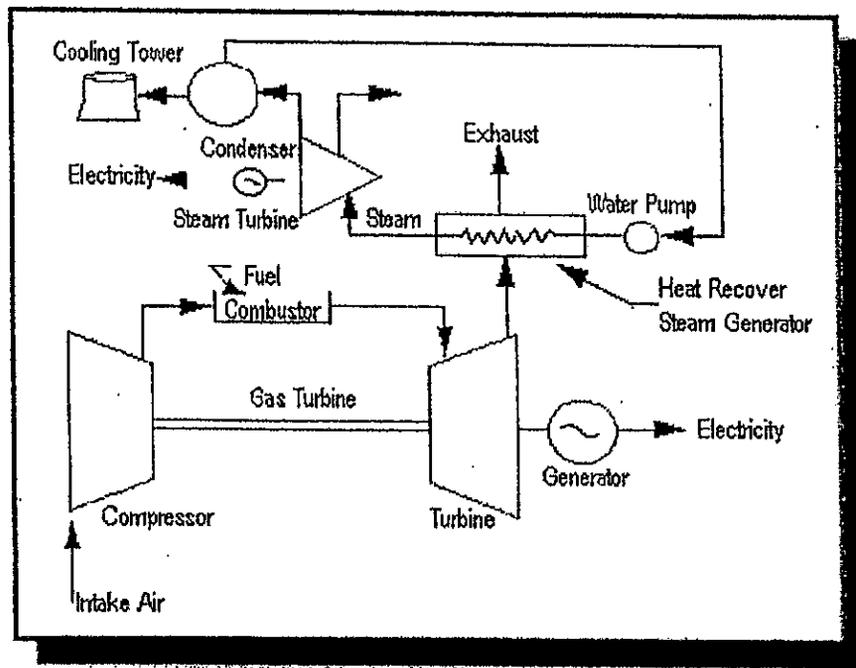
The pollution control property described in this Application is the Unit 3 HRSG and dedicated ancillary system (the "PC Property") installations.

Cottonwood Unit 3 HRSG

The Facility consists of a combined-cycle gas turbine power plant with four (4) gas Combustion Turbines ("CTs") each equipped with HRSGs and dedicated ancillary systems necessary to capture heat from the CTs' exhaust and convert it into electrical power. The Unit 3 HRSG captures the waste heat of combustion from the Unit 3 CT exhaust gas and utilizes this waste heat to produce steam, which in turn powers a steam turbine-generator set to produce electric power at the Facility in addition to the electric power generated by the CT alone.

The Facility gains both production and pollution control benefits from the subject PC Property. First, the use of this waste heat of combustion by the Unit 3 HRSG creates a thermal efficiency benefit for the Facility. Specifically, the use of waste heat in the Unit 3 CT exhaust gas results in the conversion of approximately 50% of the chemical energy of the natural gas utilized at the Facility into electricity (HHV basis), a gain over the use of the fuel by these CTs alone. Secondly, due to this efficiency gain, the Facility is able to generate fewer emissions (particularly NO_x emissions) than a traditional power generation facility utilizing a single thermodynamic cycle; thus supporting the subject PC Property's inclusion on the Expedited Review List.

The Figure below is representative of a simplified combined-cycle plant process flow.



Please see the Cost Analysis Procedure ("CAP") Model attached for the calculation of the percentage of the subject pollution control property eligible for property tax exemption.

Applicable Rule

12. What adopted environmental rule or regulation is being met by the construction or installation of the property/equipment? The citation must be to the subsection level.

The PC Property was installed to meet the requirements of 40 CFR Part 60.44da(a) "Standards for nitrogen oxides ("NOx") for Electric Utility Steam generating units for New Source Performance Standards ("NSPS)".

As well, the PC Property allows emissions to meet or exceed Best Available Control Technology emission limitations established in Federal Operating Permit #O2338. Per 30 Texas Administrative Code ("TAC") §122.143(4), the permit holder must comply with all terms and conditions codified in the permit and any provisional terms and conditions required to be included with the permit.

Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property/equipment?

The PC Property reduces the formation of and/or controls the emission of NO_x and other air emissions associated with the combustion of natural gas used in combined cycle power generation at the Facility.

Section 10. Process Flow Diagram (Optional)

Attach documentation to the application showing a Process Flow Diagram for the property/equipment.

Please see the simplified Process Flow Diagram above for a representation of the combined-cycle power plant.

Section 11. Partial-Use Percentage Calculation

This section must be completed for all Tier III applications. Attach documentation to the application showing the calculations used to determine the partial-use percentage for the property/equipment.

Please see the attachment to this application for the Cost Analysis Procedure ("CAP") Calculations.

Section 12. Property Categories and Costs

List each piece of property/equipment of integrated pollution control property/equipment for which a use determination is being sought.

Property/Equipment Name	Tier 1 Table No. or Expedited Review List No.	Use Percent	Estimated Dollar Value
Land:			
Property: Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	N/A	42.99%	\$ 60,584,465
Property:			
Property:			
Total:			\$ 26,043,320

Attach additional response sheets to the application if more than three (3) pieces.

NOTE: Separate applications must be filed for each piece of nonintegrated pollution control property/equipment.

Section 13. Certification Signature

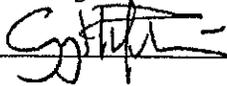
Must be signed by owner or designated representative.

By signing this application, I certify that I am duly authorized to submit this application form to the TCEQ and that the information supplied here is true and accurate to the best of my knowledge and belief.

Printed Name: Greg Maxim

Date: 12/2/2011

Signature: _____



Title: Director

Company Name: Duff & Phelps, LLC

Under Texas Penal Code 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to \$2,000, or a prison term of two to 10 years and a fine of up to \$5,000.

Title: Condominium Energy Company, LP
Client: Condominium Energy Company
Plant Summary: 1,200 MW Gas Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: The 81 Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

Source Legend

C	Calculator Assumption
DAP	DEP VAS Standardized Data
CW	Cost World
HM	Henry Hub Natural Gas Pricing
30_TAC	30 Year TAC Output

1. Assumptions

Plant Design Profile

Item	Value	Source
PC Property	8,750	CW
PC Property Capital Cost (\$/kW)	1,000	C
PC Property Capital Cost (\$/MW)	2,330	C
PC Property Capacity (MW)	3,800	CW
PC Property Net Annual Generation Capacity (MW)	1,000,000	C
PC Property Net Annual Generation Capacity (MWh)	304,482	C
Plant Capacity Factor	31.65%	CW
Plant Heat Rate (Btu/kWh)	7,503	CW
Plant Heat Rate (MJ/kWh)	8.01	C
Capital Cost O&M (%CCO)	-	-
Comparable Technology Cost	\$	-
Design Capacity Factor	0%	1
Capacity (MW)	1	1

Economic Assumptions

Item	Value	Source
Discount Rate	10.0%	DAP
Perfide	40	CW
PC Property Fixed O&M Cost (\$/MWh)	\$ 4.53	CW
Fuel Cost (\$/MWh)	\$ 2.80	HM
PC Property Variable Cost (\$/MWh)	\$ 0.48	CW
PC Property Variable Cost (\$/MWh)	\$ 0.00	C
SERC Electricity Pricing (\$/MWh)	\$ 35.32	SNE
Interest Rate	10%	30_TAC

Levelized Cost of Energy (LCOE) Model Output

Capital Recovery Factor (CRF)	\$	10.23%
LCOE (\$/MWh)	\$	0.03078

*See Levelized Cost of Energy, Item #1 Attachment A.

∴ Three-year average only historical electricity rates for SERC Reliability Corporation.

Dattinwood Energy Company, LP

Transmitter: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center
 Plant Number: 1,250 MW and Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedure (CAP) Calculations
 Date: December 2, 2011
 Rev: 0

II. Cost Analysis Procedures ("CAP")
 Formula: $\frac{[PCF \times CCN] - CCO - NPV}{CCN}$

A. Definitions [provided by TCEQ]
 1. Production Capacity Factor ("PCF")
 The rate of the capacity of the existing equipment or process to the capacity of the new equipment or process.

2. Capital Cost New ("CCN")
 CCN is the estimated total capital cost of the new equipment or process.

3. Capital Cost Old ("CCO")
 CCO is the cost of comparable equipment or a comparable process without the pollution control.
 The standards for calculating CCO are:
 1. % comparable equipment without the pollution control (issue is on the market in the U.S., that use the average market price of the most recent generation of technology must be used.

2. If the conditions in variable 3.1 do not apply and the company is replacing an existing unit that already has received a possible use determination, the company shall use the CCO from the application for the previous use determination.

3. If the conditions in variable 3.1 and 3.2 do not apply and the company is replacing an existing unit, then the company shall convert the equivalent of the unit to today's dollars by using a published industry specific standard. If the production capacity of the new equipment or process is less than the production capacity of the old equipment or process CCO is divided by the PCF to adjust CCO to reflect the same capacity as CCN.

4. If the conditions in variables 3.1, 3.2 and 3.3 do not apply, and the company can obtain an estimate to manufacture the alternative equipment without the pollution control features, then an average estimated cost to manufacture the unit must be used. The comparable unit must be the most recent generation of technology. A copy of the estimate must be provided with the worksheets including the specific source of the information.

4. Marketable Product Value ("MPV")
 Anything produced or recovered using pollution control property that is sold as a product, is accumulated for later use, or is used as raw material in a manufacturing process. Marketable product includes, but is not limited to, anything recovered or produced using the pollution control property sold, leased, accumulated for later use, or used in a manufacturing process (including at a different facility). Marketable product does not include any emission credits or emission allowances that result from installation of the pollution control property.

5. Marketable Product Value ("MPV")
 The marketable product value may be calculated in one of two ways:
 1. The market product value must be provided by the equipment for one year periods. Typically, the most recent three-year average price of the market product on the market should be used in the calculation. If the price varies from state-to-state, the applicant shall tabulate an average and explain how the figures were determined.
 2. If the material is used as an intermediate material in a production process then the value assigned to the material for internal accounting purposes may be used. It is the responsibility of the applicant to show that the internally assigned value is comparable to the value assigned by other similar producers of the product.

6. Direct Costs of Production ("DCP")
 The costs directly incurred in the production of the product, including raw materials, storage, transportation, and personnel, but excluding non-plant costs, such as overhead and depreciation.

7. n Factor
 The estimated useful life in years of the equipment that is being evaluated for a use determination.

8. f Factor
 Year One.
 9. Interest Rate
 10%

PI File 30, Texas Administrative Code, Chapter 17

Cost Analysis Procedure Manual

12/02/11

B. CAP Formulas [provided by TCEQ]

Plant Use Determination = $\frac{[PCF \times CCN] - CCO - NPV}{CCN}$

Where:
 Production Capacity Factor ("PCF") = $\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}}$

AND where
 NPV/MPV = $\sum_{t=1}^n \frac{NPV_t - PC}{(1 + \text{Interest Rate})^t}$

C. CAP Formulas for PC Property

Marketable Product Value ("MPV") = Electricity Price (\$/MWh) x MWh per Year

Direct Cost of Production ("DCP") = LCOE x MWh per year

LCOE = $\frac{\left(\frac{\text{Capital Cost}}{\text{Hours per Year}} \times \text{Capital Recovery Factor} \right) + \frac{\text{Fixed O&M Costs}}{\text{Capacity}}}{\text{Factor}} \times \left(\frac{\text{Fuel Cost}}{\text{Hour}} \times \text{Rate} \right)$

Taxpayer: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center
 Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedure ("CAP") Calculations
 Date: December 2, 2011
 Rev: 0

III. Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 3 HRSG

A. Marketable Product Value ("MPV")

$$\text{Electricity Price} \frac{\$}{\text{MWh}} \times \frac{\text{Plant MWh}}{\text{Year}} = (\$) \text{ MPV}$$

$$\$35.32 \frac{\$}{\text{MWh}} \times 808,453 \frac{\text{MWh}}{\text{Year}} = \$28,557,781$$

B. Production Cost ("PC")

$$\text{Levelized Cost of Energy ("LCOE")} \frac{\$}{\text{MWh}} \times \frac{\text{Plant MWh}}{\text{Year}} = (\$) \text{ PC}$$

$$\$0.0308 \frac{\$}{\text{MWh}} \times 808,453,135 \frac{\text{MWh}}{\text{Year}} = \$24,853,692$$

Formula:
$$\frac{(\text{PC} \times \text{CCN}) - \text{CCO} - \text{NPVMP}}{\text{CCN}}$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) \text{ MPV}}{(1 + \text{Interest Rate})^t} = \text{NPVMP } (\$)$$

$$\sum_{t=1}^n \frac{\$28,557,781}{(1 + 10\%)^t} = \$34,541,145$$

* If MP is <= 0 then NPVMP = 0.

Coltonwood Energy Company, LP

Company: Coltonwood Energy Company, LP
 Plant: Coltonwood Energy Center
 Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedure ("CAP") Calculations
 Date: December 2, 2011
 Rev: 0

C. Production Capacity Factor ("PCF")
 Production Capacity of Existing Equipment or Process = PCF
 Production Capacity of New Equipment or Process = 1,000
 282 MW / 31.65% = 0

D. Capital Cost New ("CCN")
 PC Property = \$60,584,465
 E. Capital Cost Old ("CCO")
 Comparable Technology = \$0

Partial Use Determination Calculation
 (PCF x CCN) = CCO
 CCN
 MP
 1,000 x 560,584,465 = \$0
 560,584,465 = 564,541,145
 \$ 26,043,320
 (Partial Use Determination % x PC Property Cost)
 Eligible HRSG Costs

TECO Use Determination Application Section 12 use
 Partial Use Percent 42.95%
 Estimated Dollar Value \$ 60,584,465

ATTACHMENT B

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

Levelized Cost of Energy ("LCOE") Model⁽¹⁾

Formulas

$$\text{Capital Recovery Factor ("CRF")} = \frac{i \times (1 + i)^n}{(1 + i)^n - 1}$$

$$\text{LCOE} = \left(\frac{\text{Capital Cost} \times \text{CRF}}{\text{Hours per Year}} \right) + \frac{\text{Fixed O\&M Costs}}{\text{Capacity Factor}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$$

Calculations

Capital Recovery Factor	10.23%
LCOE (\$/kWh)	\$ 0.03079

⁽¹⁾ http://www.nrel.gov/analysis/lcoe_documentation.html

Note: The Levelized Cost of Energy is a calculation developed by the United States Department of Energy's National Renewable Energy Lab to determine the cost of generating energy (electricity) using the design or performance criteria for a specific power generation unit. The website above gives a more detailed description of the model and its development.

Cottonwood Energy Company, LP

Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$3,664,099	1	1.10	\$ 3,330,999
\$3,664,099	2	1.21	\$ 3,028,181
\$3,664,099	3	1.331	\$ 2,752,892
\$3,664,099	4	1.4641	\$ 2,502,628
\$3,664,099	5	1.61051	\$ 2,275,117
\$3,664,099	6	1.771561	\$ 2,068,288
\$3,664,099	7	1.9487171	\$ 1,880,262
\$3,664,099	8	2.14358881	\$ 1,709,329
\$3,664,099	9	2.357947691	\$ 1,553,936
\$3,664,099	10	2.59374246	\$ 1,412,669
\$3,664,099	11	2.853116706	\$ 1,284,244
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\$3,664,099	14	3.797486336	\$ 964,872
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\$3,664,099	17	5.054470285	\$ 724,922
\$3,664,099	18	5.559917313	\$ 669,020
\$3,664,099	19	6.115909045	\$ 599,109
\$3,664,099	20	6.727489949	\$ 544,645
\$3,664,099	21	7.400249944	\$ 495,132
\$3,664,099	22	8.140274939	\$ 450,120
\$3,664,099	23	8.954302433	\$ 409,200
\$3,664,099	24	9.849732676	\$ 372,000
\$3,664,099	25	10.83470594	\$ 338,182
\$3,664,099	26	11.91817654	\$ 307,438
\$3,664,099	27	13.10999419	\$ 279,468
\$3,664,099	28	14.42099361	\$ 254,081
\$3,664,099	29	15.86309297	\$ 230,983
\$3,664,099	30	17.44940227	\$ 209,984
NPVMP:			\$ 34,541,145

DUFF & PHELPS LLC
ACCOUNTS PAYABLE
300 HEADQUARTERS PLAZA
EAST TOWER, 12TH FLOOR
MORRISTOWN, NJ 07960

5118

7-3710 L
C1335

DATE Nov 29, 2011

TCEQ

PAY TO THE ORDER OF

\$ 2,500.00

Two thousand five hundred

DOLLARS

Bank of America



Chicago, Illinois

[Signature]

FOR

⑆005118⑆ ⑆071000039⑆ 88885⑈08856⑈

DUFF & PHELPS

TCEQ Cashier's Office - MC-214
Building A
12100 Park 35 Circle
Austin, TX 78753

December 2, 2011

Re: Application for Use Determination for Air Pollution Control Property Located at Cottonwood Energy Center in Newton County, Texas

Enclosed please find one application (the "Application") for property tax exemption for Air Pollution Control Property located at Cottonwood Energy Center (the "Facility") in Newton County, Texas. A copy of the Application has been provided for the appraisal district.

Pursuant to Title 30 of Chapter 17 of the Texas Administrative Code, the Application has been prepared using the Texas Commission on Environmental Quality ("TCEQ") Application for Use Determination for Pollution Control Property. The enclosed application is a Tier III Application. Submission of this Application is required as a process step in the TCEQ's pollution control certification process for tax exemption of certain assets used in pollution control capacities within the Facility. As outlined by the application instructions, the fee for this Tier III Application is \$2,500. Please find enclosed a check for the \$2,500 Tier III Application Fee.

The Application can be summarized as follows:

Property	Description	Estimated Cost
Tier III	Unit 4 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	\$ 26,043,320

Please send one copy of the completed property tax exemption Use Determination to the following address:

Mr. Greg Maxim
Duff & Phelps LLC
919 Congress Avenue, Suite 1450
Austin, TX 78701

Duff & Phelps, LLC
919 Congress Avenue
Suite 1450
Austin, TX 78701

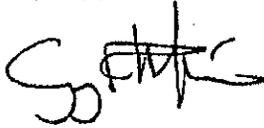
T +1 512 671 5560
F +1 512 351 7811

gregory.maxim@duffandphelps.com
www.duffandphelps.com

TCEQ Cashier's Office
December 2, 2011
Page 2 of 2

If you have any questions regarding the Application or the information supplied within the Application, please contact me, Greg Maxim, Director, Duff & Phelps LLC, at (512) 671-5580 or by e-mail at gregory.maxim@duffandphelps.com.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Greg Maxim', with a stylized flourish at the end.

Gregory Maxim
Director
Specialty Tax

Enclosures

cc: Ms. Kathryn Tronsberg Macciocca (Duff & Phelps, LLC)

Texas Commission on Environmental Quality

Use Determination for Pollution Control Property Application

A person seeking a use determination must complete this application form. For assistance in completing the application form please refer to the *Instructions for Use Determination for Pollution Control Property Application Form TCEQ-00611*, as well as the rules governing the Tax Relief Program in Title 30 Texas Administrative Code Chapter 17 (30 TAC 17). Information relating to completing this application form is also available in the TCEQ regulatory guidance document, *Property-Tax Exemptions for Pollution Control Property, RG-461*. For additional assistance, please call the Tax Relief Program at 512-239-4900.

You must supply information for each field of this application form unless otherwise noted.

Section 1. Eligibility

1. Is the property/equipment subject to any lease, lease-to-own agreement, or environmental incentive grant? Yes No
2. Is the property/equipment used solely to manufacture or produce a product or provide a service that prevents, monitors, controls, or reduces air, water or land pollution?
Yes No
3. Was the property/equipment acquired, constructed, installed, or replaced before January 1, 1994? Yes No

If the answer to any of these questions is 'Yes', then the property/equipment is not eligible for a tax exemption under this program.

Section 2. General Information

1. What is the type of ownership of this facility?
Corporation Limited Partner Other: **Limited Liability Corporation**
Sole Proprietor Utility
Partnership
2. Size of Company: Number of Employees
1 to 99 500 to 999 2,000 to 4,999
100 to 499 1,000 to 1,999 5,000 or more
3. Business Description: (Briefly describe the type of business or activity at the facility)
Natural Gas-Fired Electric Power Generation
4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility. **221122 - Electric Power Generation, fossil fuel**

Section 3. Type of Application and Fee

1. Select only one:

Tier I - Fee: \$150

Tier II - Fee: \$1,000

Tier III - Fee: \$2,500

2. Payment Information:

Check/Money Order/Electronic Payment Receipt Number:

Payment Type: Check 5119

Payment Amount: \$2,500

Name on payment: Duff & Phelps

Total Amount: \$2,500

NOTE: Enclose a check, money order to the TCEQ, or a copy of the ePay receipt along with the application to cover the required fee.

Section 4. Property/Equipment Owner Information

1. Company Name of Owner: Cottonwood Energy Company LP

2. Mailing Address: 976 County Road 4213

3. City, State, Zip: Deweyville, TX 77614

4. Customer Number (CN): CN602765687

5. Regulated Entity Number (RN): RN100226109

6. Is this property/equipment owned by the CN listed in Question 4? Yes No

If the answer is 'No,' please explain: N/A

7. Is this property/equipment leased from a third party? Yes No

If the answer is 'Yes,' please explain: N/A

8. Is this property/equipment operated by the RN listed in Question 5? Yes No

If the answer is 'No,' please explain: N/A

Section 5. Name of Property/Equipment Operator (If different from Owner)

1. Company Name: N/A

2. Mailing Address: N/A

3. City, State, Zip: N/A

4. Customer Number (CN): N/A

5. Regulated Entity Number (RN): N/A

Section 6. Physical Location of Property/Equipment

1. Name of Facility or Unit where the property/equipment is physically located:

Cottonwood Energy Center

2. Type of Mfg. Process or Service: **Natural Gas-Fired Electric Power Generation**

3. Street Address: 976 County Road 4213
4. City, State, Zip: Deweyville, TX 77614

Section 7. Appraisal District with Taxing Authority

1. Appraisal District: Newton County
2. District Account Number(s): 9900015-0805153

Section 8. Contact Name

1. Company Name: Duff & Phelps, LLC
2. First Name of Contact: Greg
3. Last Name of Contact: Maxim
4. Salutation: Mr. Mrs. Ms. Dr. Other:
5. Title: Director
6. Mailing Address: 919 Congress Avenue, Suite 1450
7. City, State, Zip: Austin, TX 78701
8. Phone Number/Fax Number: (P) 512-671-5580; (F) 512-351-7911
9. Email Address: Gregory.maxim@duffandphelps.com
10. Tracking Number (optional): CC-2012-04

Section 9. Property/Equipment Description, Applicable Rule, and Environmental Benefit

For each piece, or each category, of pollution control property/equipment for which a use determination is being sought, answer the following questions.

Attach additional response sheets to the application for each piece of integrated pollution control property/equipment if a use determination is being sought for more than one (1) piece.

General Information

1. Name the property/equipment:
Unit 4 Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems
2. Is the property/equipment used 100% as pollution control equipment? Yes No
If the answer is 'Yes,' explain how it was determined that the equipment is used 100% for pollution control: N/A. See Calculation of Percentage of pollution control Property in attached Cost Analysis Procedure ("CAP") Model.
3. Does the property/equipment generate a Marketable Product? Yes No
If the answer is 'Yes,' describe the marketable product: Electricity
4. What is the appropriate Tier I Table or Expedited Review List number? ERL #8
5. Is the property/equipment integrated pollution control equipment? Yes No

If the answer is 'No,' separate applications must be filed for each piece of property/equipment.

6. List applicable permit number(s) for the property/equipment: Title V Operating Permit O2338

Incremental Cost Difference

7. Is the Tier I Table percentage based on the incremental cost difference? Yes No N/A

If the answer is 'Yes,' answer the following questions:

8. What is the cost of the new piece of property/equipment? N/A
9. What is the cost of the comparable property/equipment? N/A
10. How was the value of the comparable property/equipment calculated? N/A

Property/Equipment Description

11. Describe the property/equipment. (What is it? Where is it? How is it used?)

Background: Cottonwood Energy Center

The Cottonwood Energy Center (the "Facility") is a natural gas-fired, combined cycle power generating facility located in Deweyville, Newton County, Texas. Four GE 7-FA combustion turbines are routed to four Foster Wheeler heat recovery steam generators ("HRSGs"), which provide steam to four Alstom steam turbine-generator sets. The Facility began commercial operation in December 2003. It has a base load capacity of 1,260 MW. The Facility serves the SERC Reliability Corporation region.

Pollution Control Property Description – Cottonwood Unit 4 HRSG

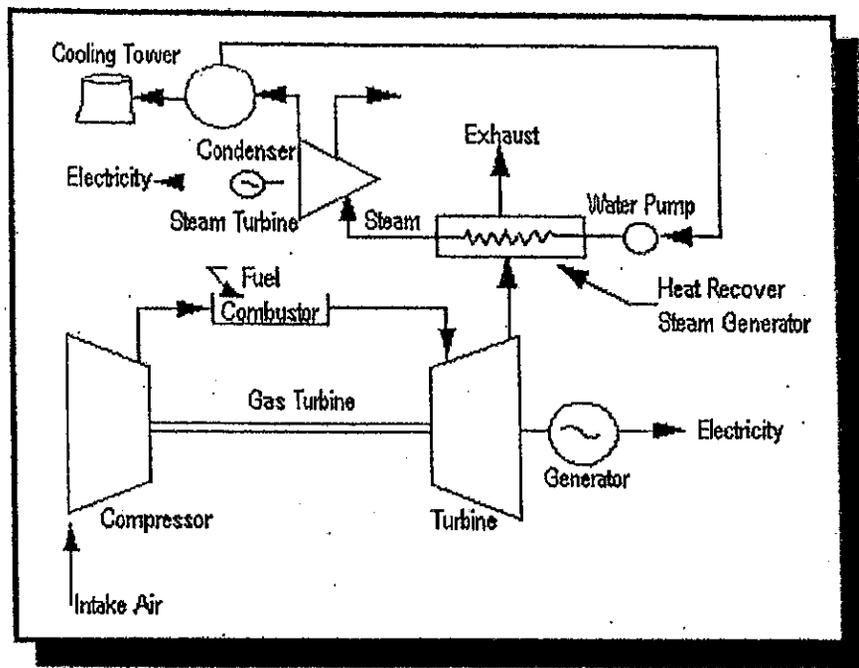
The pollution control property described in this Application is the Unit 4 HRSG and dedicated ancillary system (the "PC Property") installations.

Cottonwood Unit 4 HRSG

The Facility consists of a combined-cycle gas turbine power plant with four (4) gas Combustion Turbines ("CTs") each equipped with HRSGs and dedicated ancillary systems necessary to capture heat from the CTs' exhaust and convert it into electrical power. The Unit 4 HRSG captures the waste heat of combustion from the Unit 4 CT exhaust gas and utilizes this waste heat to produce steam, which in turn powers a steam turbine-generator set to produce electric power at the Facility in addition to the electric power generated by the CT alone.

The Facility gains both production and pollution control benefits from the subject PC Property. First, the use of this waste heat of combustion by the Unit 4 HRSG creates a thermal efficiency benefit for the Facility. Specifically, the use of waste heat in the Unit 4 CT exhaust gas results in the conversion of approximately 50% of the chemical energy of the natural gas utilized at the Facility into electricity (HHV basis), a gain over the use of the fuel by these CTs alone. Secondly, due to this efficiency gain, the Facility is able to generate fewer emissions (particularly NO_x emissions) than a traditional power generation facility utilizing a single thermodynamic cycle; thus supporting the subject PC Property's inclusion on the Expedited Review List.

The Figure below is representative of a simplified combined-cycle plant process flow.



Please see the Cost Analysis Procedure ("CAP") Model attached for the calculation of the percentage of the subject pollution control property eligible for property tax exemption.

Applicable Rule

12. What adopted environmental rule or regulation is being met by the construction or installation of the property/equipment? The citation must be to the subsection level.

The PC Property was installed to meet the requirements of 40 CFR Part 60.44da(a) "Standards for nitrogen oxides ("NOx") for Electric Utility Steam generating units for New Source Performance Standards ("NSPS)".

As well, the PC Property allows emissions to meet or exceed Best Available Control Technology emission limitations established in Federal Operating Permit #O2338. Per 30 Texas Administrative Code ("TAC") §122.143(4), the permit holder must comply with all terms and conditions codified in the permit and any provisional terms and conditions required to be included with the permit.

Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property/equipment?

The PC Property reduces the formation of and/or controls the emission of NO_x and other air emissions associated with the combustion of natural gas used in combined cycle power generation at the Facility.

Section 10. Process Flow Diagram (Optional)

Attach documentation to the application showing a Process Flow Diagram for the property/equipment.

Please see the simplified Process Flow Diagram above for a representation of the combined-cycle power plant.

Section 11. Partial-Use Percentage Calculation

This section must be completed for all Tier III applications. Attach documentation to the application showing the calculations used to determine the partial-use percentage for the property/equipment.

Please see the attachment to this application for the Cost Analysis Procedure ("CAP") Calculations.

Section 12. Property Categories and Costs

List each piece of property/equipment of integrated pollution control property/equipment for which a use determination is being sought.

Property/Equipment Name	Tier 1 Table No. or Expedited Review List No.	Use Percent	Estimated Dollar Value
Land:			
Property: Heat Recovery Steam Generator ("HRSG") and Dedicated Ancillary Systems	N/A	42.99%	\$ 60,584,465
Property:			
Property:			
Total:			\$ 26,043,320

Attach additional response sheets to the application if more than three (3) pieces.

NOTE: Separate applications must be filed for each piece of nonintegrated pollution control property/equipment.

Section 13. Certification Signature

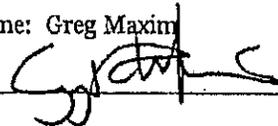
Must be signed by owner or designated representative.

By signing this application, I certify that I am duly authorized to submit this application form to the TCEQ and that the information supplied here is true and accurate to the best of my knowledge and belief.

Printed Name: Greg Maxim

Date: 12/2/2011

Signature: _____



Title: Director

Company Name: Duff & Phelps, LLC

Under Texas Penal Code 37.10, if you make a false statement on this application, you could receive a jail term of up to one year and a fine up to \$2,000, or a prison term of two to 10 years and a fine of up to \$5,000.

Taxpayer: Cottonwood Energy Company, LP
 Client: Cottonwood Energy Center
 Plant Name: 2500 MW Net Generation Combined Cycle Power Plant (2003)
 Project: The 2500 MW Net Generation Combined Cycle Power Plant
 Date: December 2, 2011
 Rev: 0

Sources Cited	
C	Calculated Assumption
DAP	DAP VAS Standardization
CW	Cottonwood Client-Provided Data
PH	Henry Hub Natural Gas Pricing
30 TAC	30 TAC DISEM 17

I. Assumptions

Plant Design Profile

		Source
PC Property		
PC Property Capital Cost (\$MM)	\$ 80,544,465	CW
PC Property Capacity (MW)	208	CW
PC Property Net Annual Generation Capacity (BWh)	508,493,135	C
Plant Capacity Factor	31.65%	CW
Plant Heat Rate (Btu/MWh)	7,503	CW
Plant Heat Rate (MMBtu/MWh)	0.01	C
Capital Cost OH ("CCO")	\$ -	
Comparable Technology Cost	\$ -	
Design Capacity Factor	0%	
Capacity ("MW")	1	

IV Three-year average daily historical electricity rates for SERC Reliability Corporation.

Economic Assumptions

	Value	Source
Discount Rate	10.0%	DAP
Payoff	40	CW
PC Property Fixed O&M Cost (\$MM/yr)	\$ 4.50	CW
Fuel Cost (\$/MMBtu)	\$ 2.80	PH
PC Property Variable Cost (\$/MWh)	\$ 0.48	CW
PC Property Variable Cost (\$/MMWh)	\$ 0.00	C
SERC Electricity Pricing (\$/MMWh)	\$ 55.32	SNL
Interest Rate	10%	30 TAC

Levelized Cost of Energy ("LCOE") Model Outputs*

Levelized Cost of Energy ("LCOE") Model Outputs*	
Capital Recovery Factor ("CRF")	10.25%
LCOE (\$/MMWh)	\$ 0.0278

*See Levelized Cost of Energy Assumptions A

Cottonwood Energy Company, LP

Technology: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center
 Plant Capacity: 1,250 MW Gas Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedure ("CAP") Calculations
 Date: December 2, 2011
 Rev: 0

II. Cost Analysis Procedures ("CAP") Formula: $\frac{[(PCF \times COH) \cdot COG - MPV]}{CCN}$

A. Definitions (provided by TC&G)¹¹

1. Production Capacity Factor ("PCF")
 The ratio of the capacity of the existing equipment or process to the capacity of the new equipment or process.

2. Capital Cost New ("CCN")
 CCN is the estimated total capital cost of the new equipment or process.

3. Capital Cost Old ("CCO")
 CCO is the cost of comparable equipment or a comparable process without the pollution control.
 The standards for calculating CCO are:

1. If comparable equipment without the pollution control feature is on the market in the U.S., then use the average market price of the most recent generation of technology that will be used.
2. If the conditions in variable 3.1 do not apply and the company is replacing an existing unit that already has received a positive use determination, the company shall use the CCO from the application for the previous use determination.
3. If the conditions in variable 3.1 and 3.2 do not apply and the company is replacing an existing unit, then the company shall convert the original cost of the unit to today's dollars by using a published industry specific statement. If the production capacity of the new equipment or process is lower than the production capacity of the old equipment or process CCO % adjust by the PCF to adjust CCO to reflect the same capacity as CCN.
4. If the conditions in variables 3.1, 3.2 and 3.3 do not apply, and the company can obtain an estimate to manufacture the alternative unit without the pollution control feature, then an average estimated cost to manufacture the unit must be used. The comparable unit must be the most recent generation of technology. A copy of the estimate must be provided with the worksheet including the specific source of the information.

4. Manufacture Product Value ("MPV")
 Anything produced or recovered using pollution control property that is sold as a product, is accumulated for later use, or is used as raw material in a manufacturing process. Manufacture product includes, but is not limited to, anything recovered or produced using the pollution control property that is intended for later use, or used in a manufacturing process (including at a different facility). Manufacture product does not include any emission credits or emission allowances that result from installation of the pollution control property.

5. Marketable Product Value ("MPV")
 The marketable product value may be calculated in one of two ways:
 1. The retail value of the product produced by the equipment for one year periods. Typically, the most recent three-year average price of the material as sold on the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average and explain how the figures were determined.
 2. If the material is used as an intermediate material in a production process, then the value assigned to the material for internal accounting purposes may be used. It is the responsibility of the applicant to show that the internally assigned value is comparable to the value assigned by other similar producers of the product.

6. Direct Costs of Production ("DCP")
 The costs directly attributed to the production of the product, including raw materials, storage, transportation, and personnel, but excluding non-cash costs, such as overhead and depreciation.

7. n Factor
 The estimated useful life in years of the equipment that is being evaluated for a use determination.

8. f Factor
 Year One.

9. Interest Rate
 10%.

R Title 30, Texas Administrative Code, Chapter 17

B. CAP Formulas (provided by TC&G)
 Partial Use Determination

$$= \frac{[(PCF \times COH) \cdot COG - MPV]}{CCN}$$

Where:
 Production Capacity Factor ("PCF") = $\frac{\text{Production Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}}$

And where:
 MPV/MP

$$= \sum_{t=1}^n \frac{MPV_t \cdot PC}{(1 + \text{Interest Rate})^t}$$

C. CAP Formulas for PC Property

Manufacture Product Value ("MPV") = Electricity Price (\$/MWh) x MWh per Year

Direct Cost of Production ("DCP") = LCOE x MWh per Year

LCOE = $\left(\frac{\text{Capital Cost}}{\text{Hours per Year}} \times \text{Capital Recovery Factor} \right) + \frac{\text{Fixed O\&M Costs}}{\text{Capacity}} + \left(\frac{\text{Fuel Cost}}{\text{Heat Rate}} \right)$

Requester: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
Plant Summary: 1,260 MW And Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure (CAP) Calculations
Date: December 2, 2011
Rev: 0

III. Cost Analysis Procedure (CAP) Calculations for Cottonwood Unit 4 HRSG

A. Marketable Product Value ("MPV")

$$\begin{aligned}
 \text{Electricity Price} & \frac{\$}{\text{MWh}} \times \frac{\text{Plant MWh}}{\text{Year}} = (\$) \text{ MPV} \\
 \$35.32 & \times 808,493 \frac{\text{MWh}}{\text{Year}} = \$28,557,781
 \end{aligned}$$

B. Production Cost ("PC")

$$\begin{aligned}
 \text{Levelized Cost of Energy ("LCOE")} & \frac{\$}{\text{MWh}} \times \frac{\text{Plant MWh}}{\text{Year}} = (\$) \text{ PC} \\
 \$0.0305 & \times 808,493,135 \frac{\text{MWh}}{\text{Year}} = \$24,850,662
 \end{aligned}$$

Formula: $\frac{(\text{PC} \times \text{CCN}) - \text{CCO} - \text{NPVMP}}{\text{CCN}}$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\begin{aligned}
 \sum_{t=1}^n \frac{(\$) \text{ MPV}}{(1 + \text{Interest Rate})^t} - (\$) \text{ PC} & = \text{NPVMP} \\
 \sum_{t=1}^n \frac{\$28,557,781}{(1 + 10\%)^t} - \$24,850,662 & = \$34,541,145
 \end{aligned}$$

* If MP is 0, then NP = 0.

Coltonwood Energy Company, LP

Target: Coltonwood Energy Company, LP
Plant: Coltonwood Energy Center
Plant Summary: 1,250 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: December 2, 2011
Rev: 0

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process	=	PCF
Production Capacity of New Equipment or Process	=	1,000
	=	282 MW @ 31.65%

D. Capital Cost New ("CCN")

PC Property	=	CCN
	=	\$80,584,465
Comparable Technology	=	CCO
	=	\$0

Partial Use Determination Calculation

(PCF x CCN)	=	CCO	=	MP
1,000 x \$80,584,465	=	\$0	=	\$24,841,320
	=	\$80,584,465	=	
	=		=	\$ 26,041,320

TCO Use Determination Application Section 12, Unit	
Use Percent	42.96%
Estimated Dollar Value	\$ 60,584,465

Eligible HRSG Costs
(Partial Use Determination % x PC Property Cost)

ATTACHMENT B

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center
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Plant Location: Newton County, Texas
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Levelized Cost of Energy ("LCOE") Model⁽¹⁾

Formulas

$$\text{Capital Recovery Factor ("CRF")} = \frac{i \times (1 + i)^n}{(1 + i)^n - 1}$$

$$\text{LCOE} = \left(\frac{\text{Capital Cost} \times \text{CRF}}{\text{Hours per Year} \times} \right) + \frac{\text{Fixed O\&M Costs}}{\text{Capacity Factor}} + \left(\text{Fuel Cost} \times \text{Heat Rate} \right)$$

Calculations

Capital Recovery Factor	10.23%
LCOE (\$/kWh)	\$ 0.03079

⁽¹⁾ http://www.nrel.gov/analysis/lcoe_documentation.html

Note: The Levelized Cost of Energy is a calculation developed by the United States Department of Energy's National Renewable Energy Lab to determine the cost of generating energy (electricity) using the design or performance criteria for a specific power generation unit. The website above gives a more detailed description of the model and its development.

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\$3,664,099	17	5.054470285	\$ 724,922
\$3,664,099	18	5.559517313	\$ 659,020
\$3,664,099	19	6.115909045	\$ 599,109
\$3,664,099	20	6.727499949	\$ 544,645
\$3,664,099	21	7.400249944	\$ 495,132
\$3,664,099	22	8.140274939	\$ 450,120
\$3,664,099	23	8.954302433	\$ 409,200
\$3,664,099	24	9.849732676	\$ 372,000
\$3,664,099	25	10.83470594	\$ 338,182
\$3,664,099	26	11.91817654	\$ 307,438
\$3,664,099	27	13.10999419	\$ 279,489
\$3,664,099	28	14.42099361	\$ 254,081
\$3,664,099	29	15.86309297	\$ 230,983
\$3,664,099	30	17.44940227	\$ 209,984
NPVMP:			\$ 34,541,145

**DUFF & PHELPS LLC
ACCOUNTS PAYABLE**

300 HEADQUARTERS PLAZA
EAST TOWER, 12TH FLOOR
MORRISTOWN, NJ 07960

5119

2-9710 L
CT355

DATE

Nov 29 2011

PAY
TO THE
ORDER OF

JCEQ

\$ *2,500.00*

DOLLARS

Two thousand five hundred

Bank of America



Chicago, Illinois

[Signature]

FOR

⑆005119⑆ ⑆071000039⑆ 88665⑈08656⑈⑆

Attachment 5



RICHARD L. "RICK" HARDCASTLE
HOUSE OF REPRESENTATIVES

November 1, 2007

Via Facsimile

Ms. Kristin Smith
Office of Legal Services, MC 205
Texas Commission on Environmental Quality
12100 Park 35 Circle
Austin TX 78753

STATE OF TEXAS
COMMISSION ON ENVIRONMENTAL QUALITY
OCT 26 2007
10:10 AM
COMMUNICATIONS SECTION

Re: Rple Project Number 2007-055-017-AS

Dear Ms. Smith:

I am writing to provide my comments on the proposed TCEQ rules in the above-referenced rule docket which, in part, involves the implementation of HB 3732. As the author of HB 3732, I support the rules as proposed in the October 3, 2007, Texas Register and commend the TCEQ staff on a job well done in implementing the letter and intent of the Prop. 2 program and the changes to that program passed by HB 3732.

Attached are two letters that I have previously written that relate to issues still under consideration in your rulemaking. The first letter (Attachment 1) was sent to the TCEQ staff and Commissioners on August 1, 2007, in order to address some questions that had been raised at that time regarding the intended scope and applicability of HB 3732. Since that time, some additional questions have been asked and formally posed in both the preamble to the proposed rule and in an opinion request that was submitted by the TCEQ Chairman to the Attorney General of Texas. The second letter (Attachment 2) was sent to the Attorney General on October 31, 2007, in response to the TCEQ Chairman's opinion request.

Together, the two attached letters reflect my views on several of the issues that are still before the Commission in this rulemaking and I include the comments made in those letters in this letter by reference to avoid repetition.

Again, I appreciate your efforts to timely implement HB 3732 and, if I can be of any assistance to you, please don't hesitate to contact me.

Sincerely,

Representative Rick Hardcastle

RH/caw

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(512) 463-0526

DISTRICT OFFICE:
1930 FANNIN STREET
VERNON, TX 76384
(940) 553-3825



RICHARD L. "RICK" HARDCASTLE
HOUSE OF REPRESENTATIVES

ATTACHMENT 1

August 1, 2007

Ms. Grace Montgomery Faulkner
Deputy Director, Administrative Services
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Ms. Faulkner,

It has come to my attention that questions have arisen about the legislative intent of Section 4 of HB 3732 which amends Section 11.31 of the Tax Code (commonly referred to as the "Prop. 2" or the "pollution control property" tax exemption). As the House author of the bill, I have a few things I would like to clarify regarding the intent and scope of that part of the bill.

1. Scope of Bill and Possible Impact on Industries Other than Electric Power Generation

The reason I filed HB 3732 was to help ensure that Texas continues to maintain and build power plants that are as clean as possible, but still capable of using a diverse range of affordable feedstocks such as coal, biomass, petroleum coke, and solid waste. Helping electricity remain affordable is an important aspect of the bill along with the obvious environmental protection goals of the bill. With that overall intent in mind, we focused the equipment list contained in Sections 4 and 5 of the bill on electric generation projects.

HB 3732 clarifies, but does not alter, the TCEQ's underlying legal authority under the Prop. 2 program. While I was focused on electric generation in filing HB 3732, I am aware that TCEQ has always had the authority (since 1994) under the Prop. 2 program to add items to the predetermined equipment list (PEL), including equipment that resembles equipment included on the HB 3732 list that are used in industries other than the electric generation industry. It was not my intent to alter that authority with this legislation. Nor does this legislation change the fundamental requirement of the Prop. 2 program - that equipment needs to control pollution, in whole or in part, in order to be eligible for a full or partial exemption.

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An extreme example of a potential misinterpretation would be to interpret item No. 1 on the list ("coal cleaning or refining facilities") as an exemption for an entire oil refinery. Such an interpretation is entirely without merit given the context of the statute and flies in the face of the bill's fundamental purpose. The "refining" word was added to the bill to clarify that, in addition to coal cleaning, the bill would encourage folks to "refine" coal before it is used. I became aware during the legislative session of the difference between the two technologies and that is why we adjusted the language in the bill.

We made it clear in the legislation that the list was not exclusive and included a general provision (item no. 18) which I intended to give the TCEQ discretion to add additional technologies when supplementing their PEL in the future as they see fit. This provision should not be interpreted as vastly expanding the fundamental purpose and scope of HB 3732.

2. Recognition of Pollution Control Exemption Despite Product or Co-product Generation by the Same Equipment

I understand that there has historically been a debate about whether and to what extent pollution control tax exemptions can be allowed for equipment that might also be involved in production. I am also aware of the debate that has existed when a facility has figured out a way to sell, as a product, materials that accumulate within a pollution control device (e.g., fly ash). One of the goals of the legislation this session was to ensure that TCEQ had the authority and direction from the legislature to recognize that pollution control benefits can be derived from the manner in which fuel is prepared and used, and from increasing the efficiency of certain facilities. By doing so, the amount of fuel needed and the total amount of pollution emitted can be reduced. I did not intend, nor do I support, an interpretation of anything in HB 3732 to prevent electric generating facilities from receiving exemptions for equipment simply because they also derive profit from a given piece of equipment or process. If it reduces pollution, it qualifies.

I am aware that some of the items on the HB 3732 list include entire generation processes like "fluidized bed combustion systems" and "ultra-supercritical pulverized coal boilers" which were included for the reason stated above: the manner in which the fuel is used helps reduce pollution. Consistent with the process put in place by HB 3121 in 2001, if TCEQ receives documentation justifying that less than 100% of an exemption should be granted for such processes, we have afforded the TCEQ discretion under the bill to include an item on the PEL for less than 100%. I understand that the TCEQ's initial plan is to assume a 100% exemption unless documentation establishes a legitimate basis for a lesser percentage. I support that approach because, again, the goal of the legislation is to reduce pollution.



RICHARD L. "RICK" HARDCASTLE
HOUSE OF REPRESENTATIVES

ATTACHMENT 2

October 31, 2007

The Honorable Greg Abbott
Attorney General
State of Texas
P.O. Box 12548
Austin, Texas 78711

Re: Attorney General Opinion Request (RQ-0635-GA) for interpretation of the intent of H.B. 3732, 80th Regular Session, Texas Legislature

Dear General Abbott:

This letter is being submitted in response to the request for an attorney general opinion submitted by Buddy Garcia, Chairman, Texas Commission on Environmental Quality ("TCEQ") regarding the legislative intent of H.B. 3732, which I authored and Senator Averitt sponsored in the Senate during the 80th Legislature.

The purpose of H.B. 3732 was to encourage the construction of advanced clean energy projects ("ACEPs") to meet the growing demand for electricity in Texas as well as increasing demands for pollution control. The incentives include grants, loans, tax exemptions and a streamlined permitting process. The bill also clarified current law regarding pollution control property exemptions and ensures that new and existing power plants receive expedited determinations for certain categories of pollution control equipment.

The question submitted by Chairman Garcia is whether "H.B. 3732 and its legislative history, limits the TCEQ's rule implementation of §11.31(k) [and §26.045(f)] of the Texas Tax Code to pollution control property associated with advanced clean energy projects, as defined in Texas Health and Safety Code, §382.003?"

It was not and is not my intent as the author of the bill to limit equipment eligible for a property tax exemption under §11.31(k) (or the corresponding change in §26.045(f)) of the Tax Code to advanced clean energy projects. In addition, I am confident you will not find anything in the legislative history to support that interpretation. In fact, all indicators of intent are quite the opposite. Since it will take several years to bring ACEPs online, we wanted to encourage current power plants to continue installing pollution control equipment.

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October 31, 2007
Page 2

While I have provided this background information to give you some context on why the statute was drafted the way it was, I understand your office will focus primarily on the unambiguous language of the statute. As Attorney General Cornyn stated: "we must first consider the statute's plain and common meaning on the presumption that the legislature intended the plain meaning of its words. If possible, we must ascertain the legislature's intent from the language it used in the statute and not look to extraneous matters for an intent the statute does not state... [w]e look to legislative history only if a statute is ambiguous."

The statute is not ambiguous. Section 11.31(k) states that the "Texas Commission on Environmental Quality shall adopt rules establishing a nonexclusive list of facilities, devices, or methods for the control of air, water, or land pollution, which must include... [a list of 18 types of equipment follows]". As Attorney General Abbott stated in Opinion No. GA-0202, "[w]e presume that every word or phrase in a statute has been chosen for a particular purpose." The opposite is also true, if the legislature chooses not to use a particular word or phrase, it is for a reason.

In drafting §11.31(k) (and the corresponding change in §26.045(f) of the Tax Code, if the legislature wanted to limit its application to pollution control equipment for ACEPs, we could have instructed the TCEQ to adopt rules "establishing a nonexclusive list of facilities, devices, or method for the control of air, water or land pollution associated with advanced clean energy projects..." We did not, however, choose to use these words, and we did not tie it in some other way to the definition of ACEPs. This was no accident.

In fact, the legislature purposely uses the word "nonexclusive," which means it did not want to place any unnecessary limitations on the type of equipment provided an exemption under this section of the Code as long as it met the definition contained in §11.31(b) adopted by the 73rd Legislature.¹ Attorney General Opinion No. DM-448 says "[a] statute is presumed to have been enacted by the legislature with complete knowledge of and with reference to the existing law."² The law prior to the 80th Legislature did not limit the tax exemptions under this section to ACEPs, and by not placing such a limitation in subsection (k), the legislature understood that the existing definition would apply.

¹ Op. Tex. Atty Gen. No. JC-0567 at 4 (2002).

² Op. Tex. Atty Gen. No. JC-0567 at 4 (2002).

³ Op. Tex. Atty Gen. No. GA-0202 at 3 (2004).

⁴ Section 11.31(b), Texas Tax Code, defines "facility, device, or method for the control of air, water, or land pollution" as "land that is acquired after January 1, 1994, or any other structure, building, installation, excavation, machinery, equipment, or device, and any attachment or addition to or reconstruction, replacement, or improvement of that property, that is used, constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by an environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water or land pollution."

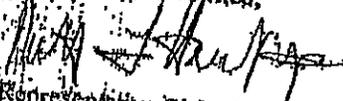
⁵ Op. Tex. Atty Gen. No. DM-448 at 4 (1997).

October 31, 2007
Page 3

Although the statute's language is unambiguous and there is no reason to look to the legislative history for guidance, it should be pointed out that nothing in the legislative history of the bill contradicts the plain meaning of the statute. I am confident you will not find any evidence to suggest that these tax exemptions should be limited to ACEPs.

Thank you for your service to our great state and your consideration of this letter. I understand that your resources are limited and that you have numerous pending opinion requests to address. That being said, the Commission is under a statutory deadline to adopt rules on this issue by January 1, 2008, so any effort you can make to expedite the response to Chairman Garcia's request would be greatly appreciated.

Respectfully submitted,


Representative Rick Hardcastle

RH/rw





JACKSON WALKER L.L.P.



ATTORNEYS & COUNSELORS

Michael J. Nasi
(512) 236-2216 (Direct Dial)
(512) 391 2194 (Direct Fax)
Email: mnasi@jw.com

June 24, 2013

Via Hand Delivery

Mr. Chance Goodin
Team Leader, Stationary Sources Programs
Air Quality Division
TCEQ
Building C, 3rd Floor
Austin, Texas 78711-3087

2013 JUN 24 PM 4: 4
CHIEF CLERK'S OFFICE
TEXAS COMMISSION
ON ENVIRONMENTAL
QUALITY

Re: Response to Notice of Technical Deficiency
Cottonwood Energy Company, LP
Cottonwood Energy Center
Application Nos. 15505, 16410, 16411, and 16412

Dear Mr. Goodin:

On February 21, 2013, the Executive Director ("ED") of the Texas Commission on Environmental Quality ("TCEQ") issued a Notice of Deficiency ("NOD") to Cottonwood Energy Company, LP ("Cottonwood" or "Applicant") regarding its application for a use determination for the heat recovery steam generators ("HRSGs") and enhanced steam turbines ("ESTs") located at its Cottonwood Energy Center. On March 20, 2013, the ED granted an extension of the deadline to respond to the NOD, resulting in a new response due date of June 24, 2013. As part of this response to the NOD, Cottonwood is providing additional information in support of its original application. With the addition of the supplemental information provided in this response, the application is current.

I. Eligibility For the Prop 2 Program

It is unquestioned that HRSGs and the turbines that utilize their steam provide an environmental benefit by reducing the amount of fuel required to produce each megawatt-hour ("MWh") of electricity. By reusing waste heat, the HRSGs are able to produce additional steam which the steam turbine uses to generate additional electricity, all while no additional fuel is consumed. The reduction in the amount of fuel consumption on a per MWh basis reduces the associated emissions of nitrogen oxides ("NOx"), hazardous air pollutants ("HAPs"), and greenhouse gases ("GHGs").

Empirical data has been presented to the TCEQ that demonstrates the indisputable reduction of NOx emissions on a MWh basis resulting from the addition of a HRSG and associated steam turbine system to a simple cycle gas-fired power plant. On top of the environmental benefits

they provide, HRSGs and steam turbines are used to meet or exceed a variety of environmental regulations, including: New Source Performance Standards (“NSPS”) and Best Available Control Technology (“BACT”) standards associated with both NOx and GHGs, as well as NOx standards arising from the Clean Air Interstate Rule (“CAIR”) and several other environmental rules. For further discussion of the specific environmental rules that have been met or exceeded by use of HRSGs and steam turbines, please see Attachment A.

II. The Current CAP, As Interpreted by ED Staff and Prescribed in the NOD, Does Not Follow Legislative Directives in the Tax Code

Under TCEQ rules, Tier III applicants are required to use the Cost Analysis Procedure (“CAP”) to calculate the appropriate use determination. And while Tier IV applicants are not required by TCEQ rules to use the CAP, ED staff has requested that each of the Tier IV applicants, include a use determination calculation based on the CAP, in addition to any other proposed calculations. In the NOD, the ED staff prescribed certain variables that must be applied by both Tier III and Tier IV applicants in developing their CAP calculations.

However, the CAP, as interpreted by the ED staff and as prescribed in the NOD, conflicts with the statutory language in Tex. Tax Code §11.31(k). Tax Code §11.31(k) specifically designates this equipment as pollution control property and explicitly restricts the TCEQ’s options for not recognizing it as such to a process set out in 11.31(l) which provides that if the TCEQ wishes to remove an item from the list in §11.31(k), it must go through a formal rule-making process, and the removal must be supported by compelling evidence that the item does not provide pollution control benefits. The Legislature did not afford the TCEQ the option to forego rulemaking and apply case-by-case interpretations of its rules that always results in a negative use determination for those items it specifically included on the statutory list of pollution control property.¹ Yet, the ED staff interprets and applies the CAP in the NOD in a manner that does exactly that - always results in a negative use determination for equipment that the Legislature specifically designated as pollution control property. What follows is an explanation of why the staff’s interpretation of the CAP generates this unlawful result followed by a description of how the CAP can be interpreted in a manner that does not violate the tax code and potentially establishes a framework for the commission’s handling of these types of applications now and in the future.

Although we disagree with the regulatory interpretations on which the NOD is based, in an effort to comply with the ED staff’s request, Cottonwood has applied the CAP as prescribed by the staff in its NOD (see Table 1). As demonstrated in Table 1 and based upon a review of similar analyses of similar applications, it is clear that following the ED staff’s recommended CAP Model will always result in a significant negative use determination for HRSGs and ESTs.

As a threshold matter, the Commission should avoid interpreting its rules in manner that will always generate a negative use percentage for equipment that has been legislatively assumed to have pollution control benefits, especially when those pollution control benefits have been fully documented. In fact, given that the staff’s interpretation of the CAP always results in a negative use determination means that the staff’s interpretation is tantamount to an ad hoc rulemaking to

¹ Tex. Tax Code § 11.31(k)(8) and (10).

remove thus equipment from eligibility. Such a procedure clearly violates Tax Code §11.31(l), which explicitly requires the Commission to go through formal rulemaking and satisfy a high burden before disallowing eligibility for this equipment.

When it created the list in §11.31(k), the Legislature was not merely providing a list of equipment for which the TCEQ must conduct an expedited review. The Legislature was prescribing a list of equipment that was to be considered pollution control property. Just because the ED is required under 11.31(g-1) to evaluate the equipment on the 11.31(k) list using the standards and methods used for all equipment does not mean that the staff has the ability to disregard the legislatively determined pollution control benefits and interpret its standards and methods in a way that generates arbitrarily negative results without giving any regard to the emission reduction benefits of the equipment in question.

For further discussion of the CAP formula, as prescribed by the ED staff, how it fails to properly account for pollution prevention, and how it generates an arbitrarily negative use determination percentage, please see Attachment B.

III. Proposed Methodology

Cottonwood has interpreted the regulations and applied the CAP in a manner that is in harmony with the documented and legislatively-sanctioned environmental benefits of HRSGs and their associated steam turbine systems. As more fully described in Attachment C, not only is there a regulatory basis for the "Clarified CAP" approach reflected in Attachment C, it also comports with agency precedent on a few important points.

IV. Conclusion

Based on the results of the Clarified CAP Model that Cottonwood has developed to accurately account for the portion of HRSGs and steam turbines that is attributable to a pollution prevention function, Cottonwood submits that the appropriate use determination is 87 percent (see Attachment D). Finally, although many of the issues raised in the NOD are addressed in some way by this narrative and Attachments A-D, in order to be fully responsive to the NOD, an issue-by-issue response to the items listed in the NOD is contained in Attachment E.

Sincerely,



for Michael J. Nasi

Attachments

Attachment A

ATTACHMENT A

Environmental Rules and Regulations Met or Exceeded by the Use of HRSGs and Steam Turbines

From the outset, it must be emphasized that the structure of 11.31 and the manner in which it was amended in 2007 by the Texas Legislature makes it clear that applications that relate to equipment contained on the 11.31(k) list are not required to provide citation to document that the equipment helps to meet or exceed an environmental rule. That is statutorily assumed to be the case in light of the fact that applicant is explicitly excused from submitting information demonstrating the environmental benefits of the equipment in question. This, in and of itself, should suffice to satisfy any inquiry about whether applications relating to HRSGs and ESTs are obliged to include environmental citation to support their claim for statutory eligibility.

Nonetheless, in order fully response to the information requests by the ED staff, what follows is a discussion of the rules that are being met or exceeded by Cottonwood's use of HRSGs and ESTs.

I. Rules or Regulations that are Met or Exceeded by HRSGs and ESTs

It should be noted that Issue 2 of the NOD does not honor Chairman Shaw's specific directive to provide "an opportunity for additional citations to be provided for what those rules are" but instead attempts to limit the discussion to citations already provided by the Applicant in its original application. As Chairman Shaw indicated, the ED should be providing the Applicant an opportunity to demonstrate whether any environmental regulation exists that is being met or exceeded through the use of the HRSGs and ESTs. It does not matter whether the applicable environmental rule is an EPA regulation such as CAIR or county-specific regulations promulgated by TCEQ, the question before the Commission is simply whether any environmental rule is being met or exceeded.

A HRSG's use of otherwise wasted heat from the turbine exhaust gas results in higher plant thermal efficiency (net power output of the plant divided by the heating value of the fuel), compared to other power generation technologies. Specifically, the equipment's increased thermal efficiency, as compared to a traditional steam boiler unit, reduces the fuel needs for the same power outputs, while emitting no additional air emissions. It is important to note that the lower fuel consumption associated with increased fuel conversion efficiency not only reduces NOx emissions, but also reduces emissions of hazardous air pollutants and greenhouse gas emissions, such as CO₂. The use of HRSGs, ESTs, and combined cycle technology is a crucial piece of the state's power fleet as we attempt to meet a growing demand for electricity and maintain healthy air quality.

It is important to note that, under Tex. Tax Code § 11.31(b), to qualify for an exemption the equipment must be used "to meet or exceed rules or regulations adopted by any environmental protection agency ... for the prevention, monitoring, control, or reduction of air, water, or land pollution." There is no statutory definition of the word "exceed," but the only reasonable interpretation of that term in this context is to include actions that not only reduce emissions below an applicable limit, but also actions that do so before they are absolutely mandated of the particular facility. Once a rule is duly adopted and time is all that stands between that rule mandating a reduction at a particular plant, it is wholly unreasonable for the ED staff to narrowly

ATTACHMENT A

construe the term “exceed” in the Tax Code to prevent proactive projects from qualifying under 11.31 while reserving eligibility only for those sites that wait until the last minute and they are absolutely mandated to act. Not only would this create an absurd disincentive for proactive pollution prevention, it ignores the reality that no member of the regulated community can afford to always operate in a reactive, as opposed to proactive, manner.

Therefore, the only reasonable interpretation of 11.31 is to recognize that “exceed[ing]” an environmental rule includes complying with duly-adopted environmental rules prior to the ultimate compliance date that might be afforded under the rule. As discussed further below, this is an important recognition in the context of pollution prevention approaches like HRSGs and ESTs because, in many instances, the emission reductions achieved by this equipment are required of some, but not all sites at this point in time, but the passage of time and compliance deadlines will ultimately make such reductions mandatory at every site.

II. CAIR

There are several applicable regulations which are being met or exceeded through the use of HRSGs. Most notably, Texas and 27 other states are subject to the EPA’s Clean Air Interstate Rule (“CAIR”), which specifically calls for those states to reduce emissions of NO_x and SO₂ from electric generating facilities.² As described in the Application itself, Cottonwood’s HRSGs and ESTs help meet or exceed the CAIR requirements primarily by reducing fossil fuel consumption and related NO_x emissions. The use of Cottonwood’s HRSGs and ESTs in the combined cycle configuration results in significantly lower NO_x emissions for the same electric power that could be generated by a simple cycle plant without pollution control equipment. HRSGs and ESTs accomplish this result by capturing/recycling and using heat generated by its combustion turbines, which then convert water into steam to power steam (rather than natural gas) turbines to produce additional power without use of additional fossil fuel or its associated NO_x emissions. Stated conversely, without its HRSGs and ESTs, Cottonwood would be unable to produce the same amount of power without producing more NO_x emissions that would in turn be curtailed on CAIR-implementing state regulations.

III. BACT

On January 2, 2011, EPA began regulating GHGs under the Clean Air Act³ and implemented a new GHG regime through BACT reviews (in SIP-authorized states or via a FIP [e.g., Texas]) which effects an output-based emission limit on GHGs. On May 21, 2013, the Texas Legislature passed House Bill 788, which directs the commission to adopt rules to authorize GHG emissions through state issued permits in order to displace the FIP with a SIP-authorized GHG permit regime.⁴

So, although the debate continues regarding EPA’s technical legal approach for regulating GHGs under the Federal Clean Air Act, there can be no debating the fact that they are, in fact, regulating GHGs in a manner that effects an output-based emission standard for fossil fuel-fired power plants. Coupled with multiple NO_x-based regulations, EPA’s GHG regime leaves no

² See 40 C.F.R. Part 96.

³ See 75 Fed. Reg. 31514 -- 31608 (June 3, 2010).

⁴ See TEX. HEALTH & SAFETY CODE § 382.05102; H. B. 788, 83rd Tex. Leg., § 2 (2013).

ATTACHMENT A

question that an adequate environmental regulatory basis exists to satisfy that aspect of Prop. 2 eligibility.

The most effective means to reduce the amount of CO₂ generated by a fuel-burning power plant is to use efficient generating technologies and processes to meet the plant's required power output. The equipment itself, heat recovery system generators, enhanced steam turbines, and related ancillary equipment capture and recirculate heat that would otherwise be vented to the atmosphere, which results in more electricity being produced per unit of fuel input.

In its GHG BACT Guidance Document, the EPA states, "Considering the most energy efficient technologies in the BACT analysis helps reduce the products of combustion, which includes not only GHGs but other regulated NSR pollutants (e.g. NO_x, SO₂, PM/PM10/PM2.5, CO etc.) Thus, it is also important to emphasize that energy efficiency should be considered in BACT determinations for all regulated NSR pollutants (not just GHGs)."⁵ The fact that output-based emission reductions have been so clearly identified by the EPA as a preferred method of compliance with BACT for a wide range of pollutants should end any debate about whether a sufficient regulatory basis exists to conclude that HRSGs qualify as pollution control property.

By reducing output based emissions of GHGs in this manner, this equipment is clearly eligible for Prop. 2 consideration without the need for any further discussion of whether and to what extent existing NO_x regulations independently establish that eligibility.

IV. NSPS

As previously mentioned, HRSGs also help facilities meet 40 CFR 60.44Da, which establishes standards of performance for NO_x emissions for electric utility steam generating units for which construction commenced after September 18, 1978.⁶

In its Response Brief to the negative use determination appeal, the ED staff stated, "Applicants cite to NSPS Da and/or Db which contain a limit based upon the pounds of NO_x per MWh generated. NSPS Da and Db regulate only a portion of the plant. Applicants argue HRSGs provide control by increasing efficiency of the entire plant. Because what is regulated by NSPS Da and Db is not the same as what Applicants state the control provided by HRSGs, there is not a sufficient nexus."⁷ It appears that the ED's argument here is that HRSGs help increase efficiency and thereby reduce overall plant emissions, but the emission limits in parts Da and Db only apply to specific pieces of equipment and therefore, the HRSGs were not "used, constructed, acquired, or installed wholly or partly to meet or exceed" Da and/or Db.

A simple reading of the regulation demonstrates 1) that Da is an environmental rule; 2) that Da requires that both HRSGs and duct burners meet certain emissions limits; and 3) that the use, construction, acquisition, or installation of HRSGs will help an applicant meet these rules. The fact that the Applicant argues that HRSGs help increase the efficiency of the whole plant has

⁵ EPA, *PSD and Title V Permitting Guidance for Greenhouse Gases*, p. 21 (March 2011).

⁶ 40 C.F.R. 60.40Da. It should be noted that the applicable emission limits vary depending on the year the facility was constructed.

⁷ Executive Director's Response to the Appeals Filed on the Negative Use Determinations for the Heat Recovery Steam Generator Applications ("Executive Director Response Brief"), October 4, 2012, p. 11.

ATTACHMENT A

absolutely nothing to do with the fact that the HRSGs acquired and installed at its facility help Applicant to comply with part Da.

The ED has already conceded that 40 CFR Part 60, Subpart KKKK includes an output-based emission limit on NO_x that applies to an entire power plant.⁸ Rather than taking the logical step of acknowledging that HRSGs assist and, in fact, are essential to achieving the Subpart KKKK emission limit, the ED makes a seemingly illogical leap to the conclusion that Subpart KKKK cannot be the qualifying environmental regulation because that Subpart would not apply until “after an applicant affirmatively decides to build a combined cycle plant.”⁹ Whatever that statement is intended to convey, it does not accurately reflect the regulatory framework.

The “Applicability” section of 40 CFR Part 60, Subpart KKKK states “if you are the owner or operator of a stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005,” your turbine is subject to this subpart.”¹⁰ So, it is clear that this regulation applies to “stationary combustion turbines” without reference to what type of equipment is installed in conjunction with those turbines.

V. Conclusion

Therefore, the CAIR Program, 40 CFR Part 60, Subpart Da, and 40 CFR Part 60, Subpart KKKK clearly and unambiguously create NO_x emission limits that HRSGs are “used, constructed, acquired, or installed wholly or partly to meet or exceed.” The bottom line is that NO_x emission limits exist and HRSGs help to meet or exceed those limits. Furthermore, a combined-cycle power plant using HRSGs is an example of efficient generating technologies and processes used to meet the plant’s required power output, which is necessary to meet GHG BACT requirements now and will be critical to meet GHG NSPS requirements, once finalized.

⁸ *Id.* at 12.

⁹ *Id.*

¹⁰ 40 CFR §60.4305.

Attachment B

ATTACHMENT B

Flaws with the Interpretation and Application of the CAP Reflected in the ED Staff's NOD

I. Structural Flaws in the CAP, as Interpreted in the NOD

During the Commissioner Agenda Meeting, in a discussion with Minor Hibbs regarding the flaws of the current CAP, Chairman Shaw noted that "My thought is you use those same processes, *it's just that for the purpose of those items listed in (k) you consider energy efficiency in that methodology.*" Unfortunately, the interpretation of the CAP reflected in the staff's NOD does not account for the energy efficiency benefits provided by HRSGs and ESTs in the CAP and has, in fact, guaranteed that this equipment will receive a negative use determination. What follows is the documentation of how the ED staff's interpretations of the CAP always generate a negative use determination for this equipment.

The CAP as interpreted by ED staff and set forth in the NOD, is best suited to measure the positive use determination percentage generated as a consequence of an upgrade or modification to production facilities that generate pollution control benefits as a consequence of such a modification. Cottonwood was not replacing an older, traditional steam-fired boiler with a more efficient combined-cycle unit. Rather, Cottonwood, inclusive of its HRSGs, was designed and installed as a greenfield power generation facility. As a result, the CAP Model presented in the NOD does not generate a use determination percentage that accurately reflects the pollution prevention benefit of HRSGs and ESTs.

II. Application of the ED's Prescribed CAP Model Demonstrates Significant Deficiencies and Does Not Comply with Commission's Instructions

Although Cottonwood does not agree with the regulatory interpretations reflected in the CAP instructions provided in the NOD, in an effort to fully comply with the ED staff request, Cottonwood has applied the CAP as prescribed in the NOD (see Table 1 below). Use of this model results in a use determination of -749.40%, which demonstrates why the staff's interpretations are flawed and do not comport with legislative directives set out in 11.31.

ATTACHMENT B

Table 1: Results of CAP Model Using TCEQ Variable Assumptions

	TCEQ CAP Model Variable Assumption	TCEQ CAP Model Inputs	TCEQ CAP Model Output
1	Production Capacity Factor (PCF): Calculated by dividing the capacity of the existing equipment or process by the capacity of the new equipment or process.	PCF = 0; undefined Capacity of Existing Equipment = 0 Capacity of New Equipment/Process = 220	-
2	Capital Cost New (CCN): Cost of HRSGs ONLY	CCN = \$ 23,260,294	-
3	Capital Cost Old (CCO): Cost of a boiler(s) required to produce the same amount of steam produced by the HRSGs.	CCO = \$ 27,590,022	-
4	Net Present Value of the Marketable Product (NPVMP): The net present value of the marketable product recovered for the expected lifetime of the property, calculated using the equation in §17.17(c)(2) 1. If steam is used to generate electricity that is sold to external parties or used on site, then the value of the marketable product is considered the value of electricity sold or used on site as a result of the steam generated by the HRSG. For 1 above, the thermal power of steam generated by the facility is converted into electrical power. Using steam tables and basic thermodynamic equations, the thermal power of the steam can be determined.	Substituted actual steam turbine net generation in Mega Watt-Hours for the 2005-2007 period[1]	N/A
5	Production Cost (PC): Itemized costs directly attributed to the operation of the HRSG excluding non-cash costs, such as overhead and depreciation and excluding costs related to operating the gas turbine, associated duct burners, or the steam turbine including fuel costs.	HRSG-Only O&M: \$827,508 (NOTE: <u>No</u> Fuel Costs Included)	-
6	Interest Rate:	10%; Use in current CAP Model	Assumed
7	n: Estimated Useful Life in years of the HRSG	Use 20 year useful life, Assumed	Assumed
8	ALL Assumptions Above	All	-749.40%

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One of the major reasons the ED staff's interpretation of the CAP drives an absurd negative percentage is the over-emphasis on income in the calculation, which is direct conflict with comments made by Commissioner Baker at the December 5, 2012 Agenda when he stated:

In this letter from the author that says specifically that "3732....[was not intended] to prevent electric-generating facilities from receiving exemptions for equipment simply because they also derive profit from any given piece of equipment or process." It basically says if it reduces pollution it qualifies. And so, I have a really hard time sort of ignoring what the will of the author, who seems to be very clear in sort of what he was thinking when the Bill was written and passed, and sort of just setting that aside because of the economic benefit gain from the installation of a HRSG.

The fact that, in large part, the staff's interpretation of the CAP uses production value as a means to drive down the use determination percentage also runs afoul of the stated expectations of Commissioner Rubenstein when he stated at the December 5 Agenda:

I don't disagree that there's great production value in having the HRSGs there. None. Nobody disputes that. But, I also don't think it's appropriate to discount the fact that that efficiency ends up in emission avoidance, and . . . we've touted the improvements in air quality that we've made because we're targeting the emissions, in large respects the increased efficiencies because of the regulations that we have also let us get there, and so we can't like it here and not like it over on this end.

There is no doubt that the Commissioners' directive was for the ED to provide a method for calculating use determinations that accounts for and encourages the prevention of pollution through efficient process and design features. Unfortunately, the interpretations of the CAP reflected in the NOD fail to accomplish this end and should not be used to evaluate HRSGs and ESTs. We remain hopeful that, through the submission of responses to NODs, the regulated community will provide a more than adequate basis for the ED staff to follow a different interpretation and application of the CAP that better honors the directions and expectations of the Commissioners. Toward that end, what follows in Attachment C is Cottonwood's attempt to document a more technically, legally, and practically sound approach to applying the CAP to HRSGs and ESTs.

Attachment C

ATTACHMENT C

Solution to CAP Issue and Statutory Compliance

While the CAP, as prescribed by the ED staff, should not be used to evaluate HRSGs and ESTs, an interpretation of the CAP that utilizes the same basic form as that prescribed by the ED staff, but which better incorporates accurate measures of costs and revenues for each variable. Cottonwood has worked closely with other pending Prop. 2 applicants to develop a consistent set of measures in order to make the ED staff's job in evaluating each submission much more efficient and productive. We hope that what results is the agreement by staff that the clarified CAP approach set out below can serve as a useful tool in calculating the appropriate use determination for the pending applications.

Proposed Models and Resulting Use Determinations

I. Summary of Models Used to Calculate Use Determinations

As discussed in Attachment B, Cottonwood has run the numbers using ED's prescribed CAP Model and calculated a use determination percentage of -749.40 percent. The arbitrarily low use determinations that result when applying this model demonstrate that it cannot be relied upon as an accurate measure of the pollution control benefits provided by HRSGs and ESTs. Therefore, Cottonwood has interpreted and applied the CAP in a way that much more accurately accounts for the pollution control benefits provided by HRSGs and ESTs while still using the staff's preferred tool for deriving positive use determinations. Without waiving any right to contest the Commission's use of the CAP for these types of applications, we are confident that, for purposes of resolving the pending applications for HRSGs and ESTs, the refined CAP model set out below will serve the Commission very well.

Under this refined CAP Model set out below, Cottonwood has prepared two scenarios – one in which the Capital Cost Old (“CCO”) is assumed to equal zero and one in which the CCO is assumed to be the cost of a “flue gas ducting spacer” or “spool piece” which would be located in place of the HRSGs and associated equipment if the HRSGs and associated equipment were eliminated from the facility's design (i.e. if the heat was simply vented).

II. Refined CAP Model

Cottonwood has chosen to first prepare a CAP Model utilizing the form in the NOD, and then to incorporate within this CAP Model the most accurate cost and revenue assumptions for each of this model's variables, when those proposed by the TCEQ within the NOD do not represent these values.

Cottonwood has prepared two CAP Model scenarios:

- Scenario (1) in which the Capital Cost Old (“CCO”) is assumed to equal zero, to reflect the greenfield design of the Facility (or, stated another way, to reflect the fact that there is no comparable equipment being replaced by the HRSGs and ESTs); and
- Scenario (2) in which CCO is assumed to be the cost of a “flue gas ducting spacer, or “spool piece”, which would be in place if the Facility's HRSGs and their dedicated ancillary equipment were eliminated from the Facility design.

ATTACHMENT C

The Applicant assumptions used within these CAP Model scenarios, and a summary of the resulting use determination percentages, are presented below.

A. Clarified CAP Model Assumptions

Cottonwood has defined certain cost and revenue variables in applying the CAP Model in a way that allows the CAP to accurately reflect the Facility's costs and revenues, and to incorporate them into a calculation that results in an accurate use determination percentage for a pollution prevention device like a HRSG.

$$\frac{(\text{Production Capacity Factor} \times \text{Capital Cost New}) - \text{Capital Cost Old} - \text{NPVMP}}{\text{Capital Cost New}} \times 100$$

Where NPVMP is defined as "the net present value of the marketable product recovered for the expected lifetime of the property, calculated using the equation in paragraph (2) of this subsection [30 TAC §17.17(c)(1)]. Typically, the most recent three-year average price of the material as sold on the open market should be used in the calculation. If the price varies from state-to-state, the application shall calculate an average and explain how the figures were determined."

Specifically, Cottonwood has used the following assumptions regarding the variables to be used in the CAP Model presented by the TCEQ in the NOD:

- Production Capacity Factor ("PCF"): value has been assumed to equal 1.

No older, less efficient equipment was replaced by the installation of the subject equipment and the Facility was constructed from a greenfield design. Therefore, any theoretical consideration of a comparable, older design in the CAP Model would be assumed to be at the same productive capacity as the subject equipment at the Facility. Precedent exists from prior TCEQ Tier III Application filings for the use and acceptance of a PCF value of 1.

- Capital Cost New ("CCN"): value has been assumed to include the installed cost of the HRSGs and all dedicated ancillary equipment necessary to generate the marketable product assumed in this CAP Model, including the ESTs.

HRSGs alone cannot produce electricity as a fuel substitute; the HRSG works in conjunction with additional equipment to convert the heat of combustion from the Facility's Combustion Turbines ("CTs") into electricity. That additional equipment, including circulating water systems, cooling water systems, cooling towers/air cooled condensers, water treatment systems, and the ESTs, must be included in CCN. Precedent from prior TCEQ Tier I, II, and III Application filings exists for the use and acceptance of a PCF applicant-defined Historical Costs, inclusive of dedicated ancillary equipment costs.

- Capital Cost Old ("CCO"): value has been defined as zero.

As stated above, the HRSGs were not installed as a replacement of similar or comparable, less efficient equipment. Precedent exists from prior TCEQ Tier III Application filings for the use and acceptance of a CCO value of zero.

ATTACHMENT C

- Net Present Value of the Marketable Product (“NPVMP”) includes the following assumptions:
 - Production Cost (“PC”): value has been modified to include the cost of fuel attributable to the MW output of the ESTs.

The NOD directs Cottonwood to exclude such fuel costs. The fuel used to create the steam is a raw material used in HRSG operation. The CAP Model should not consider the Marketable Product value (“revenues”) of the electricity produced by the subject equipment on one hand while excluding the fuel costs (“O&M costs”) necessary to create that Marketable Product on the other. Without fuel, the HRSG cannot generate steam; without the ESTs the HRSG cannot generate electricity; and therefore, no Marketable Product would be created. Fuel costs must be included in Production Costs in any rational application of this CAP Model.

It is an oversimplification to assume all fuel costs within the Combined-Cycle system are attributable to the Facility CTs alone. Facility fuel costs to generate Marketable Product should be assumed to be incurred by: the CTs; the Facility HRSG Duct Burners; and the Facility HRSGs.

- Three-Year average inputs (2005-2007) for the following:
 - Facility Capacity Factor (%);
 - Facility Heat Rate (“UNITS”);
 - Annual O&M Costs for HRSGs & Ancillary Equipment;
 - ERCOT Houston Zone electricity pricing; and
 - Katy Hub Fuel pricing.
- Annual O&M Costs included O&M costs for the following Facility systems:
 - HRSGs;
 - Circulating Water System;
 - Cooling Water System;
 - Cooling Towers/Air Cooled Condenser(s);
 - Make Up Water Treatment System; and
 - ESTs.

ATTACHMENT C

B. Clarified CAP Model Results

The Clarified CAP Model results in a positive use determination of 87.22 percent when CCO is assumed to equal "0" and 87.06 percent when CCO is assumed to equal the cost of a spool piece. **Attachment D**, entitled "Cost Analysis Procedure 'CAP' Calculations," details Cottonwood's CAP Model assumptions and the resulting use determination percentages to be applied to facility's HRSGs and ESTs where:

- CCO = 0 and
- CCO = Cost of Spool Piece

Attachment D also provides any needed supporting documentation for the Applicant's variable assumptions used in the CAP Model to generate the resulting use determination percentages.

Table 2 below summarizes the outcomes of the two CAP Model scenarios prepared.

Table 2: Clarified CAP Model Outcomes

CAP Model Scenario	Description	Partial Use Determination %	Eligible Pollution Control Cost
Tier III – CAP Model w/ CCO = \$0	HRSG & Dedicated Ancillary Systems	87.22%	\$52,844,633
Tier III – CAP Model w/ CCO = Spool Piece	HRSG & Dedicated Ancillary Systems	87.06%	\$52,742,124

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 1
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Naxos County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: 7

Source Legend		
	Calculated Assumption	Eff. Date
C	Cottonwood Client-Provided Data	6/17/2013
CW	Henry Hub Hub Natural Gas Pricing	4/23/2013
HH	SERC Electricity Pricing	6/17/2013
SERC	D&P Combined Cycle Cost Database	6/17/2013
D&P	30 TAC Chapter 17	12/13/2010
30 TAC		

Assumptions

Plant Design Profile

	Source
PC Property Capital Cost	\$ 60,584,465
PC Property Capital Cost (\$/kW)	\$ 386
PC Property Capacity (MW)	156
PC Property Net Annual Generation Capacity (kWh)	558,208,619
PC Property Net Annual Generation Capacity (MWh)	558,210
Plant Capacity Factor	40.85%
Plant Heat Rate (btu/kWh)	7,467
Plant Heat Rate (MMBtu/kWh)	0.01

Capital Cost Old ("CCO")

Comparable Technology Cost	\$
Comparable Technology Design Capacity Factor	0.00%
Capacity (MW)	

Conversion Factors

Hours/Year	Source
8,760	CW
1,000	C
2.20	CW
3,600	C
1,000,000	C

Economic Assumptions

NPVMP Discount Rate	10.0%	Source
NPVMP Interest Rate	10.0%	30 TAC
Periods	20	30 TAC
PC Property Annual O&M Cost (\$)	\$ 1,120,554	CW
Fuel Cost (\$/MMBtu) ⁽¹⁾	\$ 3.70	HH
SERC Electricity Pricing (\$/MWh) ⁽²⁾	\$ 31.30	SERC

⁽¹⁾ 3-year average daily historical gas pricing for Henry Hub, 2008-2010.
⁽²⁾ 3-year average daily historical electricity rates for SERC, 2008-2010.

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Advanced Energy Company, LP

1. **Production Equipment Factor (PECF)**
 a. **Production Equipment Factor (PECF)**
 b. **Production Capacity of Existing Equipment or Process**
 c. **Production Capacity of New Equipment or Process**

$$PECF = \frac{Production\ Capacity\ of\ New\ Equipment\ or\ Process}{Production\ Capacity\ of\ Existing\ Equipment\ or\ Process}$$

2. **Direct Cost of Production (DCP)**
 a. **Electricity Price (\$/MWh)**
 b. **Annual O&M (\$)**
 c. **Annual Fuel Cost (\$)**

$$DCP = Electricity\ Price\ (\$/MWh) \times Production\ Capacity\ (MW) + Annual\ O\&M\ (\$) + Annual\ Fuel\ Cost\ (\$)$$

3. **Manufacturing Process Value (MPV)**
 a. **Electricity Price (\$/MWh)**
 b. **Annual O&M (\$)**
 c. **Annual Fuel Cost (\$)**

$$MPV = \frac{Production\ Capacity\ of\ Existing\ Equipment\ or\ Process}{Production\ Capacity\ of\ New\ Equipment\ or\ Process} \times DCP$$

4. **Adjusted Manufacturing Process Value (AMPV)**
 a. **Electricity Price (\$/MWh)**
 b. **Annual O&M (\$)**
 c. **Annual Fuel Cost (\$)**

$$AMPV = MPV \times (1 + Interest\ Rate)$$

5. **NPV**
 a. **NPV**

$$NPV = \sum_{t=1}^n \frac{Cash\ Flow_t}{(1 + r)^t} - Initial\ Investment$$

6. **IRR**
 a. **IRR**

$$NPV = 0 \Rightarrow \text{Solve for } r$$

7. **Payback Period**
 a. **Payback Period**

$$Payback\ Period = \frac{Initial\ Investment}{Annual\ Cash\ Flow}$$

8. **Simple Payback Period**
 a. **Simple Payback Period**

$$Simple\ Payback\ Period = \frac{Initial\ Investment}{Annual\ Cash\ Flow}$$

9. **Weighted Average Cost of Capital (WACC)**
 a. **WACC**

$$WACC = w_d \times r_d + w_e \times r_e$$

10. **Cost of Debt (CD)**
 a. **CD**

$$CD = r_d \times (1 - Tax\ Rate)$$

11. **Cost of Equity (CE)**
 a. **CE**

$$CE = r_f + \beta \times (r_m - r_f)$$

12. **Weighted Average Cost of Capital (WACC)**
 a. **WACC**

$$WACC = w_d \times r_d + w_e \times r_e$$

13. **NPV**
 a. **NPV**

$$NPV = \sum_{t=1}^n \frac{Cash\ Flow_t}{(1 + r)^t} - Initial\ Investment$$

Advanced Energy Company, LP

1. **Production Equipment Factor (PECF)**
 a. **Production Equipment Factor (PECF)**
 b. **Production Capacity of Existing Equipment or Process**
 c. **Production Capacity of New Equipment or Process**

$$PECF = \frac{Production\ Capacity\ of\ New\ Equipment\ or\ Process}{Production\ Capacity\ of\ Existing\ Equipment\ or\ Process}$$

2. **Direct Cost of Production (DCP)**
 a. **Electricity Price (\$/MWh)**
 b. **Annual O&M (\$)**
 c. **Annual Fuel Cost (\$)**

$$DCP = Electricity\ Price\ (\$/MWh) \times Production\ Capacity\ (MW) + Annual\ O\&M\ (\$) + Annual\ Fuel\ Cost\ (\$)$$

3. **Manufacturing Process Value (MPV)**
 a. **Electricity Price (\$/MWh)**
 b. **Annual O&M (\$)**
 c. **Annual Fuel Cost (\$)**

$$MPV = \frac{Production\ Capacity\ of\ Existing\ Equipment\ or\ Process}{Production\ Capacity\ of\ New\ Equipment\ or\ Process} \times DCP$$

4. **Adjusted Manufacturing Process Value (AMPV)**
 a. **Electricity Price (\$/MWh)**
 b. **Annual O&M (\$)**
 c. **Annual Fuel Cost (\$)**

$$AMPV = MPV \times (1 + Interest\ Rate)$$

5. **NPV**
 a. **NPV**

$$NPV = \sum_{t=1}^n \frac{Cash\ Flow_t}{(1 + r)^t} - Initial\ Investment$$

6. **IRR**
 a. **IRR**

$$NPV = 0 \Rightarrow \text{Solve for } r$$

7. **Payback Period**
 a. **Payback Period**

$$Payback\ Period = \frac{Initial\ Investment}{Annual\ Cash\ Flow}$$

8. **Simple Payback Period**
 a. **Simple Payback Period**

$$Simple\ Payback\ Period = \frac{Initial\ Investment}{Annual\ Cash\ Flow}$$

9. **Weighted Average Cost of Capital (WACC)**
 a. **WACC**

$$WACC = w_d \times r_d + w_e \times r_e$$

10. **Cost of Debt (CD)**
 a. **CD**

$$CD = r_d \times (1 - Tax\ Rate)$$

11. **Cost of Equity (CE)**
 a. **CE**

$$CE = r_f + \beta \times (r_m - r_f)$$

12. **Weighted Average Cost of Capital (WACC)**
 a. **WACC**

$$WACC = w_d \times r_d + w_e \times r_e$$

13. **NPV**
 a. **NPV**

$$NPV = \sum_{t=1}^n \frac{Cash\ Flow_t}{(1 + r)^t} - Initial\ Investment$$

Transpwr: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 1
Plant Summary: 1,280 MW and Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Assessment Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: 7

B. Unit Annualize Procedure ("CAP") Calculations for Cottonwood Unit 1 HRSG

A. Marketable Product Value ("MPV")

Electricity Price	\$	MWh	x	PC-MWh	=	(\$)	MPV
\$31.40	\$	MWh	x	556,210	=	\$17,472,601	

B. Production Cost ("PC")

Heat Rate	mmbtu	x	PC-MWh	=	Fuel	Cost	Allocated Fuel Costs (\$)
0.01	mmbtu	x	556,209.019	=	\$3.70	\$	\$15,442,929

Annual O&M Cost	+	Allocated Fuel Costs	=	Annual Production Cost (\$)
\$1,120,564	+	\$15,442,929	=	\$16,563,484

Formula:
$$\frac{[PCF \times CCM] - CCO - NPVMP}{CCN}$$

Net Present Value Marketable Product ("NPVMP") Calculation:

$\sum_{t=1}^n \frac{(\$) MPV}{(1 + \text{Interest Rate})^t} \times PC$	=	NPVMP (\$)
$\sum_{t=1}^n \frac{\$17,472,601}{(1 + 10\%)^t} =$	\$16,563,484	
$\sum_{t=1}^n \frac{\$7,739,833}{(1 + 10\%)^t} =$	\$7,739,833	
		NPVMP
		\$7,739,833

* If MP is < 0, then NP = 0

Transaction: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 1
Plant Summary: 1,280 MW and Configuration Considered (2008)
Plant Location: Newton County, Texas
Project: Per All Unit Analysis Procedure ("UAP") Calculations
Date: June 24, 2013
Rev:

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process
 Production Capacity of New Equipment or Process

158 MW @ 41.85%
 PCF
 1,000

D. Capital Cost New ("CCN")

CCN
 \$60,584,465

E. Capital Cost Old ("CCO")

CCO
 \$0

Partial Use Determination Calculation

(PCF x CCN)	CCO	NP/MP	Partial Use Determination %
1,000 x \$60,584,465	\$0	\$7,739,833	87.22%
\$60,584,465	\$60,584,465		

TCEQ Use Determination Attribution Section 12, Use:
 Use Percentage: 87.22%
 Estimated Debar Value: \$ 60,584,465

(Partial Use Determination % x PC Property Cost)

Cottonwood Energy Company, LP

SCENARIO 1: CAPITAL COST OLD = \$0

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Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$909,118	1	1.10	\$ 826,471
\$909,118	2	1.21	\$ 751,337
\$909,118	3	1.331	\$ 683,034
\$909,118	4	1.4641	\$ 620,940
\$909,118	5	1.61051	\$ 564,491
\$909,118	6	1.771561	\$ 513,173
\$909,118	7	1.9487171	\$ 466,521
\$909,118	8	2.14358881	\$ 424,110
\$909,118	9	2.357947691	\$ 385,555
\$909,118	10	2.59374246	\$ 350,504
\$909,118	11	2.853116706	\$ 318,640
\$909,118	12	3.138428377	\$ 289,673
\$909,118	13	3.452271214	\$ 263,339
\$909,118	14	3.797498336	\$ 239,399
\$909,118	15	4.177248169	\$ 217,636
\$909,118	16	4.594972986	\$ 197,851
\$909,118	17	5.054470285	\$ 179,864
\$909,118	18	5.559917313	\$ 163,512
\$909,118	19	6.115909045	\$ 148,648
\$909,118	20	6.727499949	\$ 135,135
NPVMP:			\$ 7,739,833

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Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 2
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: 1

Source Legend		Eff. Date
C	Calculated Assumption	6/17/2013
CW	Cottonwood Client-Provided Data	4/23/2013
HH	Henry Hub Hub Natural Gas Pricing	6/17/2013
SERC	SERC Electricity Pricing	6/17/2013
D&P	D&P Combined Cycle Cost Database	6/17/2013
30 TAC	30 TAC Chapter 17	12/13/2010

Assumptions:

Plant Design Profile

	Source
PC Property	CW
PC Property Capital Cost	\$ 60,584,465
PC Property Capital Cost (\$/kW)	\$ 388
PC Property Capacity (MW)	156
PC Property Net Annual Generation Capacity (kWh)	568,209,619
PC Property Net Annual Generation Capacity (MWh)	568,210
Plant Capacity Factor	40.65%
Plant Heat Rate (btu/kWh)	7,467
Plant Heat Rate (MMBTU/kWh)	0.01
Capital Cost Old ("CCO")	
Comparable Technology Cost	\$
Design Capacity Factor	0.00%
Capacity ("MW")	

Conversion Factors

Hours/Year	8,760
kWh/MWh	1,000
lb/kg	2.20
s/hour	3,600
btu/mmbtu	1,000,000

Economic Assumptions

NPVMP Discount Rate	10.0%	Source	36 TAC
NPVMP Interest Rate	10.0%		30 TAC
Periods	20		CW
PC Property Annual O&M Cost (\$)	\$ 1,120,554		CW
Fuel Cost (\$/MMBTU) ¹¹	\$ 3.70		HH
SERC Electricity Pricing (\$/MWh) ¹²	\$ 31.30		SERC

¹¹ 5-year average daily historical gas pricing for Henry Hub, 2008-2010.
¹² 3-year average daily historical electricity rates for SERC, 2008-2010.

Cottonwood Energy Company, LP

Company: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 2
Plant Summary: 1,266 MW ccs Configuration Combined Cycle Power Plant (2023)
Plant Location: Newton County, Texas
Project: Per HR Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2014
Rev: 7

HR Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 2 HRSG

A. Marketable Product Value ("MPV")

Electricity Price	\$ / MWh	x	PC kMWh / Year	=	(\$) MPV
\$31.30	\$	x	568,210 MWh / Year	=	\$17,472,601

B. Production Cost ("PC")

Heat Rate	mmBtu / kWh	x	PC kMWh / Year	=	Fuel Cost
0.01	mmBtu / kWh	x	568,209,619 kWh / Year	=	\$5.70
					mmBtu
					Allocated Fuel Costs (\$)
					\$15,442,326

Annual O&M Cost	x	Allocated Fuel Costs	=	Annual Production Cost (\$)
\$1,120,554	x	\$15,442,326	=	\$16,562,880

Formula:
$$\frac{[(PCF \times CCN) - CCO] - NPVMP}{CCN}$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) MPV}{(1 + \text{Interest Rate})^t} = \frac{(\$) PC}{(1 + 10\%)^t}$$

$$\sum_{t=1}^n \frac{\$17,472,601}{(1 + 10\%)^t} = \frac{\$16,562,880}{(1 + 10\%)^t}$$

NPVMP (\$)
\$7,739,833

* If MP is 0, then NP = 0.

Calloway Energy Company, LP

Transpacer: Calloway Energy Company, LP
Plant: Calloway Energy Center - Unit 2
Plant Summary: 1,250 MW 4x4 Combined Combined Cycle Power Plant (2003)
Plant Location: Newlyn County, Texas
Project: For III Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: Fair

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process
 Production Capacity of New Equipment or Process

PCF	1,000
CCN	\$80,594,465
CCO	30

D. Capital Cost New ("CCN")
 P3 Property

E. Capital Cost Old ("CCO")
 Unavailable Technology

CCN	\$80,594,465
CCO	30

Partial Use Determination Calculations

(PCF x CCN)	1,000 x \$80,594,465
CCO	\$0
NPVMP	\$7,739,833
Partial Use Determination %	87.22%

Partial Use Determination % x PC Property Cost

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Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$909,118	1	1.10	\$ 826,471
\$909,118	2	1.21	\$ 751,337
\$909,118	3	1.331	\$ 683,034
\$909,118	4	1.4641	\$ 620,940
\$909,118	5	1.61051	\$ 564,481
\$909,118	6	1.771561	\$ 513,173
\$909,118	7	1.9487171	\$ 466,521
\$909,118	8	2.14358881	\$ 424,110
\$909,118	9	2.357947691	\$ 385,555
\$909,118	10	2.59374246	\$ 350,504
\$909,118	11	2.853116706	\$ 318,640
\$909,118	12	3.138428377	\$ 289,673
\$909,118	13	3.452271214	\$ 263,339
\$909,118	14	3.797498336	\$ 239,399
\$909,118	15	4.177248169	\$ 217,636
\$909,118	16	4.594972986	\$ 197,851
\$909,118	17	5.054470285	\$ 179,864
\$909,118	18	5.558917313	\$ 163,513
\$909,118	19	6.115909045	\$ 148,648
\$909,118	20	6.727499949	\$ 135,135
NPVMP:			\$ 7,739,833

Transaction: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 3
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: 7

Source Legend		
		Eff. Date
C	Calculated Assumption	6/17/2013
CW	Cottonwood Client-Provided Data	4/23/2013
HH	Henry Hub Hub Natural Gas Pricing	6/17/2013
SERC	SERC Electricity Pricing	6/17/2013
D&P	D&P Combined Cycle Cost Database	6/17/2013
30 TAC	30 TAC Chapter 17	12/13/2010

Assumptions

Plant Design Profile

		Source
PC Property		CW
PC Property Capital Cost	\$ 60,584,465	CW
PC Property Capital Cost (\$/kW)	\$	C
PC Property Capacity (MW)	388	CW
PC Property Net Annual Generation Capacity (kW/h)	558,209,619	C
PC Property Net Annual Generation Capacity (kW/h)	558,210	C
Plant Capacity Factor	40.85%	CW
Plant Heat Rate (btu/kWh)	7,467	CW
Plant Heat Rate (MMBTU/kWh)	0.01	C

Capital Cost Qld ("CCQ")		
Comparable Technology Cost	\$	
Design Capacity Factor		
Capacity ("MW")	0.00%	

Conversion Factors

	Hours/Year
kWh/MW	8,760
lb/kg	2.20
s/hour	3,600
btu/mmBtu	1,000,000

Economic Assumptions

		Source
NPVMP Discount Rate	10.0%	30 TAC
NPVMP Interest Rate	10.0%	30 TAC
Periods	20	CW
PC Property Annual O&M Cost (\$)	\$	1,120,554
Fuel Cost (\$/MMBTU) ¹¹	\$	3.70
SERC Electricity Pricing (\$/MWh) ¹²	\$	31.30

¹¹ 3-year average daily historical gas pricing for Henry Hub, 2008-2010.

¹² 5-year average daily historical electricity rates for SERC, 2008-2010.

Company: [Name]
Plant: [Name]
Address: [Address]
City: [City], **State:** [State], **Zip:** [Zip]

Equipment: [Name]
Capacity: [Value]
Year: [Year]

Costs: [Value]
Life: [Years]

Production: [Value]

Efficiency: [Value]

Material: [Value]

Energy: [Value]

Water: [Value]

Other: [Value]

Total: [Value]

Notes: [Text]

Comments: [Text]

References: [List]

Attachments: [List]

Signatures: [Text]

Date: [Date]

Page: [Page]

Total: [Value]

Final: [Value]

Summary: [Text]

Conclusion: [Text]

Recommendations: [Text]

Next Steps: [Text]

Approval: [Text]

Signature: [Text]

Date: [Date]

B. CAP Formulas (provided by TCEQ)

Permit Use Determination:
$$\frac{[PCP \times COE] - COE \times [MPCAP]}{COE}$$

Minimum Production Capacity Factor (MPCF):
$$\frac{\text{Permitted Capacity of Existing Equipment or Process}}{\text{Production Capacity of New Equipment or Process}}$$

Annualized Production Value (APV):
$$\sum_{t=1}^n \frac{P_t \times PC}{(1 + \text{interest rate})^t}$$

C. CAP Formulas for PC Priority

Allowable Production Value (APV):
$$\text{Electricity Price (\$/MWh)} \times \text{MWh per Year from System Turbine}$$

Level Cost of Production (LCP):
$$\text{Annual O\&M (\$)} \times \text{Annual Fuel Cost (\$)}$$

Tracker: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 3
Plant Summary: 1,260 MW Ass Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: For All Cost Analysis Procedures ("CAP") Calculations
Date: June 21, 2013
Rev:

16 Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 3 HRSG

A. Marketable Product Value ("MPV")

Electricity Price:	\$	MPV	x	CC	MPV	=
	\$/MWh			\$/MWh	Year	
	\$31.30	\$	x	550,210	MWh	=
		\$/MWh			Year	
						\$17,472,601

B. Production Cost ("PC")

Heat Rate	mmBtu	x	PC	mmBtu	x	Fuel	mmBtu	=	Allocated Fuel Costs (\$)
	\$/mmBtu		\$/mmBtu	Year		\$/mmBtu	Year		
0.01	\$/mmBtu	x	658,209,619	MMBtu	x	\$3.70	MMBtu	=	\$15,442,926
				Year			Year		
Annual O&M Cost	\$							=	Annual Production Cost (\$)
\$1,120,554								=	\$16,563,484

Formula:
$$\frac{(PC \times CCN) - COC - NPVMP}{CCN}$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) MPV}{(1 + \text{Interest Rate})^t} = \frac{(\$) PC}{(1 + 10\%)^t}$$

$$\sum_{t=1}^n \frac{\$17,472,601}{(1 + 10\%)^t} = \frac{\$18,853,484}{(1 + 10\%)^t}$$

NPVMP (\$)

NPVMP = \$7,739,833

* If MP is < 0, then MP = 0.

Cottonwood Energy Company, LP

Facility: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center - Unit 3
 Plant Summary: 1,260 MW sst Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: For IIR Cost Analysis Procedure ("CAP") Calculations
 Date: June 24, 2013
 Rev:

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process
 Production Capacity of New Equipment or Process

PCF
 1.000

0
 156 MW * 40.85%

D. Capital Cost New ("CCN")

PC Property

\$60,584,465

E. Capital Cost Old ("CCO")

Comparative Technology

\$0

Partial Use Determination Substitution

(PCF x CCN)	CCO	CCN	NPVMP	Partial Use Determination %
1.000 x \$60,584,465	\$0	\$60,584,465	\$7,739,833	12.8722%

Yr:EO Use Determination Application Section 12. Use:
 Use Percentage: 12.8722%
 Estimated Dollar Value: \$ 60,584,465

(Partial Use Determination % x PC Property Cost)

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Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$909,118	1	1.10	\$ 826,471
\$909,118	2	1.21	\$ 751,337
\$909,118	3	1.331	\$ 683,034
\$909,118	4	1.4641	\$ 620,940
\$909,118	5	1.61051	\$ 564,491
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\$909,118	8	2.14358861	\$ 424,110
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\$909,118	18	5.559917313	\$ 163,513
\$909,118	19	6.115909045	\$ 148,648
\$909,118	20	6.727499949	\$ 135,135
NPVMP:			\$ 7,739,833

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 4
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev:

Source Legend	Eff. Date	
C	Calculated Assumption	8/17/2013
CW	Cottonwood Client-Provided Data	4/23/2013
HH	Henry Hub Natural Gas Pricing	8/17/2013
SERC	SERC Electricity Pricing	8/17/2013
D&P	D&P Combined Cycle Cost Database	8/17/2013
30 TAC	30 TAC Chapter 17	12/13/2010

ASSUMPTIONS

Plant Design Profile

	Source
PC Property	CW
PC Property Capital Cost	\$ 60,584,465
PC Property Capital Cost (\$/kW)	\$ 388
PC Property Capacity (MW)	156
PC Property Net Annual Generation Capacity (kWh)	558,209,619
PC Property Net Annual Generation Capacity (MWh)	558,210
Plant Capacity Factor	40.85%
Plant Heat Rate (Btu/kWh)	7,467
Plant Heat Rate (MMBTU/kWh)	0.01

Capital Cost Old ("CCO")
 Comparable Technology Cost
 Comparable Technology
 Design Capacity Factor
 Capacity ("MW")

Conversion Factors

Hours/Year	Source
8,760	CW
1,000	C
2.20	CW
3,600	C
1,000,000	C

Economic Assumptions

NPVMP Discount Rate	10.0%	Source	30 TAC
NPVMP Interest Rate	10.0%		30 TAC
Periods	20		CW
PC Property Annual O&M Cost (\$)	\$ 1,120,554		CW
Fuel Cost (\$/MMBTU) ⁽¹⁾	\$ 3.70		HH
SERC Electricity Pricing (\$/MWh) ⁽²⁾	\$ 31.30		SERC

⁽¹⁾ 3-year average daily historical gas pricing for Henry Hub, 2008-2010.
⁽²⁾ 3-year average daily historical electricity rates for SERC, 2008-2010.

Company: Subsidiary Energy Company, Ltd.
 Plant: Combined Cycle Gas Turbine
 Plant Location: 10000 Highway 100, Houston, TX 77036
 Project: New 1000 MW Gas Turbine Plant
 Date: 01/15/2000

$$\frac{[PCF \times CO_2] - CO_2 \times SP}{CO_2}$$

1. CAP Expenditure (unweighted by TCEG)

$$\text{Annual Use Depreciation} = \frac{[PCF \times CO_2] - CO_2 \times NPV(MP)}{CO_2}$$

Where:
 Production Capacity Existing Equipment or Process
 Production Capacity of New Equipment or Process

$$\text{And where:} \quad NPV = \sum_{t=1}^n \frac{CF_t}{(1 + \text{Interest Rate})^t}$$

2. CAP Expenditure for PC Inventory

$$\text{Manufacture Product Value (MPV)} \times \text{Emissions Price (\$/MWh)} = \text{Annual Fuel Cost (\$)}$$

$$\text{Level Cost of Production (LCOF)}$$

Subsidiary Energy Company, Ltd.

Company: Subsidiary Energy Company, Ltd.
 Plant: Combined Cycle Gas Turbine
 Plant Location: 10000 Highway 100, Houston, TX 77036
 Project: New 1000 MW Gas Turbine Plant
 Date: 01/15/2000

CO₂

Production Capacity Existing Equipment or Process

Production Capacity of New Equipment or Process

1. CAP Expenditure (unweighted by TCEG)

$$\text{Annual Use Depreciation} = \frac{[PCF \times CO_2] - CO_2 \times NPV(MP)}{CO_2}$$

Where:
 Production Capacity Existing Equipment or Process
 Production Capacity of New Equipment or Process

$$\text{And where:} \quad NPV = \sum_{t=1}^n \frac{CF_t}{(1 + \text{Interest Rate})^t}$$

2. CAP Expenditure for PC Inventory

$$\text{Manufacture Product Value (MPV)} \times \text{Emissions Price (\$/MWh)} = \text{Annual Fuel Cost (\$)}$$

$$\text{Level Cost of Production (LCOF)}$$

1. If the conditions in variables 1.1, 1.2 and 1.3 do not apply and the company is replicating an existing unit that already has received a positive use determination, the company shall use the CO₂ from the application for the previous use determination.
 1.1 If the conditions in variables 1.1 and 1.2 do not apply and the company is replacing an existing unit that the company shall convert the unit to use the old technology and the unit shall be subject to the applicable CO₂ emissions rate.
 1.2 If the conditions in variables 1.1 and 1.2 do not apply and the company is replacing an existing unit that the company shall convert the unit to use the old technology and the unit shall be subject to the applicable CO₂ emissions rate.
 1.3 If the conditions in variables 1.1, 1.2 and 1.3 do not apply, and the company can obtain an estimate to manufacture the alternative equipment without the pollution control facilities, then the average estimated cost to manufacture the unit must be used. This comparable unit must be the most recent generation of technology. A copy of the estimate must be provided with the worksheet including the details, source of the information.
 2. Manufacture Product Value (MPV)
 The manufacture product value (MPV) is the value of a product, as accumulated for later use, or is used as raw material in a manufacturing process. Manufacture product value, but is not limited to, including recovered or produced waste that pollution control property used, product, or material for later use, or used in a manufacturing process (including as a different facility). Manufacture product value does not include any emission credits or emission allowances that result from installation of the pollution control property.
 3. Manufacture Product Value (MPV)
 The manufacture product value (MPV) is the value of a product, as accumulated for later use, or is used as raw material in a manufacturing process. Manufacture product value, but is not limited to, including recovered or produced waste that pollution control property used, product, or material for later use, or used in a manufacturing process (including as a different facility). Manufacture product value does not include any emission credits or emission allowances that result from installation of the pollution control property.
 4. Manufacture Product Value (MPV)
 The manufacture product value (MPV) is the value of a product, as accumulated for later use, or is used as raw material in a manufacturing process. Manufacture product value, but is not limited to, including recovered or produced waste that pollution control property used, product, or material for later use, or used in a manufacturing process (including as a different facility). Manufacture product value does not include any emission credits or emission allowances that result from installation of the pollution control property.

1. The total value of the product produced by the equipment for one year (MWh). Typically, the most recent three-year average price of the product is used on the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average price for the state.
 2. The applicant shall use the most recent estimate of a production process, and the value assigned in the market for internal accounting purposes (per MWh). It is the responsibility of the applicant to state that the internally assigned value is comparable to the value assigned by other market participants of the product.

1. The cost of the equipment in the year of the equipment (MWh) in terms of the average for a use determination.
 2. The cost of the equipment in the year of the equipment (MWh) in terms of the average for a use determination.

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Cottonwood Energy Company, LP

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 4
Plant Summary: 1,280 MW and Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: The IP Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: 7

IP Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 4 HRSG

A. Marketable Product Value ("MPV")

Electricity Price	\$	MPV	x	PC	MPV	=	(S) MPV
	\$/MWh			\$/MWh	Year		
	\$31.30	\$	x	550,210	MWh		\$17,472,601
		MWh			Year		

B. Production Cost ("PC")

Heat Rate	mmBtu	x	PC	MMWh	x	Fuel	Cost	Allocated Fuel Costs (\$)
	\$/MMWh		\$/MMWh	Year		\$/mmBtu		
0.01	mmBtu	x	698,209.619	MMWh	x	\$3.70	mmBtu	\$15,442,929
	\$/MMWh			Year				

Annual O&M Cost	=	Allocated Fuel Costs	=	Annual Production Cost (\$)
\$1,120,554		\$15,442,929		\$16,563,484

Formula:
$$\frac{(\text{PC} \times \text{CCN}) - \text{CCO} - \text{NPVMP}}{\text{CCN}}$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) \text{MPV}}{(1 + \text{Interest Rate})^t} - (\$) \text{PC} = \text{NPVMP} (\$)$$

$$\sum_{t=1}^n \frac{\$17,472,601}{(1 + 10\%)^t} - \$16,563,484 = \$7,738,833$$

* If MP is < 0, then MP = 0.

Transpayer: Caltonwood Energy Company, LP
Plant: Caltonwood Energy Center - Unit 4
Plant Summary: 1,260 MW Gas Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: For IR Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev:

1. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process	PCF
Production Capacity of New Equipment or Process	
	PCF
156 MW * 49.85%	1,000

2. Capital Cost New ("CCN")

PC Property	CCN
	\$60,694,465

3. Capital Cost Old ("CCO")

Comparable Technology	CCO
	\$0

Partial Use Determination Calculation

(PCF x CCN)	CCO	NPVMP	Partial Use Determination %
1,000 x \$60,694,465	\$0	\$7,739,633	87.22%
	\$60,694,465		

TOEQ Use Determination Application Section 12, Use:
 Use Parameter: 87.22%
 Estimated Order Value: \$60,694,465

(Partial Use Determination % x PC Property Cost)

Attachment D

Scenario 1:
Capital Cost Old = \$0

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Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$909,118	1	1.10	\$ 826,471
\$909,118	2	1.21	\$ 751,337
\$909,118	3	1.331	\$ 683,034
\$909,118	4	1.4641	\$ 620,940
\$909,118	5	1.61051	\$ 564,491
\$909,118	6	1.771561	\$ 513,173
\$909,118	7	1.9487171	\$ 466,521
\$909,118	8	2.14358881	\$ 424,110
\$909,118	9	2.357947691	\$ 385,555
\$909,118	10	2.59374246	\$ 350,504
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\$909,118	12	3.138428377	\$ 289,673
\$909,118	13	3.452271214	\$ 263,339
\$909,118	14	3.797498336	\$ 239,399
\$909,118	15	4.177248169	\$ 217,636
\$909,118	16	4.594872986	\$ 197,851
\$909,118	17	5.054470285	\$ 179,864
\$909,118	18	5.559917313	\$ 163,513
\$909,118	19	6.115909045	\$ 148,648
\$909,118	20	6.727499949	\$ 135,135
NPVMP:			\$ 7,739,833

Scenario 2:
Capital Cost Old = Spool Piece

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 1
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: 7

Source Legend	Eff. Date
C	Calculated Assumption
CW	6/17/2013
HH	4/23/2013
SERC	6/17/2013
D&P	6/17/2013
30 TAC	12/13/2010

Plant Design Profile

	Source	Conversion Factors
PC Property		Hours/Year 8,760
PC Property Capital Cost	CW	kW/MW 1,000
PC Property Capital Cost (\$/kW)	C	lb/kg 2.20
PC Property Capacity (MW)	CW	\$/hour 3,600
PC Property Net Annual Generation Capacity (kWh)	C	\$/MMBtu 1,000,000
Plant Capacity Factor	C	
Plant Heat Rate (lb/kWh)	CW	
Plant Heat Rate (MMBTU/kWh)	CW	
Capital Cost Old ("COO")	C	
Comparable Technology Cost	D&P	
Comparable Technology	Spool Piece	
Design Capacity Factor	0.00%	
Capacity (MW)		

Economic Assumptions

NPVMP Discount Rate	10.0%	Source
NPVMP Interest Rate	10.0%	30 TAC
Periods	20	30 TAC
PC Property Annual O&M Cost (\$)	\$ 1,120,564	CW
Fuel Cost (\$/MMBTU) ¹¹	\$ 3.70	HH
SERC Electricity Pricing (\$/MWh) ¹²	\$ 31.30	SERC

¹¹ 3-year average utility historical gas pricing for Henry Hub, 2008-2010.
¹² 3-year average daily historical electricity rates for SERC, 2008-2010.

Collinwood Energy Company, LP

Taxpayer: Collinwood Energy Company, LP
Plant: Collinwood Energy Center - Unit 1
Plant Summary: 1,200 MW and Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: For Use Analysis Proceeding ("LAP") Calculations
Date: June 24, 2013
Rev: 7

B. ASSESSMENT PROCEEDING ("LAP") CALCULATIONS FOR COLLINWOOD UNIT 1 (HRS)

Formula:
$$\frac{(PC \times CCN) - CCO - NPVMP}{CCN}$$

Electricity Price	\$	MWh	x	PC MWh/Year	=	(\$) MPV
331.30	\$	MWh	x	556,218 MWh/Year	=	\$17,472,801

B. Production Cost ("PC")

Heat Rate	mmBtu/kWh	x	PC MWh/Year	=	Fuel Cost
6,01	mmBtu/kWh	x	556,209.619 kWh/Year	=	\$3.70
				=	\$15,442,929

Annual O&M Cost	+	Allocated Fuel Costs	=	Annual Production Cost (\$)
\$1,120,564	+	\$15,442,929	=	\$16,563,494

Net Present Value-Marketable Product ("NPVMP") Calculation:

$$\sum_{t=1}^n \frac{(\$) MPV}{(1 + \text{Interest Rate})^t} (\$) PC$$

$$\sum_{t=1}^n \frac{\$17,472,801}{(1 + 10\%)^t} = \$7,739,833$$

NPVMP (\$)

NPVMP
\$7,739,833

* IF MP = 0, then NP = 0

Caltonwood Energy Company, LP

Taxpayer: Caltonwood Energy Company, LP
Plant: Caltonwood Energy Center - Unit 1
Plant Summary: 1,390 MW and Complementary Combined Cycle Power Plant (2063)
Plant Location: Newton County, Texas
Project: 1st CC Unit Addition - Phase 2a - (CCAT) Construction
Date: June 24, 2013
Rev:

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process
 Production Capacity of New Equipment or Process

PCF = 1.000
 (35 MW) * 40.65%

D. Capital Cost New ("CCN")
 ("C Property")

CCN = \$60,584,465

E. Capital Cost Old ("CCO")
 Comparative Technology

CCO = \$102,509

Partial Use Determination Calculation

(PCF x CCN)	CCO	NPUMP
1,000 x \$60,584,465	\$102,509	\$7,739,833
\$60,584,465	\$60,584,465	

Partial Use Determination %

87.06%

TCEQ Use Determination Application Section 10, use:
 Use Percentage = 87.06%
 Excluding Debit Value = \$0,584,465

(Partial Use Determination % x PC Property Cost)

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Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$909,118	1	1.10	\$ 826,471
\$909,118	2	1.21	\$ 751,337
\$909,118	3	1.351	\$ 683,034
\$909,118	4	1.4841	\$ 620,940
\$909,118	5	1.61051	\$ 564,491
\$909,118	6	1.771561	\$ 513,173
\$909,118	7	1.9487171	\$ 466,521
\$909,118	8	2.14358881	\$ 424,110
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\$909,118	16	4.594972986	\$ 197,851
\$909,118	17	5.054470285	\$ 179,864
\$909,118	18	5.559917313	\$ 163,513
\$909,118	19	6.115909045	\$ 148,648
\$909,118	20	6.727499949	\$ 135,135
NPVMP:			\$ 7,739,833

Cottonwood Energy Company, LP

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 2
Plant Summary: 1,250 MW 4x4 Configuration Combined Cycle Power Plant (2008)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: 1

DUFF & PHELPS

Source Legend		
		Est. Date
C	Calculated Assumption	6/17/2013
CW	Cottonwood Client-Provided Data	4/23/2013
HH	Henry Hub Natural Gas Pricing	6/17/2013
SERC	SERC Electricity Pricing	6/17/2013
D&P	D&P Combined Cycle Cost Database	6/17/2013
30 TAC	30 TAC Chapter 17	12/13/2010

Assumptions

Plant Design Profile		Conversion Factors	
PC Property	Source	Hours/Year	Source
PC Property Capital Cost	\$ 60,584,465	8,760	30 TAC
PC Property Capital Cost (\$/kW)	\$	1,000	30 TAC
PC Property Capacity (MW)	388	lb/kg	20
PC Property Net Annual Generation Capacity (kWh)	156	s/hour	3,600
PC Property Net Annual Generation Capacity (MWh)	559,208,619	btu/mmbtu	1,000,000
Plant Capacity Factor	40.85%		
Plant Heat Rate (btu/kWh)	7,467		
Plant Heat Rate (MMBtu/kWh)	0.01		

Economic Assumptions	
NPVMP Discount Rate	10.0%
NPVMP Interest Rate	10.0%
Periods	20
PC Property Annual O&M Cost (\$)	\$ 1,120,654
Fuel Cost (\$/MMBTU) ⁽¹⁾	\$ 3.70
SERC Electricity Pricing (\$/MWh) ⁽²⁾	\$ 31.30

⁽¹⁾ 3-year average daily historical gas pricing for Henry Hub, 2008-2010.
⁽²⁾ 3-year average daily historical electricity rates for SERC, 2008-2010.

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Administrative Energy Company, LP

Project: Administrative Energy Company, LP
Plant: Coalwood Energy Center - Unit 2
Plant Address: 1280 Mt. Airy Community Center Circle Phase Plant 250131
Project: The 16 Gas Assets Production (CAP) Calculations
Date: June 24, 2014
Rev:

$$\text{Formula: } \frac{(\text{PCE} \times \text{CCO} \times \text{M})}{\text{CCN}}$$

1. Production Lifecycle Factor ("PLF")
 The ratio of the capacity of the existing equipment to produce in the capacity of the new equipment or process

2. Capacity Factor ("CF")
 CF is the capacity of the existing equipment or process divided by the capacity of the new equipment or process

3. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

4. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

5. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

6. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

7. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

8. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

9. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

10. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

11. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

12. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

13. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

14. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

15. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

16. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

17. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

18. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

19. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

20. Capacity Cost ("CCO")
 CCO is the cost of capacity of the existing equipment or process without the pollution control

If CAP Formulas (provided by TCEQ)

Formula Use Determination

$$\frac{(\text{PCE} \times \text{CCO} \times \text{CCO} \times \text{M})}{\text{CCN}}$$

Where

Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process

Production Capacity of New Equipment or Process

Annual Fuel Cost (\$)

Electricity Price (\$/MWh)

Annual O&M (\$)

Annual Fuel Cost (\$)

Electricity Price (\$/MWh)

Annual O&M (\$)

Annual Fuel Cost (\$)

Electricity Price (\$/MWh)

Annual O&M (\$)

Annual Fuel Cost (\$)

Electricity Price (\$/MWh)

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Annual Fuel Cost (\$)

Electricity Price (\$/MWh)

Annual O&M (\$)

Annual Fuel Cost (\$)

Electricity Price (\$/MWh)

Collonwood Energy Company, LP

NUMEROUS CAPITAL COSTS AND FINANCIAL RISK

DUFF & PHELPS

CONFIDENTIAL

Transmitter: Collonwood Energy Company, LP
Plant: Collonwood Energy Center - Unit 2
Plant Summary: 1,250 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("C/CAP") Calculations
Date: June 24, 2013
Rev:

8. Production Cost ("PC") Calculations for Collonwood Unit 2 (MW)

$$\text{Formula: } \frac{(\text{FC} \times \text{CCM}) - \text{CCO} - \text{NPVMP}}{\text{CCM}}$$

Electricity Price	\$/MWh	x	CC MWh/Year	=	(\$) NPV
\$31.20	\$	x	568,210 MWh/Year	=	\$17,472,601

9. Production Cost ("PC")

Heat Rate	mmbtu/kWh	x	PC, kWh/Year	=	Fuel Cost	=	Allocated Fuel Costs (\$)
9.01	mmbtu/kWh	x	568,209,816 kWh/Year	=	\$2.70	=	\$15,442,929

Annual O&M Cost	-	Allocated Fuel Costs	=	Annual Production Cost (\$)
\$1,120,554	-	\$15,442,929	=	\$16,563,484

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) \text{ NPV}}{(1 + \text{Interest Rate})^t} = \frac{(\$) \text{ FC}}{(1 + 10\%)^1} = \$16,563,484$$

$$\sum_{t=1}^n \frac{(\$) \text{ NPV}}{(1 + \text{Interest Rate})^t} = \frac{(\$) \text{ FC}}{(1 + 10\%)^1} = \$17,472,601$$

$$\text{NPVMP} = \$7,739,833$$

* If NPV is < 0, then MP = 0.

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 2
Plant Summary: 1,250 MW Gas Lignite/Combined Cycle Power Plant (2003)
Plant Location: Hardee County, Tenn.
Project: Partial Use Determination Procedure ("PUT") Calculations
Date: June 24, 2013
Rev:

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process,
Production Capacity of New Equipment or Process

PCF
 1,000
 100.00% * 40.15%

D. Capital Cost New ("CCN")

(\$, Property)

\$60,594,465

E. Capital Cost Old ("CCO")

Comparative Technology

\$102,508

Partial Use Determination Calculations

(PCF x CCN)	CCO	NPVMP	Partial Use Determination %
1,000 x \$60,594,465	\$102,508	\$7,739,833	87.06%
	\$60,594,465		

TCOE Use Determination Application Section 11. Use
 Use Percentage 87.06%
 Estimated Plant Value \$ 60,594,465

(Partial Use Determination % x PC Property Cost)

<< CONFIDENTIAL >>

Electricity - PV Calculatlons

Difference	Period	Interest Rate	PV - Period
\$909,118	1	1.10	\$ 826,471
\$909,118	2	1.21	\$ 751,337
\$909,118	3	1.331	\$ 683,034
\$909,118	4	1.4641	\$ 620,840
\$909,118	5	1.61051	\$ 564,491
\$909,118	6	1.771561	\$ 513,173
\$909,118	7	1.9487171	\$ 466,521
\$909,118	8	2.14358881	\$ 424,110
\$909,118	9	2.357947691	\$ 385,555
\$909,118	10	2.59374246	\$ 350,504
\$909,118	11	2.853116706	\$ 318,640
\$909,118	12	3.138428377	\$ 289,673
\$909,118	13	3.452271214	\$ 263,339
\$909,118	14	3.797498336	\$ 239,399
\$909,118	15	4.177248169	\$ 217,636
\$909,118	16	4.594972986	\$ 197,851
\$909,118	17	5.054470285	\$ 179,864
\$909,118	18	5.559917313	\$ 163,513
\$909,118	19	6.115909045	\$ 148,648
\$909,118	20	6.727499949	\$ 135,135
NPVMP:			\$ 7,739,833

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Transpayer: Coltonwood Energy Company, LP
Plant: Coltonwood Energy Center - Unit 3
Plant Summary: 1,250 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: 7

Source Legend		
	Calculated Assumption:	Eff. Date
C	Coltonwood Client-Provided Data	6/17/2013
CW	Henry Hub Hub Natural Gas Pricing	4/23/2013
HH	SERC Electricity Pricing	6/17/2013
SERC	D&P Combined Cycle Cost Database	6/17/2013
D&P	30 TAC Chapter 17	12/13/2010
30 TAC		

Plant Design Profile

	Source
PC Property Capital Cost	\$ 60,584,465
PC Property Capital Cost (\$/kW)	\$ 388
PC Property Capacity (MW)	156
PC Property Net Annual Generation Capacity (kWh)	568,209,619
PC Property Net Annual Generation Capacity (MWh)	568,210
Plant Capacity Factor	40.85%
Plant Heat Rate (btu/kWh)	7,467
Plant Heat Rate (MMBtu/kWh)	0.01
Capital Cost Old ("CCO")	\$ 102,509
Comparable Technology Cost	Spool Piece
Design Capacity Factor	0.00%
Capacity (MW)	

Conversion Factors

	Hours/Year
kWh/MW	8,760
lb/KG	1,000
\$/hour	2.20
\$/mmBtu	3,600
	1,000,000

Economic Assumptions

	Source
NPVMP Discount Rate	10.0%
NPVMP Interest Rate	10.0%
Periods	20
PC Property Annual O&M Cost (\$)	\$ 1,120,554
Fuel Cost (\$/MMBTU) ⁽¹⁾	\$ 3.70
SERC Electricity Pricing (\$/MWh) ⁽²⁾	\$ 31.30

⁽¹⁾ 3-year average daily historical gas pricing for Henry Hub, 2008-2010
⁽²⁾ 3-year average daily historical electricity rates for SERC, 2008-2010.

Cottonwood Energy Company, LP

SCENARIO 2: CAPITAL LAST DELTA SPARK PIERCE
 - COMPLIMENTAL -

DEFF & PHELPS

Employer: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center - Unit 3
 Mark Summary: 1,260 MW gas Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Pre-III Cost Analysis Procedure ("CAP") Calculations
 Date: June 24, 2013
 Rev: 7

Use appropriate Procedure ("AP") and conditions for Cottonwood Unit 3 HRSG

A. Marketable Product Value ("MPV")

Electricity Price	\$/MWh	x	PC MWh/Year	=	(\$)/MWh
531.30	\$	x	558,210 MWh/Year	=	\$17,472,601

B. Production Cost ("PC")

Heat Rate	mmBtu/kWh	x	PC MWh/Year	=	Fuel Cost	=	Allocated Fuel Costs (\$)
9.01	mmBtu/kWh	x	558,209.819 MWh/Year	=	\$5.70	=	\$15,442,829

Annual O&M Cost	\$/MWh	x	Allocated Fuel Costs	=	Annual Production Cost (\$)
\$1,120,364	\$/MWh	x	\$15,442,829	=	\$16,563,494

Formula:
$$\frac{(\text{PC} \times \text{CCM}) - \text{CCO} - \text{NPVMP}}{\text{CCN}}$$

Net Present Value Marketable Product ("NPVMP") Calculation:

$$\sum_{t=1}^n \frac{(\$) \text{MPV}}{(1 + \text{Interest Rate})^t} - \frac{(\$) \text{PC}}{(1 + 10\%)^t}$$

NPVMP (\$)
\$7,739,833

* If MP > 0, then MP = 0.

Transmittal: Cottonmax Energy Company, LP
Plant: Cottonwood Energy Center - Unit 3
Plant Summary: 1,260 MW 454 Conventional Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: June 24, 2013
Rev: 7

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process
 Production Capacity of New Equipment or Process

186 MW * 40.85%
 = 76 MW
 PCF = 1,000

D. Capital Cost New ("CCN")

CCN
 \$60,584,465

E. Capital Cost Old ("CCO")

CCO
 \$102,508

Partial Use Determination Calculation

(PCF * CCN)	CCO	NPVMP	Partial Use Determination %
1,000 * \$60,584,465	\$102,508	\$7,738,833	87.06%
	\$60,584,465		

Partial Use Determination Application, Section 12, Use
 Use Percentages 87.06%
 Estimated Dollar Value \$ 60,584,465

(Partial Use Determination % * PC Property Cost)

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Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$909,118	1	1.10	\$ 826,471
\$909,118	2	1.21	\$ 751,337
\$909,118	3	1.331	\$ 683,034
\$909,118	4	1.4641	\$ 620,940
\$909,118	5	1.61051	\$ 564,491
\$909,118	6	1.771561	\$ 513,173
\$909,118	7	1.9487171	\$ 466,521
\$909,118	8	2.14358681	\$ 424,110
\$909,118	9	2.357947691	\$ 385,555
\$909,118	10	2.59374246	\$ 350,504
\$909,118	11	2.853116706	\$ 318,640
\$909,118	12	3.138428377	\$ 289,673
\$909,118	13	3.452271214	\$ 263,339
\$909,118	14	3.797498336	\$ 239,399
\$909,118	15	4.177248169	\$ 217,636
\$909,118	16	4.594972986	\$ 197,851
\$909,118	17	5.054470285	\$ 179,864
\$909,118	18	5.559917313	\$ 163,513
\$909,118	19	6.115909045	\$ 148,648
\$909,118	20	6.727499949	\$ 135,135
NPVMP:			\$ 7,739,833

CONFIDENTIAL

Taxpayer: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center - Unit 4
 Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedure ("CAP") Calculations
 Date: June 24, 2013
 Rev: 7

Source Legend		
		Eff. Date
C	Calculated Assumption	6/17/2013
CW	Cottonwood Client-Provided Data	4/23/2013
HH	Henry Hub Hub Natural Gas Pricing	6/17/2013
SERC	SERC Electricity Pricing	6/17/2013
D&P	D&P Combined Cycle Cost Database	6/17/2013
30 TAC	30 TAC Chapter 17	12/13/2010

Plant Design Profile		Conversion Factors		Economic Assumptions	
PC Property	Source	Hours/Year	Source	NPVMP Discount Rate	Source
PC Property Capital Cost	\$ 60,584,465	8,760	CW	NPVMP Interest Rate	3C TAC
PC Property Capital Cost (\$/kW)	\$	1,000	C	Periods	3C TAC
PC Property Capacity (MW)	388	lb/kg	CW	PC Property Annual O&M Cost (\$)	CW
PC Property Net Annual Generation Capacity (kWh)	156	\$/hour	C	Fuel Cost (\$/MMBTU) ⁽¹⁾	-H
PC Property Net Annual Generation Capacity (MWh)	558,209,619	\$/mmBtu	C	SERC Electricity Pricing (\$/MWh) ⁽¹⁾	SERC
Plant Capacity Factor	55.21%		CW		
Plant Heat Rate (btu/kWh)	7,487		C		
Plant Heat Rate (MMBTU/kWh)	9.01				

Capital Cost Old ("CCO")	
Comparable Technology Cost	\$ 102,509
Design Capacity Factor	Spool Piece
Capacity ("MW")	0.00%

(1) 3-year average daily historical gas pricing for Henry Hub, 2008-2010.
 (2) 3-year average daily historical electricity rates for SERC, 2008-2010.

Coltonwood Energy Company, LP

MEMORANDUM CAPITAL COST STUDY - SPURIAL FIELD

DUFF & PHELPS

CONFIDENTIAL

Transmitter: Coltonwood Energy Company, LP
Plant: Coltonwood Energy Capital - Unit 4
Plant Summary: 1,200 MW Acid Combustion Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: For All Cost Analysis Procedures (CAP) Calculations
Date: June 24, 2013
Rev: 7

FOR ALL COST ANALYSIS PROCEDURES (CAP) CALCULATIONS FOR COLTONWOOD UNIT 4 HRSG

Formula:
$$\frac{(PCF \times CCN) - CCO - NPVMP}{CCN}$$

A. Marketable Product Value ("MPV")

Electricity Price	\$	MWh	x	PC MWh Year	=	\$	MPV
521.30	\$	MWh	x	566,210	=	\$17,472,601	

B. Production Cost ("PC")

Heat Rate	Btu/kWh	x	PC kWh Year	=	\$	Allocated Fuel Costs (\$)
0.01	Btu/kWh	x	566,209,619	=	\$15,442,929	

Annual O&M Cost	-	Allocated Fuel Costs	=	Annual Production Cost (\$)
\$1,120,564	-	\$15,442,929	=	\$16,563,494

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) MPV}{(1 + \text{Interest Rate})^t} - \frac{(\$) PC}{(1 + \text{Interest Rate})^0}$$

NPVMP (\$)

* If MP is < 0, then MP = 0

Company: Customwood Energy Company, LP
Plant: Customwood Energy Center - Unit 3
Plant Summary: 1,250 MW and Configuration Combined Cycle Power Plant (CCPP)
Plant Location: Newton County, Texas
Project: Per III Asset Auction: Predefine "CCPP" Calculations.
Date: June 24, 2013
Rev: 7

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process
 Production Capacity of New Equipment or Process
 PCF
 100%

100% / 100% = 100%

D. Capital Cost New ("CCN")

CCN
 \$60,594,465

E. Capital Cost Old ("CCO")

CCO
 \$102,509

Partial Use Determination Calculation

(PCF x CCN)	CCO	NPVMP	Partial Use Determination %
1.000 x \$60,594,465	\$102,509	\$7,739,833	87.06%
	\$60,594,465		

Partial Use Determination Application Section 12, use:
 Use: 87.06%
 Estimated Dollar Value: $60,594,465$

(Partial Use Determination % x PC Property Cost)

Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$909,118	1	1.10	\$ 826,471
\$909,118	2	1.21	\$ 751,337
\$909,118	3	1.331	\$ 683,034
\$909,118	4	1.4641	\$ 620,940
\$909,118	5	1.61051	\$ 564,491
\$909,118	6	1.771561	\$ 513,173
\$909,118	7	1.9487171	\$ 466,521
\$909,118	8	2.14358881	\$ 424,110
\$909,118	9	2.357947691	\$ 385,555
\$909,118	10	2.59374246	\$ 350,504
\$909,118	11	2.853116706	\$ 318,640
\$909,118	12	3.138428377	\$ 289,673
\$909,118	13	3.452271214	\$ 263,339
\$909,118	14	3.797498336	\$ 239,399
\$909,118	15	4.177248169	\$ 217,636
\$909,118	16	4.594972986	\$ 197,851
\$909,118	17	5.054470285	\$ 179,864
\$909,118	18	5.559917313	\$ 163,513
\$909,118	19	6.115909045	\$ 148,648
\$909,118	20	6.727499949	\$ 135,135
NPVMP:			\$ 7,739,833

Attachment E

Cottonwood Energy Company, LP

Consultant: Greg Maxim, Duff & Phelps

Plant: Cottonwood Energy Center

Issue 1: Please review the enclosed applications to ensure that all information is still current.

Response: This response to the NOD provides additional information in support of Cottonwood's original applications. With the addition of the supplemental information provided in this response, the applications are current.

Issue 2: Specify the subsections of 40 Code of Federal Regulations ("CFR") §60 Subpart Da being met as a result of the installation and use of the heat recovery steam generator ("HRSG") and explain how the HRSG use causes the facility to meet or exceed the rule.

Response: Please refer to Attachment A.

Issue 3: Provide a copy of permit O2338. Explain where in the permit HRSGs are considered to be Best Available Control Technology.

Response: Per your request, please find a copy of Permit 02338 attached. The appropriate statutory citations applicable to the Facility's HRSGs have been updated in response to Issue 2 above.

Issue 4: Provide a list of the equipment included in the description "Dedicated Ancillary Systems." Does this listing include items that appear on either the Tier I Table located in 30 TAC §17.14(a) or the Expedited Review List located in 30 TAC §17.17(b)?

Response: The following Facility systems and equipment are included within the HRSG's Dedicated Ancillary Systems:

- Steam Turbine;
- Condenser;
- Circulating Water System;
- Cooling Water System;
- Make-Up Water Treatment; and
- Cooling Tower

Issue 5: Please resubmit your partial calculation. We agree that the proper method for calculating a partial use determination is the Cost Analysis Procedure located in

30 TAC §17.17. We do not agree with the method used to calculate the variables in your equation. The variables used in the CAP should be calculated as follows:

$$\frac{(\text{Production Capacity Factor} \times \text{Capital Cost New}) - \text{Capital Cost Old} - \text{NPVMP}}{\text{Capital Cost New}} \times 100$$

The variables used in the CAP should be calculated as follows:

- Production Capacity Factor: calculated by dividing the capacity of the existing equipment or process by the capacity of the new equipment or process.
- Capital Cost New: Cost of HRSGs
- Capital Cost Old: Cost of a boiler(s) required to produce the same amount of steam produced by the HRSGs
- Net Present Value of the Marketable Product: The net present value of the marketable product recovered for the expected lifetime of the property, calculated using the equation in §17.17(c)(2).

$$\text{NPVMP} = \sum_{t=1}^n \frac{(\text{Marketable Product Value} - \text{Production Cost})_t}{(1 + \text{Interest Rate})^t}$$

- Marketable Product:
 1. If steam is used to generate electricity that is sold to external parties or used on site, then the value of the marketable product is considered the value of electricity sold or used on site as a result of the steam generated by the HRSG.
 2. If steam is sold to an external party, then the value of the marketable product is considered to be the retail value of the steam sold.
 3. If steam is used on site, then the value of the marketable product is the value assigned to the steam for internal accounting purposes. It is the responsibility of the applicant to show that the internally assigned value is comparable to the value assigned by other similar producers of steam.

For 1 above, the thermal power of steam generated by the facility is converted into electrical power. Using steam tables and basic thermodynamic equations, the thermal power of the steam can be determined.

$$W_{\text{thermal}} = (h_1 - h_0) \times m$$

Where h_0 is the initial specific enthalpy of the liquid (the HRSG feedwater) and h_1 is the final specific enthalpy of the steam at a given temperature and pressure exiting the HRSG. m is the mass flow rate of the steam. Use the steam tables to determine the specific enthalpy of the steam based on the required specifications (temperature and pressure) of the steam produced.

To determine the electrical power represented by W_{thermal} , W_{thermal} must be converted to electrical power using the thermal efficiency (η_{thermal}) of the steam turbine(s). You may either use the rated efficiency of the actual steam turbine at the facility or assume η_{thermal} of 36%, which is an average steam turbine thermal efficiency for non-nuclear applications.

$$W_{\text{electrical}} = W_{\text{thermal}} \times \eta_{\text{thermal}}$$

$W_{\text{electrical}}$ represents the electrical power generation associated with the HRSG. In order to determine the marketable product value, multiply this value by the number of hours the HRSG operated in each of the last three years while the electricity was being generated for sale or use on site. This value should then be multiplied by the average retail rate of electricity sold during each of the last three years in order to determine the marketable product value of the steam used to generate electricity sold to external parties or used on site for the last three years. The marketable product values for the last three years should be added and the sum divided by three to obtain the average marketable product value over the last three years.

- Production Cost: Itemized costs directly attributed to the operation of the HRSG excluding non-cash costs, such as overhead and depreciation and excluding costs related to operating the gas turbine, associated duct burners, or the steam turbine including fuel costs.
- Interest Rate: 10%
- n: estimated useful life in years of the HRSG

Response: Please refer to Attachment B for a discussion regarding the flaws in CAP as prescribed by the ED staff. Also, please refer to Attachment C for a discussion regarding the use determination models developed by Cottonwood and the pollution control percentages.

Bryan W. Shaw, Ph.D., *Chairman*
Buddy Garcia, *Commissioner*
Carlos Rubinstein, *Commissioner*
Mark R. Vickery, P.G., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 28, 2009

MR FRANK J SCHNEIDER
VICE PRESIDENT
COTTONWOOD ENERGY COMPANY LP
6700 ALEXANDER BELL DR STE 360
COLUMBIA MD 21046

Re: Effective Permit and Acid Rain Permit Approval
Renewal
Permit Number: O2338
Cottonwood Energy Company, LP
Cottonwood Energy Project
Deweyville, Newton County
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Account Number: NC-0056-N

Dear Mr. Schneider:

The effective federal operating permit (FOP) and acid rain permit for Cottonwood Energy Company, LP, Cottonwood Energy Project, is enclosed. This FOP constitutes authority to operate the emission units identified in the FOP application.

All site operating permits are subject to public petition for 60 days following the expiration of the 45-day U.S. Environmental Protection Agency (EPA) review. The public petition period for the FOP extends from September 12, 2009 until November 10, 2009. If the EPA receives a valid petition and objects to the above-referenced permit, you will be notified promptly by the Texas Commission on Environmental Quality (TCEQ).

It should be noted that from the date of this letter Cottonwood Energy Company, LP, Cottonwood Energy Project, must operate in accordance with the requirements of Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122) and the FOP. Some of the terms and conditions contained in the FOP include recordkeeping conditions, reporting conditions (which includes deviation reporting), and compliance certification conditions. All reports, along with any questions regarding the reports, shall be forwarded to the Texas Commission on Environmental Quality Beaumont Regional Office, 3870 Eastex Freeway, Beaumont, Texas 77703-1830.

Mr. Frank J. Schneider
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September 28, 2009

Consistent with 30 TAC Chapter 122, Subchapter C, the permit holder shall submit an application to the Air Permits Division (APD) for a revision to an FOP for those activities at a site which change, add, or remove one or more FOP terms or conditions. The permit holder shall also submit an application to the APD for a revision to a permit to address the following: the adoption of an applicable requirement previously designated as federally enforceable only; the promulgation of a new applicable requirement; the adoption of a new state-only requirement; or a change in a state-only designation.

Thank you again for your cooperation in this matter. If you have questions concerning the review or this notice, please contact Ms. Camilla Widenhofer at (512) 239-1028.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality.

Sincerely,



Steve Hagle, P.E., Director
Air Permits Division
Office of Permitting and Registration
Texas Commission on Environmental Quality

SH/CW/kp

cc: Mr. Wayne Whitehead, EHS Coordinator, Cottonwood Energy Company, LP, Deweyville
Air Section Manager, Region 10 - Beaumont

Enclosure: Effective Permit

cc: Air Permit Section Chief, U.S. Environmental Protection Agency, Region 6, Dallas

Project Number: 13047

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO

Cottonwood Energy Company, LP

AUTHORIZING THE OPERATION OF

Cottonwood Energy Project
Electric Services

LOCATED AT

Newton County, Texas

Latitude 30° 15' 36" Longitude 093° 44' 10"

Regulated Entity Number: RN100226109

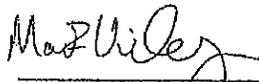
This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site, emission units, and affected sources listed in this permit. Operations of the site, emission units, and affected sources listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site, emission units, and affected sources authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site, emission units, and affected sources.

Permit No: 02338 Issuance Date: September 28, 2009



For the Commission

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GENERAL TERMS AND CONDITIONS

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit shall be forwarded as one original and one copy to the TCEQ Regional Office for your site. Reports submitted must include a cover letter which identifies the following information: company name, TCEQ regulated entity number, site name, area name (if applicable), and Air Permits Division permit number.

SPECIAL TERMS AND CONDITIONS:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting:

1. Permit holder shall comply with the following requirements:
 - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
 - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.
 - C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
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2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
 - A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
 - B. Title 30 TAC § 101.3 (relating to Circumvention).
 - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
 - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
 - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
 - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
 - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
 - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
 - I. Title 30 TAC § 101.222 (relating to Demonstrations)
 - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
 - A. For stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment, the permit holder shall comply with the following requirements:
 - (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
 - (ii) Title 30 TAC § 111.111(a)(1)(E)
 - (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
 - (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146.

These periodic monitoring requirements do not apply to vents that do not emit visible emissions such as vents that emit only VOC or vents that provide passive ventilation, such as plumbing vents; or vents that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) and Compliance Assurance Monitoring, as specified in the attached "Applicable Requirements Summary" and "Additional Monitoring Requirements:"

1. An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
2. For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
3. Records of all observations shall be maintained.
4. Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

5. Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.
- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.

B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
- (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

1. An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.
 2. Records of all observations shall be maintained.
 3. Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
 4. Compliance Certification:
 - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A).
 - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall
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list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- C. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
 - D. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).
 - E. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
 - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
 - (ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)
 - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(e)
 - F. Outdoor burning, as stated in 30 TAC § 111.201, shall not be authorized unless the following requirements are satisfied:
 - (i) Title 30 TAC § 111.207 (relating to Exception for Recreation, Ceremony, Cooking, and Warmth)
 - (ii) Title 30 TAC § 111.219 (relating to General Requirements for Allowable Outdoor Burning)
 - (iii) Title 30 TAC § 111.221 (relating to Responsibility for Consequences of Outdoor Burning)
4. Permit holder shall comply with the following 30 TAC Chapter 115, Subchapter C requirements:
- A. When filling stationary gasoline storage containers with a nominal capacity less than or equal to 1,000 gallons at a Stage I motor vehicle fuel dispensing facility, the permit holder shall comply with the following requirements specified in 30 TAC Chapter 115, Subchapter C:
 - (i) Title 30 TAC § 115.222(7) (relating to Control Requirements)
 - (ii) Title 30 TAC § 115.222(3), as it applies to liquid gasoline leaks

(iii) Title 30 TAC § 115.224(1) (relating to Inspection Requirements), as it applies to liquid gasoline leaks)

5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:
- A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)
 - B. Title 40 CFR § 60.8 (relating to Performance Tests)
 - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
 - D. Title 40 CFR § 60.12 (relating to Circumvention)
 - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
 - F. Title 40 CFR § 60.14 (relating to Modification)
 - G. Title 40 CFR § 60.15 (relating to Reconstruction)
 - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

Additional Monitoring Requirements

6. Unless otherwise specified, the permit holder shall comply with the compliance assurance monitoring requirements as specified in the attached "CAM Summary" upon issuance of the permit. In addition, the permit holder shall comply with the following:
- A. The permit holder shall comply with the terms and conditions contained in 30 TAC § 122.147 (General Terms and Conditions for Compliance Assurance Monitoring).
 - B. The permit holder shall report, consistent with the averaging time identified in the "CAM Summary," deviations as defined by the deviation limit in the "CAM Summary." Any monitoring data below a minimum limit or above a maximum limit, that is collected in accordance with the requirements specified in 40 CFR § 64.7(c), shall be reported as a deviation. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).
 - C. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the "CAM Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances in order to avoid reporting deviations. All monitoring data shall be collected in accordance with the requirements specified in 40 CFR § 64.7(c).
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- D. The permit holder shall operate the monitoring, identified in the attached "CAM Summary," in accordance with the provisions of 40 CFR § 64.7.
7. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

8. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
- A. Are incorporated by reference into this permit as applicable requirements
 - B. Shall be located with this operating permit
 - C. Are not eligible for a permit shield
9. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

Compliance Requirements

10. The permit holder shall certify compliance with all permit terms and conditions using, at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
11. Use of Discrete Emission Credits to Comply with Applicable Requirements:

Permit Shield (30 TAC § 122.148)

14. A permit shield is granted for the emission units, groups, or processes specified in the attached "Permit Shield." Compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements listed in the attachment "Permit Shield." Permit shield provisions shall not be modified by the executive director until notification is provided to the permit holder. No later than 90 days after notification of a change in a determination made by the executive director, the permit holder shall apply for the appropriate permit revision to reflect the new determination. Provisional terms are not eligible for this permit shield. Any term or condition, under a permit shield, shall not be protected by the permit shield if it is replaced by a provisional term or condition or the basis of the term and condition changes.

Acid Rain Permit Requirements

15. For units STACK 1, STACK 2, STACK 3, and STACK 4 (identified in the Certificate of Representation as units CT-1, CT-2, CT-3, and CT-4), located at the affected source identified by ORIS/Facility code 55358 the designated representative and the owner or operator, as applicable, shall comply with the following Acid Rain Permit requirements.

A. General Requirements

- (i) Under 30 TAC § 122.12(1) and 40 CFR Part 72, the Acid Rain Permit requirements contained here are a separable portion of the Federal Operating Permit (FOP) and have an independent public comment process which may be separate from, or combined with the FOP.
- (ii) The owner and operator shall comply with the requirements of 40 CFR Part 72 and 40 CFR Part 76. Any noncompliance with the Acid Rain Permit will be considered noncompliance with the FOP and may be subject to enforcement action.
- (iii) The owners and operators of the affected source shall operate the source and the unit in compliance with the requirements of this Acid Rain Permit and all other applicable State and federal requirements.
- (iv) The owners and operators of the affected source shall comply with the General Terms and Conditions of the FOP that incorporates this Acid Rain Permit.
- (v) The term for the Acid Rain permit shall commence with the issuance of the FOP that incorporates the Acid Rain permit and shall be run concurrent with the remainder of the term of the FOP. Renewal of the Acid Rain permit shall coincide with the renewal of the FOP that incorporates the Acid Rain permit and subsequent terms shall be no more than five years from the date of renewal of the FOP and run concurrent with the permit term of the FOP.

B. Monitoring Requirements

- (i) The owners and operators, and the designated representative, of the affected source and each affected unit at the source shall comply with the monitoring requirements contained 40 CFR Part 75.
- (ii) The emissions measurements recorded and reported in accordance with 40 CFR Part 75 and any other credible evidence shall be used to determine compliance by the affected source with the acid rain emissions limitations and emissions reduction requirements for SO₂ and NO_x under the ARP.
- (iii) The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emission of other pollutants or other emissions characteristics at the unit under other applicable requirements of the FCAA Amendments (42 U.S.C. 7401, as amended November 15, 1990) and other terms and conditions of the operating permit for the source.

C. SO₂ emissions requirements

- (i) The owners and operators of each source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for SO₂.
- (ii) As of the allowance transfer deadline the owners and operators of the affected source and each affected unit at the source shall hold, in the unit's compliance subaccount, allowances in an amount not less than the total annual emissions of SO₂ for the previous calendar year.
- (iii) Each ton of SO₂ emitted in excess of the acid rain emissions limitations for SO₂ shall constitute a separate violation of the FCAA amendments.
- (iv) An affected unit shall be subject to the requirements under (i) and (ii) of the SO₂ emissions requirements as follows:
 - 1. Starting January 1, 2000, an affected unit under 40 CFR § 72.6(a)(2); or
 - 2. Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR Part 75, an affected unit under 40 CFR § 72.6(a)(3).
- (v) Allowances shall be held in, deducted from, or transferred into or among Allowance Tracking System accounts in accordance with the requirements of the ARP.

- (vi) An allowance shall not be deducted, for compliance with the requirements of this permit, in a calendar year before the year for which the allowance was allocated.
- (vii) An allowance allocated by the EPA Administrator or under the ARP is a limited authorization to emit SO₂ in accordance with the ARP. No provision of the ARP, Acid Rain permit application, this Acid Rain Permit, or an exemption under 40 CFR §§ 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (viii) An allowance allocated by the EPA Administrator under the ARP does not constitute a property right.

D. NO_x Emission Requirements

- (i) The owners and operators of the source and each affected unit at the source shall comply with the applicable acid rain emissions limitations for NO_x under 40 CFR Part 76.

E. Excess emissions requirements for SO₂ and NO_x

- (i) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR Part 77.
- (ii) If an affected source has excess emissions in any calendar year shall, as required by 40 CFR Part 77:
 - 1. Pay, without demand, the penalty required and pay, upon demand, the interest on that penalty.
 - 2. Comply with the terms of an approved offset plan.

F. Recordkeeping and Reporting Requirements

- (i) Unless otherwise provided, the owners and operators of the affected source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the EPA Administrator.
 - 1. The certificate of representation for the designated representative for the source and each affected unit and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR § 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded

because of the submission of a new certificate of representation changing the designated representative.

2. All emissions monitoring information, in accordance with 40 CFR Part 75, provided that to the extent that 40 CFR Part 75 provides for a 3-year period for recordkeeping (rather than a five-year period cited in 30 TAC § 122.144), the 3-year period shall apply.
 3. Copies of all reports, compliance certifications, and other submissions and all records made or required under the ARP or relied upon for compliance certification.
 4. Copies of all documents used to complete an acid rain permit application and any other submission under the ARP or to demonstrate compliance with the requirements of the ARP.
- (ii) The designated representative of an affected source and each affected unit at the source shall submit the reports required under the ARP including those under 40 CFR Part 72, Subpart I and 40 CFR Part 75.

G. Liability

- (i) Any person who knowingly violates any requirement or prohibition of the ARP, a complete acid rain permit application, an acid rain permit, or a written exemption under 40 CFR §§ 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to FCAA § 113(c).
- (ii) Any person who knowingly makes a false, material statement in any record, submission, or report under the ARP shall be subject to criminal enforcement pursuant to FCAA § 113(c) and 18 U.S.C. 1001.
- (iii) No permit revision shall excuse any violation of the requirements of the ARP that occurs prior to the date that the revision takes effect.
- (iv) The affected source and each affected unit shall meet the requirements of the ARP contained in 40 CFR Parts 72 through 78.
- (v) Any provision of the ARP that applies to an affected source or the designated representative of an affected source shall also apply to the owners and operators of such source and of the affected units at the source.
- (vi) Any provision of the ARP that applies to an affected unit (including a provision applicable to the DR of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR § 72.44 (Phase II repowering extension plans) and 40 CFR

§ 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR Part 75 (including 40 CFR §§ 75.16, 75.17, and 75.18), the owners and operators and the DR of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the DR and that is located at a source of which they are not owners or operators or the DR.

- (vii) Each violation of a provision of 40 CFR Parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or DR of such source or unit, shall be a separate violation of the FCAA Amendments.

H. Effect on other authorities. No provision of the ARP, an acid rain permit application, an acid rain permit, or an exemption under 40 CFR §§ 72.7 or 72.8 shall be construed as:

- (i) Except as expressly provided in Title IV of the FCAA Amendments, exempting or excluding the owners and operators and, to the extent applicable, the DR of an affected source or affected unit from compliance with any other provision of the FCAA Amendments, including the provisions of Title I of the FCAA Amendments relating to applicable National Ambient Air Quality Standards or State Implementation Plans
- (ii) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the FCAA Amendments
- (iii) Requiring a change of any kind in any state law regulating electric utility rates and charges, affecting any state law regarding such state regulation, or limiting such state regulation, including any prudence review requirements under such state law
- (iv) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (v) Interfering with or impairing any program for competitive bidding for power supply in a state in which such program is established

I. The number of SO₂ allowances allocated by the EPA in 40 CFR Part 73 is enforceable only by the EPA Administrator.

Clean Air Interstate Rule Permit Requirements

16. For units STACK 1, STACK 2, STACK 3, and STACK 4 (identified in the Certificate of Representation as units CT-1, CT-2, CT-3, and CT-4), located at the affected source identified by ORIS/Facility code 55358, the designated representative and the owner or operator, as applicable, shall comply with the following Clean Air Interstate Rule (CAIR) Permit requirements. Until approval of the Texas CAIR SIP by EPA, the permit holder

shall comply with the equivalent requirements of 40 CFR Part 97 in place of the referenced 40 CFR Part 96 requirements in the Texas CAIR permit and 30 TAC Chapter 122 requirements.

A. General Requirements

- (i) Under 30 TAC § 122.420(b) and 40 CFR §§ 96.120(b) and 96.220(b) the CAIR Permit requirements contained here are a separable portion of the Federal Operating Permit (FOP).
- (ii) The owners and operators of the CAIR NO_x and the CAIR SO₂ source shall operate the source and the unit in compliance with the requirements of this CAIR permit and all other applicable State and federal requirements.
- (iii) The owners and operators of the CAIR NO_x and the CAIR SO₂ source shall comply with the General Terms and Conditions of the FOP that incorporates this CAIR Permit.
- (iv) The term for the initial CAIR permit shall commence with the issuance of the revision containing the CAIR permit and shall be the remaining term for the FOP that incorporates the CAIR permit. Renewal of the initial CAIR permit shall coincide with the renewal of the FOP that incorporates the CAIR permit and subsequent terms shall be no more than five years from the date of renewal of the FOP and run concurrent with the permit term of the FOP.

B. Monitoring and Reporting Requirements

- (i) The owners and operators, and the CAIR designated representative, of the CAIR NO_x source and each CAIR NO_x unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements contained 40 CFR Part 96, Subpart HH.
- (ii) The owners and operators, and the CAIR designated representative, of the CAIR SO₂ source and each CAIR SO₂ unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements contained 40 CFR Part 96, Subpart HHH.
- (iii) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HH and any other credible evidence shall be used to determine compliance by the CAIR NO_x source with the CAIR NO_x emissions limitation.
- (iv) The emissions measurements recorded and reported in accordance with 40 CFR Part 96, Subpart HHH and any other credible evidence shall be used to determine compliance by the CAIR SO₂ source with the CAIR SO₂ emissions limitation.

C. NO_x emissions requirements

- (i) As of the allowance transfer deadline for a control period, the owners and operators of the CAIR NO_x source and each CAIR NO_x unit at the source shall hold, in the source's compliance account, CAIR NO_x allowances available for compliance deductions for the control period under 40 CFR § 96.154(a) in an amount not less than the tons of total nitrogen oxides emissions for the control period from all CAIR NO_x units at the source, as determined in accordance the requirements 40 CFR Part 96, Subpart HH.
- (ii) A CAIR NO_x unit shall be subject to the requirements of paragraph C.(i) of this CAIR Permit starting on the later of January 1, 2009 or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 96.170(b)(1), (2), or (5).
- (iii) A CAIR NO_x allowance shall not be deducted, for compliance with the requirements of this permit, for a control period in a calendar year before the year for which the CAIR NO_x allowance was allocated.
- (iv) CAIR NO_x allowances shall be held in, deducted from, or transferred into or among CAIR NO_x Allowance Tracking System accounts in accordance with the requirements of 40 CFR Part 96, Subpart FF or Subpart GG.
- (v) A CAIR NO_x allowance is a limited authorization to emit one ton of nitrogen oxides in accordance with the CAIR NO_x Annual Trading Program. No provision of the CAIR NO_x Annual Trading Program, the CAIR permit application, the CAIR permit, or an exemption under 40 CFR § 96.105 and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.
- (vi) A CAIR NO_x allowance does not constitute a property right.
- (vii) Upon recordation by the Administrator under 40 CFR Part 96, Subpart FF or Subpart GG, every allocation, transfer, or deduction of a CAIR NO_x allowance to or from a CAIR NO_x unit's compliance account is incorporated automatically in this CAIR permit.

D. NO_x excess emissions requirements

- (i) If a CAIR NO_x source emits nitrogen oxides during any control period in excess of the CAIR NO_x emissions limitation, the owners and operators of the source and each CAIR NO_x unit at the source shall surrender the CAIR NO_x allowances required for deduction under 40 CFR § 96.154(d)(1) and pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law.

- (ii) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AA, the Clean Air Act, and applicable State law.

E. SO₂ emissions requirements

- (i) As of the allowance transfer deadline for a control period, the owners and operators of the CAIR SO₂ source and each CAIR SO₂ unit at the source shall hold, in the source's compliance account, CAIR SO₂ allowances available for compliance deductions for the control period under 40 CFR § 96.254(a) and (b) in an amount not less than the tons of total sulfur dioxides emissions for the control period from all CAIR SO₂ units at the source, as determined in accordance the requirements 40 CFR Part 96, Subpart HHH.
- (ii) A CAIR SO₂ unit shall be subject to the requirements of paragraph E.(i) of this CAIR Permit starting on the later of January 1, 2010 or the deadline for meeting the unit's monitor certification requirements under 40 CFR § 96.270(b)(1), (2), or (5).
- (iii) A CAIR SO₂ allowance shall not be deducted, for compliance with the requirements of this permit, for a control period in a calendar year before the year for which the CAIR SO₂ allowance was allocated.
- (iv) CAIR SO₂ allowances shall be held in, deducted from, or transferred into or among CAIR SO₂ Allowance Tracking System accounts in accordance with the requirements of 40 CFR Part 96, Subpart FFF or Subpart GGG.
- (v) A CAIR SO₂ allowance is a limited authorization to emit sulfur dioxide in accordance with the CAIR SO₂ Trading Program. No provision of the CAIR SO₂ Trading Program, the CAIR permit application, the CAIR permit, or an exemption under 40 CFR § 96.205 and no provision of law shall be construed to limit the authority of the State or the United States to terminate or limit such authorization.
- (vi) A CAIR SO₂ allowance does not constitute a property right.
- (vii) Upon recordation by the Administrator under 40 CFR Part 96, Subpart FFF or Subpart GGG, every allocation, transfer, or deduction of a CAIR SO₂ allowance to or from a CAIR SO₂ unit's compliance account is incorporated automatically in this CAIR permit.

F. SO₂ excess emissions requirements

- (i) If a CAIR SO₂ source emits sulfur dioxides during any control period in excess of the CAIR SO₂ emissions limitation, the owners and operators of the source and each CAIR SO₂ unit at the source shall surrender the CAIR SO₂ allowances required for deduction under 40 CFR § 96.254(d)(1) and
-

pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act or applicable State law.

- (ii) Each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR Part 96, Subpart AAA, the Clean Air Act, and applicable State law.

G. Recordkeeping and Reporting Requirements

- (i) Unless otherwise provided, the owners and operators of the CAIR NO_x source and each CAIR NO_x unit at the source and the CAIR SO₂ source and each CAIR SO₂ unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the permitting authority or the Administrator.

1. The certificate of representation under 40 CFR §§ 96.113 and 96.213 for the CAIR NO_x designated representative for the source and each CAIR NO_x unit and the CAIR SO₂ designated representative for the source and each CAIR SO₂ unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation under 40 CFR §§ 96.113 and 96.213 changing the CAIR designated representative.
2. All emissions monitoring information, in accordance with 40 CFR Part 96, Subpart HH and Subpart HHH, provided that to the extent that these subparts provide for a 3-year period for recordkeeping, the 3-year period shall apply.
3. Copies of all reports, compliance certifications, and other submissions and all records made or required under the CAIR NO_x Annual Trading Program and CAIR SO₂ Trading Program or relied upon for compliance determinations.
4. Copies of all documents used to complete a CAIR permit application and any other submission under the CAIR NO_x Annual Trading Program and CAIR SO₂ Trading Program or to demonstrate compliance with the requirements of the CAIR NO_x Annual Trading Program and CAIR SO₂ Trading Program.

- (ii) The CAIR designated representative of a CAIR NO_x source and each CAIR NO_x unit at the source and a CAIR SO₂ source and each CAIR SO₂

unit at the source shall submit the reports required under the CAIR NO_x Annual Trading Program and the CAIR SO₂ Trading Program including those under 40 CFR Part 96, Subpart HH and Subpart HHH.

- H. The CAIR NO_x source and each CAIR NO_x unit shall meet the requirements of the CAIR NO_x Annual Trading Program contained in 40 CFR Part 96, Subparts AA through II.
- I. The CAIR SO₂ source and each CAIR SO₂ unit shall meet the requirements of the CAIR SO₂ Trading Program contained in 40 CFR Part 96, Subparts AAA through III.
- J. Any provision of the CAIR NO_x Annual Trading Program and the CAIR SO₂ Trading Program that applies to a CAIR NO_x source or CAIR SO₂ source or the CAIR designated representative of a CAIR NO_x source or CAIR SO₂ source shall also apply to the owners and operators of such source and the units at the source.
- K. Any provision of the CAIR NO_x Annual Trading Program and the CAIR SO₂ Trading Program that applies to a CAIR NO_x unit or CAIR SO₂ unit or the CAIR designated representative of a CAIR NO_x unit or CAIR SO₂ unit shall also apply to the owners and operators of such unit.
- L. No provision of the CAIR NO_x Annual Trading Program, CAIR SO₂ Trading Program, a CAIR permit application, a CAIR permit, or an exemption under 40 CFR §§ 96.105 or 96.205 shall be construed as exempting or excluding the owners and operators, and the CAIR designated representative, of a CAIR NO_x source or CAIR NO_x unit or a CAIR SO₂ source or CAIR SO₂ unit from compliance with any other provision of the applicable, approved State implementation plan, a federally enforceable permit, or the Clean Air Act.

ATTACHMENTS

Applicable Requirements Summary

Additional Monitoring Requirements

Permit Shield

New Source Review Authorization References

Applicable Requirements Summary

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Note: A "none" entry may be noted for some emission sources in this permit's "Applicable Requirements Summary" under the heading of "Monitoring and Testing Requirements" and/or "Recordkeeping Requirements" and/or "Reporting Requirements." Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement driver
AUXBOL1	Boilers/Steam Generators/Steam Generating Units	N/A	60Dc-01	40 CFR Part 60, Subpart Dc	No changing attributes.
GRPHRSG	Boilers/Steam Generators/Steam Generating Units	HRSG1, HRSG2, HRSG3, HRSG4	60Da-01	40 CFR Part 60, Subpart Da	No changing attributes.
GRPSTACK	Emission Points/Stationary Vents/Process Vents	STACK 1, STACK 2, STACK 3, STACK 4	RJ1111-01	30 TAC Chapter 111, Visible Emissions	No changing attributes.
GRPTURB	Stationary Turbines	STACK 1, STACK 2, STACK 3, STACK 4	60GG-01	40 CFR Part 60, Subpart GG	No changing attributes.

Applicable Requirements Summary

Unit/Group/Process ID No.	SOP Title No.	Pollutant	Emission Limitation/Standard/ Equipment Specification Name	Applicable Standard/ Condition/BS	Monitoring and Testing Requirements	Record Keeping Requirements	Reporting Requirements
AUXBOIL1 EU	60Dc-01	SO2	40 CFR Part 60, Subpart Dc	This subpart applies to each steam generating unit constructed, reconstructed, or modified after 6/9/89 and that has a maximum design heat input capacity of 2.9-29 megawatts (MW).	None	§ 60.48c(f) § 60.48c(f)	§ 60.48c(a) § 60.48c(a)(1) § 60.48c(a)(3)
AUXBOIL1 EU	60Dc-01	PM	40 CFR Part 60, Subpart Dc	This subpart applies to each steam generating unit constructed, reconstructed, or modified after 6/9/89 and that has a maximum design heat input capacity of 2.9-29 megawatts (MW).	None	§ 60.48c(g) § 60.48c(f)	§ 60.48c(a) § 60.48c(a)(1) § 60.48c(a)(3)
AUXBOIL1 EU	60Dc-01	PM (OPACITY)	40 CFR Part 60, Subpart Dc	This subpart applies to each steam generating unit constructed, reconstructed, or modified after 6/9/89 and that has a maximum design heat input capacity of 2.9-29 megawatts (MW).	None	§ 60.48c(g) § 60.48c(f)	§ 60.48c(a) § 60.48c(a)(1) § 60.48c(a)(3)
GRPHRSG BU	60Da-01	PM	40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 60, Subpart Da
GRPHRSG EU	60Da-01	PM (OPACITY)	40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable monitoring and testing requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable recordkeeping requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable reporting requirements of 40 CFR Part 60, Subpart Da

Applicable Requirements Summary

Unit/Group/Process	W/D No	Type	SOP Title/No.	Pollutant	Emission Limitation/Standard/Equipment Specification		Test/Description (See Special Permit and Conditions)	Monitoring and Testability Requirements	Record Keeping Requirements	Reporting Requirements
					Name	Citation				
GRPHRSO		EU	60Da-01	NOX	40 CFR Part 60, Subpart Da	§ 60.40Da(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specifications of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da
GRPHRSO		EU	60Da-01	SO2	40 CFR Part 60, Subpart Da	§ 60.40Da(a) The permit holder shall comply with the applicable limitation, standard and/or equipment specifications of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da	The permit holder shall comply with the applicable requirements of 40 CFR Part 60, Subpart Da
GRPSTACK		EP	R1111-01	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
GRPTURB		EU	60CG-01	SO2	40 CFR Part 60, Subpart CG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(f) [G]§ 60.334(b)(3)	None	None
GRPTURB		EU	60CG-01	NOX	40 CFR Part 60, Subpart CG	§ 60.332(a)(1) § 60.332(a)(3)	No owner or operator shall discharge into the atmosphere from any stationary gas turbine, any gases which contain nitrogen oxides in excess of the amount as determined from the specified equation.	[G]§ 60.334(b) § 60.334(f) § 60.334(g)(1) [G]§ 60.334(f)(1)(ii) [G]§ 60.335(e) § 60.335(b)(2) § 60.335(b)(3) ** See CAM Summary	[G]§ 60.334(b)	§ 60.334(f) § 60.334(g)(5)

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CAM Summary

UNIT/GROUP/PROCESS INFORMATION	
ID No.: GRPTURB	Applicable Form: OP-UA11
Control Device ID No.: SCR	Control Device Type: SCR
APPLICABLE REGULATORY REQUIREMENT	
Name: 40 CFR Part 60, Subpart GG	SOP Index No.: 60GG-01
Pollutant: NO _x	Main Standard: § 60.332(a)(1)
MONITORING INFORMATION	
Indicator: Nitrogen Oxides Concentration	
Minimum Frequency: four times per hour	
Averaging Period: one hour	
Deviation Limit: Maximum NO _x concentration not to exceed value calculated by § 60.332(a)(1) or greater than 5 parts per million by dry, volume NO _x when corrected to 15 percent O ₂ .	
CAM Text: Use a continuous emissions monitoring system (CEMS) to measure and record the concentration of nitrogen oxides from the combustion turbine generator stack. The CEMS shall be operated in accordance with Special Condition No. 13 of New Source Review Permit 43890/PSDTX965.	

Periodic Monitoring Summary

UNIT/GROUP/PROCESS INFORMATION	
ID No.: GRPSTACK	Applicable Form: OP-UA15
Control Device ID No.: n/a	Control Device Type: n/a
APPLICABLE REGULATORY REQUIREMENT	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-01
Pollutant: OPACITY	Main Standard: § 111.111(a)(1)(C)
MONITORING INFORMATION	
Indicator: Fuel Type	
Minimum Frequency: Annually or at any time an alternate fuel is used.	
Averaging Period: n/a	
Deviation Limit: Use of alternative fuels (any fuel besides natural gas), and failure to keep annual records of fuel type.	
<p>Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, for a period greater than or equal to 24 consecutive hours it shall be considered and reported as a deviation or the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are observed. Any time an alternate fuel is fired for a period of greater than 7 consecutive days then visible emissions observations will be conducted no less than once per week. Documentation of all observations shall be maintained. If visible emissions are present during the firing of an alternate fuel, the permit holder shall either list this occurrence as a deviation or the permit holder may determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.</p>	

Permit Shield

Permit Shield29

Permit Shield

The Executive Director of the TCEQ has determined that the permit holder is not required to comply with the specific regulation(s) identified for each emission unit, group, or process in this table.

Unit/Group/Process		Regulation	Basis of Determination
ID No.	Group/Inclusive Units		
3RPCOOLTWR	COOL 1, COOL 2, COOL 3, COOL 4	40 CFR Part 63, Subpart Q	These cooling towers have never operated using chromium-based water treatment chemicals.
3MGEN	N/A	40 CFR Part 60, Subpart IIII	Emergency generator compression ignition internal combustion engine was not constructed after July 11, 2005, not manufactured after April 1, 2006, and no modification or reconstruction after July 11, 2005.
3MGEN	N/A	40 CFR Part 60, Subpart JJJJ	Not a Spark Ignition Internal Combustion Engine.
3MGEN	N/A	40 CFR Part 63, Subpart ZZZZ	An existing compression ignition stationary reciprocating internal combustion engine, as defined in 63.6590(a)(1)(iii), is not applicable to the requirements of MACT ZZZZ.
3WP	N/A	40 CFR Part 60, Subpart IIII	Construction prior to July 11, 2005 where the stationary CI ICE was manufactured as a certified National Fire Protection Association (NFPA) fire pump engine prior to July 1, 2006.
3WP	N/A	40 CFR Part 60, Subpart JJJJ	Not a Spark Ignition Internal Combustion Engine.
3WP	N/A	40 CFR Part 63, Subpart ZZZZ	An existing compression ignition stationary reciprocating internal combustion engine, as defined in 63.6590(a)(1)(iii), is not applicable to the requirements of MACT ZZZZ.
3RPTURB	STACK 1, STACK 2, STACK 3, STACK 4	40 CFR Part 60, Subpart KKKK	Stationary combustion turbines did not commence construction, modification or reconstruction after February 18, 2005.
3RPTURB	STACK 1, STACK 2, STACK 3, STACK 4	40 CFR Part 63, Subpart YYYY	The site is not a major source of HAP.

New Source Review Authorization References

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New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

PSD Permits	NA Permits
PSD Permit No.: PSDTX965	NA Permit No.:
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area	
Authorization No.: 43890	Authorization No.:
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.372	Version No./Date: 09/04/2000
Number: 106.373	Version No./Date: 09/04/2000
Number: 106.412	Version No./Date: 09/04/2000
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/01/2000
Number: 106.512	Version No./Date: 09/04/2000
Number: 106.532	Version No./Date: 09/04/2000
Municipal Solid Waste and Industrial Hazardous Waste Permits With an Air Addendum	
Permit No.:	Permit No.:

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
AUXBOIL1	NO. 1 AUXILIARY BOILER	43890,PSDTX965
COOL 1	NO.1 COOLING TOWER	43890,PSDTX965
COOL 2	NO. 2 COOLING TOWER	43890,PSDTX965
COOL 3	NO. 3 COOLING TOWER	43890,PSDTX965
COOL 4	NO. 4 COOLING TOWER	43890,PSDTX965
EMGEN	EMERGENCY GENERATOR	43890,PSDTX965
FWP	FIREWATER PUMP	43890,PSDTX965
HRSG1	NO. 1 DUCT BURNER	43890,PSDTX965
HRSG2	NO. 2 DUCT BURNER	43890,PSDTX965
HRSG3	NO. 3 DUCT BURNER	43890,PSDTX965
HRSG4	NO. 4 DUCT BURNER	43890,PSDTX965
STACK 1	NO. 1 COMBUSTION TURBINE STACK	43890,PSDTX965
STACK 1	NO.1 COMBUSTION TURBINE	43890,PSDTX965
STACK 2	NO. 2 COMBUSTION TURBINE	43890,PSDTX965
STACK 2	NO. 2 COMBUSTION TURBINE STACK	43890,PSDTX965
STACK 3	NO. 3 COMBUSTION TURBINE	43890,PSDTX965
STACK 3	NO. 3 COMBUSTION TURBINE STACK	43890,PSDTX965
STACK 4	NO. 4 COMBUSTION TURBINE	43890,PSDTX965
STACK 4	NO. 4 COMBUSTION TURBINE STACK	43890,PSDTX965

APPENDIX A

Acronym List.....34

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM	actual cubic feet per minute
AMOC	alternate means of control
ARP	Acid Rain Program
ASTM	American Society of Testing and Materials
B/PA	Beaumont/Port Arthur (nonattainment area)
CAM	Compliance Assurance Monitoring
CD	control device
COMS	continuous opacity monitoring system
CVS	closed-vent system
D/FW	Dallas/Fort Worth (nonattainment area)
DR	Designated Representative
EIP	El Paso (nonattainment area)
EP	emission point
EPA	U.S. Environmental Protection Agency
EU	emission unit
FCAA Amendments	Federal Clean Air Act Amendments
FOP	federal operating permit
GF	grandfathered
gr/100 scf	grains per 100 standard cubic feet
HAP	hazardous air pollutant
H/G	Houston/Galveston (nonattainment area)
H ₂ S	hydrogen sulfide
ID No.	identification number
lb/hr	pound(s) per hour
MMBtu/hr	Million British thermal units per hour
MRRT	monitoring, recordkeeping, reporting, and testing
NA	nonattainment
N/A	not applicable
NADB	National Allowance Data Base
NO _x	nitrogen oxides
NSPS	New Source Performance Standard (40 CFR Part 60)
NSR	New Source Review
ORIS	Office of Regulatory Information Systems
Pb	lead
PBR	Permit By Rule
PM	particulate matter
ppmv	parts per million by volume
PSD	prevention of significant deterioration
RO	Responsible Official
SO ₂	sulfur dioxide
TSP	total suspended particulate
TVP	true vapor pressure
U.S.C.	United States Code
VOC	Volatile organic compound



JACKSON WALKER L.L.P.
125 YEARS
ATTORNEYS & COUNSELORS

received

MAR 21 2014

Air Quality Division

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March 21, 2014

Via Email and Hand Delivery

Mr. Ron Hatlett
TCEQ Tax Relief for Pollution Control Property Program
MC 110
12100 Park 35 Circle, Building F, 4th Floor
Austin, Texas 78711-3087

Re: Response to Notice of Technical Deficiency
Cottonwood Energy Company, LP
Cottonwood Energy Center, Deweyville, Newton County, Texas
Regulated Entity No.: RN100226109
Customer No.: CN602765687
Application No. 15505, 16410, 16411 and 16412

Dear Mr. Hatlett:

On February 3, 2014, the Executive Director ("ED") of the Texas Commission on Environmental Quality ("TCEQ") issued a Notice of Technical Deficiency ("NOD") to Cottonwood Energy Company, LP ("Cottonwood" or "Applicant") regarding its application for a use determination for the heat recovery steam generators ("HRSGs") and enhanced steam turbines ("ESTs") located at its Cottonwood Energy Center. As part of this response to the NOD, Cottonwood is providing additional information in support of its original application. With the addition of the supplemental information provided in this response, the application is current.

Introduction

In the discussion that follows, Applicant provides a full response to the Executive Director's request for additional information while explaining how many of those requests reflect an interpretation that contradicts the letter and intent of the controlling provisions of the Texas Tax Code. As Applicant has consistently stated in prior filings and meetings, much work has been done to develop a consensus position among the group of current HRSG and EST applicants to provide the Executive Director with the tools and the technical support it needs to generate positive use determinations that comport with the Texas Tax Code and existing commission regulations.

Specifically, the Avoided Emissions and Clarified CAP Models that have been provided are the fruit of months of technical collaboration among applicants and reflect a significant compromise given the fact that several competitor power plants are not paying any property tax on HRSGs

due to 100% positive use determinations previously issued by the Commission. Thanks to this collaboration and compromise, the Executive Director has been given a clear path forward that can bring this almost 7-year old process to completion and, by so doing, establish a framework for handling future applications as energy efficiency, generally, and HRSGs and ESTs, in particular, continue to be central components of pollution control strategies within the electric power industry and beyond. While the Applicant appreciates the difficult task the Executive Director has in working through these applications, we respectfully request that the long-overdue use determinations be finalized as soon as possible and we trust that the legal and technical information provided below will help expedite that process.

Issue 1 – Texas Tax Code §§ 11.31(k) and (m)

A. The statutory definition of “facility, device, or method for the control of air, water, or land pollution” states that such property is used “to meet or exceed rules or regulations adopted by any environmental protection agency.”

While the ED’s interpretation of Texas Tax Code §§ 11.31(k) and (m) is not listed as a separate issue in Cottonwood’s NOD, this is a very important issue and warrants its own response from Cottonwood. As noted in its NOD, the ED interprets Texas Tax Code §§ 11.31(k) and (m) as “establishing an expedited review process and exempting an applicant from providing detailed information regarding the anticipated environmental benefit for property on the k-list.” However, the ED goes on to say that “[b]ecause Article VIII, Section 1-1, of the state constitution authorizes the exemption only for property used to meet or exceed an environmental rule, the Executive Director does not interpret Texas Tax Code § 11.31 subsection (m) as exempting §11.31(k)-listed property from the TCEQ’s review standards at Title 30 Texas Administrative Code (TAC) Chapter 17 or mandating the issuance of a positive use determination, when the property is not used, constructed, acquired or installed to meet or exceed an environmental rule.”

Section 11.31(a) provides that “A person is entitled to an exemption from taxation of all or part of real and personal property that the person owns and that is used wholly or partly as a facility, device, or method for the control of air, water, or land pollution.” Under this provision, if the property is used for the control of air, water of land pollution, it is eligible to receive a tax exemption.

The ED accurately notes that in addition to being property used for the control of air, water, or land pollution, that the property must also be used to meet or exceed an environmental regulation. What the ED refuses to recognize is that when the Legislature amended § 11.31 in 2007, by adding §11.31(k), the Legislature specifically defined the equipment listed in §11.31(k) as “facilities, devices, or methods for the control of air, water or land pollution.” This is not just some generic description, but mirrors the defined terms used in §§11.31(a) and (b) and specifically satisfies the requirement to meet or exceed an environmental regulation.

The term “facility, device, or method for the control of air, water, or land pollution” is defined in §11.31(b) as:

land that is acquired after January 1, 1994, or any structure, building, installation, excavation, machinery, equipment, or device, and any attachment or addition to or

reconstruction, replacement, or improvement of that property, that is used, constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, this state, or a political subdivision of this state for the prevention, monitoring, control, or reduction of air, water, or land pollution.

Therefore, if equipment is considered a facility, device, or method “for the control of air, water, or land pollution” then, *by definition*, it is used “to meet or exceed rules or regulations adopted by an environmental protection agency for the prevention, monitoring, control, or reduction of air, water, or land pollution.” There is no other way it can be interpreted. The fact that the Legislature specifically chose to define the items listed in 11.31(k) as “facilities, devices, or methods for the control of air, water, or land pollution” demonstrates that the Legislature had already determined that these items satisfy the requirement to meet or exceed an environmental regulation. Because the Legislature chose to describe this equipment using a statutorily defined term, that definition must be applied and the property must be considered to “meet or exceed rules or regulations adopted by any environmental protection agency . . . for the prevention, monitoring, control, or reduction of air, water, or land pollution.” The ED cannot simply choose to ignore this statutory definition.

Thus, when the Legislature states that heat recovery steam generators (“HRSGs”) and enhanced steam turbines (“ESTs”) are “facilities devices, or methods for the control of air, water, or land pollution,” the ED must treat them as that term is defined and recognize that they are used to meet or exceed an environmental regulation. If the ED continues to argue that there is no environmental regulation that HRSGs and ESTs meet or exceed, then the ED is willfully ignoring the statutory language. The ED has no such authority.

Finally, it is worth reiterating Chairman Shaw’s comments during the December 5, 2012 Agenda, in which he articulated the argument that equipment listed in § 11.31(k) are not required to provide an environmental citation based on the statutory language:

I can understand how one might read that subsections (m) and (k) and say well we don’t really have to cite the rules and regulations that are met or exceeded because of this because the legislature said the ED is going to determine that this, they shall determine that this is pollution control equipment, it’s just a matter of determining what proportion of that is. And so I think at a minimum, it’s problematic to suggest that negative use determination should be made because they failed to cite an applicable rule in light of that. I think that, it makes it difficult to square that with what the legislature was intending whenever they included that in the rule or in their legislation.

The order issued by the Commission remanded the applications back to the ED and allowed the ED to issue NODs to seek further information from the applicants, including information regarding environmental citations. However, the fact that the ED has the ability to request further information regarding environmental citations cannot be viewed as an opportunity to ignore the statutory definition of a “facility, device, or method for the control of air, water, or land pollution.”

B. ED's Reliance on Intent Is Misplaced

It has also become evident that the ED is reading an element of intent into the statute where none exists. The ED's position with regard to HRSGs and ESTs is that the applicants did not install this equipment for the environmental benefit it achieves, but for the additional electricity that this equipment can help generate. The position that the intent of the applicant governs whether the equipment is eligible for a tax exemption could be derived from one of two places: 1) Article VIII, Section 1-1 of the state constitution, which requires that eligible equipment must meet or exceed an environmental rule or regulation; or 2) Tax Code § 11.31(g)(3), which requires the Commission's rules to "allow for determinations that distinguish the proportion of property that is used to control, monitor, prevent, or reduce pollution from the proportion of property that is used to produce goods or services."

However, there is no provision in the statutory language that directs TCEQ to consider the property owner's intent when it installed the equipment in question. The fact that the equipment may also provide some production value is of no consequence as to whether the equipment is eligible for a positive use determination.

If the ED believes that they must consider the intent of the applicant based on the "meet or exceed" language, it is clear this requirement has been satisfied through the statutory definition of "facility, device, or method for the control of air, water, or land pollution." When the Legislature applied this defined term to the equipment listed in 11.31(k), any concern about the intent of the applicant was rendered moot.

We have previously cited to the letter from Rep. Rick Hardcastle, the author of HB 3732, which specifically states:

pollution control benefits can be derived from the manner in which fuel is prepared and used, and from increasing the efficiency of certain facilities. By doing so, the amount of fuel needed and the total amount of pollution emitted can be reduced. I did not intend, nor do I support, an interpretation of anything in HB 3732 to prevent electric generating facilities from receiving exemptions for equipment simply because they also derive profit from a given piece of equipment or process. If it reduces pollution, it qualifies. (emphasis added).¹

Furthermore, during the December 5, 2012 Agenda, Commissioner Baker noted:

...In this letter from the author that says specifically that "3732...[was not intended] to prevent electric-generating facilities from receiving exemptions for equipment simply because they also derive profit from any given piece of equipment or process." It basically says if it reduces pollution it qualifies. And so, I have a really hard time sort of ignoring what the will of the author, who seems to be very clear in sort of what he was thinking when the bill was written

¹ Letter from Rep. Rick Hardcastle to Grace Montgomery, Deputy Director of Administrative Services at the TCEQ, August 1, 2007 (emphasis added).

and passed, and sort of just setting that aside because of the economic benefit gain from the installation of a HRSG.

The ED's position regarding the applicant's intent could be based on a misinterpretation of 11.31(c)(3) which directs applicants to provide, among other things, "the purpose of the installation of such facility, device, or method, and the proportion of the installation that is pollution control property." Here the applicant must describe the operational purpose of the equipment, but the ED's job is to make an objective evaluation of the percentage of the equipment that serves a pollution control function and the percentage of the equipment that serves a productive function. This language does not provide the ED with authority to determine the eligibility of the equipment for a tax exemption based on the applicant's intent in installing such equipment.

Whatever the ED's view is of what *should be* considered in evaluating these applications cannot take precedence over what is *required* by the statute. Nowhere does the statute state that the ED should consider the intent of the applicant in installing the equipment; instead, the ED must make a matter of fact assessment – "If it reduces pollution, it qualifies."

Issue 2 - Review of Environmental Rule Citations

While Cottonwood does not agree that an environmental citation is required for those items listed in § 11.31(k), in an effort to comply with the ED's request, we have provided a number of environmental citations that are exceeded by the installation of the HRSGs and ESTs. The ED considers each of the listed citations to be insufficient "to establish a clear connection between the listed equipment and the cited rules." The ED requests that we "provide an explanation of how the equipment is used to meet a requirement in the [cited] rule."

Before explaining how the HRSGs and ESTs provide reductions in nitrogen oxide ("NO_x") emissions, it is worth noting that the ED's request that Applicant provide an explanation of how equipment is used to meet a requirement of the cited rule substantively differs from the statutory requirement that the equipment meets or exceeds an environmental rule. The Commission has previously recognized that "[t]he term 'exceed' is interpreted to include voluntary projects which go beyond the minimum requirements of environmental laws, rules, or regulations, provided that the projects are initiated pursuant to or in compliance with an adopted or enacted law, rule, or regulation."² Thus, even if an environmental rule does not specifically call for the installation of a HRSG, if a HRSG assists in reducing pollution beyond the minimum requirements of that rule, then it exceeds the environmental rule and is eligible for a positive use determination.

Furthermore, an environmental rule regarding NO_x emissions can be exceeded not only by achieving greater emissions reductions than is required by the rule, but also by proactively complying with or exceeding the requirements of an adopted or enacted rule that the facility will have to comply with in the future. Even if the facility is not yet required to comply with a particular rule, if an applicant voluntarily complies with or exceeds the requirements of an adopted or enacted rule, then it meets the statutory requirements as well as the Commission's stated position of what it means to exceed a rule.

² 19 Tex. Reg. 7737, 7793 (Sept. 30, 1994).

A. NSPS

One of the reasons that the interpretation of the term “exceeds” is so important with regard to HRSGs and ESTs, is that the applicability of the EPA’s New Source Performance Standards (“NSPS”) for steam generating units and combustion turbines is based on the heat input for a particular facility and the timeframe in which it was constructed or modified. For example, a gas turbine with a heat input at peak load that is greater than 10 MMBtu per hour, which was constructed after February 18, 2005 is subject to the requirements in 40 CFR 60, Subpart KKKK. On the other hand, if the exact same type of plant particular plant was constructed in 2004, the gas turbine would be subject to 40 CFR 60, Subpart GG (“NSPS GG”) and any associated HRSGs which use duct burners would be subject to either 40 CFR 60 Subpart Da (“NSPS Da”) or 40 CFR 60, Subpart Db (“NSPS Db”). The only difference between the two plants is the time in which it was constructed. However, the environmental benefit of reduced emissions per megawatt/hr produced that is provided by the HRSGs and ESTs at both plants is the same.

Cottonwood is subject to NSPS GG and NSPS Da, as it was not constructed or modified after February 18, 2005. NSPS GG and NSPS Da both provide concentration-based NO_x emission limits. Admittedly HRSGs and ESTs do not change a facility’s ability to meet or exceed a concentration-based emission limit. HRSGs and ESTs do, however, help a facility comply with an output-based emission limit by improving the overall efficiency of the plant. Output based emissions limits are based on the amount of pollution produced per unit of useful output.

Subpart KKKK, on the other hand, does provide an output based emissions limit. Subpart KKKK applies to the emissions from the gas turbine, as well as any associated HRSGs and duct burners. Furthermore, the TCEQ recently adopted a Permit By Rule (PBR) for Natural Gas-Fired Combined Heat and Power Units.³ In the preamble to the adoption of the Combined Heat and Power (CHP) PBR, the TCEQ states, “The Commission acknowledges the benefits and advantages of CHP as a means of providing efficient, reliable, and clean energy.” As part of that PBR, TCEQ specifically provided that the emission limits for stationary natural gas engines would be measured in terms of air contaminant emissions per unit of total energy output.⁴ HRSGs are recognized as a typical industrial CHP application. The fact that the TCEQ recognizes the pollution control benefits of this type of equipment in its permitting program should be given weight when evaluating the Executive Director’s arguments in this case that similar equipment does not have pollution control benefits.

The ED’s NOD states:

NSPS Subpart KKKK pertains to stationary combustion turbines which commenced construction, modification, or reconstruction after February 18, 2005. When air permit 43890 was amended August 20, 2012, NPS Subpart KKKK was not identified as an applicable NSPS. The applicable NSPS Subparts were Da for the duct burners, GG for the gas turbines, and Dc for the auxiliary boiler. As previously stated, an applicant cannot claim eligibility for a positive use

³ 30 TAC §106.513; 37 Tex.Reg. 6037-6049, August 10, 2012.

⁴ 30 TAC §106.513(d).

determination based on a exceeding a rule that the applicant is not required to meet.

It is worth noting that those facilities that have not triggered NSPS KKKK because they were constructed or last modified prior to February 18, 2005 still provide the exact same environmental benefit and emission reductions that facilities constructed or modified after February 18, 2005 provide. The same environmental benefits and emissions reductions that have been recognized by the Commission.

Cottonwood contends that it is wholly unreasonable for the Commission to treat a plant which was constructed prior to 2005 as ineligible for a pollution control tax exemption because it was not subject to an output based emission standard, even though it provided the same emissions reductions and the same environmental benefits that the same plant built in 2005 provides. Any facility constructed prior to February 18, 2005 that employs HRSGs and ESTs meets the Commission's definition of "exceed" as it is a "voluntary project" which goes "beyond the minimum requirements of environmental laws, rules, or regulations" that is "in compliance with an adopted or enacted law, rule, or regulation [i.e., NSPS KKKK]."

The ED's position would ignore the environmental benefit that the Commission has explicitly acknowledged that these facilities provide. We find it hard to believe that the Commission would choose to provide a market incentive to some, but not all, facilities that install the exact same pollution control equipment while ignoring the environmental benefit that older facilities have been providing for a longer period of time. In a seemingly ironic twist, under the ED's current position, those facilities that have provided the greatest amount of pollution prevention are the facilities that will be left without a positive use determination.

If, however, the ED wishes to distinguish between plants that provide the exact same environmental benefit based on the date which the facility commenced construction, there are other regulatory programs that the ED has previously recognized as appropriate citations that are applicable in this matter. The Commission has previously issued positive use determinations to dozens of applicants who have cited to the Clean Air Interstate Rule ("CAIR") and the National Ambient Air Quality Standards ("NAAQS") as the environmental rule that is being met or exceeded by the use of the pollution control property. The "Tax Relief for Pollution Control Property: Technical Review Document" for applications citing to the CAIR and NAAQS regulations indicates that these applications "cites valid rules."

B. CAIR

The ED has noted that "CAIR is a cap and trade program that allocates allowances to all electric generating units. Please explain how a Heat Recovery Steam generator (HRSG) is required to meet a CAIR requirement." Under CAIR the EPA has established a model NO_x trading program, where the EPA provides emission "allowances" for NO_x to each state, according to the state budget. The states will allocate those allowances to sources (or other entities), which can trade them. As a result, sources are able to choose from many compliance alternatives, including: installing pollution control equipment; switching fuels; buying excess allowances from other sources that have reduced their emissions, or investing in energy efficient processes that reduce emissions. Through the use of a HRSG and EST, Applicant is able achieve the desired megawatt

production, while limiting NO_x emissions. Without its HRSGs and ESTs, Applicant would be unable to produce the same amount of power without producing more NO_x emissions that would cause it to exceed its NO_x emissions allocations under CAIR.

C. NAAQS

Similarly, the ED has also dismissed NAAQS as an applicable environmental regulation. When any applicant submits an air quality permit application to the TCEQ, it must be able to demonstrate that the proposed facility will not cause or contribute to an exceedance of the NAAQS for any of the criteria pollutants, including NO_x. When Applicant was deciding what type of natural gas facility to construct, it had a certain megawatt production in mind. The desired megawatt production could be achieved either by constructing simple cycle facilities or combined cycle facilities. Both types of facilities would have to demonstrate compliance with the NAAQS. A combined cycle facility, through the use of HRSGs, has significantly reduced fuel consumption and thereby lower total NO_x emissions. Therefore, even if both facilities could demonstrate compliance with the NAAQS, the decision to expend more capital and construct a more energy efficient combined cycle facility that reduces NO_x emissions exceeds the NAAQS requirement and improves air quality.

D. BACT

The ED states that its review of the construction and amendment air permit applications "did not disclose any representation of the HRSGs providing pollution control. . . It is not appropriate to revise a BACT analysis in order to justify a property tax exemption." Applicant does not disagree with the ED's assertion that HRSGs were not specifically identified as a BACT requirement in its permit applications. However, the fact that HRSGs are actually used to reduce exhaust temperature in order to improve the operation of the SCR systems, which is a BACT requirement, demonstrates that HRSGs are used to meet an environmental rule.

The ED could argue that SCR systems do not require HRSGs to reduce exhaust temperature and that other means are available to achieve the desired temperature reduction. However, such an argument would again fail to apply the appropriate statutory requirement. The statute does not require applicants to demonstrate that the equipment is required to meet a requirement of an environmental rule; it merely states that eligible property must be used to meet or exceed an environmental rule. In this case, the HRSGs are used in order to assist in meeting the BACT requirements, by cooling the exhaust prior to passing through the SCR, in order to reduce NO_x emissions.

The ED has also rejected the position that GHG BACT requirements are a sufficient regulatory citation because Applicant is not yet required to meet those regulations. The ED's position fails to recognize that an environmental rule that limits emissions can be exceeded not only by achieving greater emissions reductions than is required by the rule, but also through "voluntary projects which go beyond the minimum requirements of environmental laws, rules, or regulations, provided that the projects are initiated pursuant to or in compliance with an adopted or enacted law, rule, or regulation." Even if the facility is not yet required to comply with a particular rule, if an applicant voluntarily complies with or exceeds the requirements of an

adopted or enacted rule, then it meets the statutory requirements as well as the Commission's stated position of what it means to exceed a rule.

The most effective means to reduce the amount of CO₂ generated by a fuel-burning power plant is to use efficient generating technologies and processes to meet the plant's required power output. The equipment itself, heat recovery system generators, enhanced steam turbines, and related ancillary equipment capture and recirculate heat that would otherwise be vented to the atmosphere, which results in more electricity being produced per unit of fuel input.

In its GHG BACT Guidance Document, the EPA states, "Considering the most energy efficient technologies in the BACT analysis helps reduce the products of combustion, which includes not only GHGs but other regulated NSR pollutants (e.g. NO_x, SO₂, PM/PM₁₀/PM_{2.5}, CO etc.). Thus, it is also important to emphasize that energy efficiency should be considered in BACT determinations for all regulated NSR pollutants (not just GHGs)."⁵ The fact that output-based emission reductions have been so clearly identified by the EPA as a preferred method of compliance with BACT for a wide range of pollutants should end any debate about whether a sufficient regulatory basis exists to conclude that HRSGs qualify as pollution control property.

By reducing output based emissions of GHGs and other pollutants in this manner, this equipment is clearly eligible for Prop. 2 consideration without the need for any further discussion of whether and to what extent existing NO_x regulations independently establish that eligibility.

Issue 3 – Calculation of an Appropriate Partial Positive Use Determination

A. CAP Calculations / CCN: Steam Turbines and Dedicated Ancillary Equipment

To clarify, only two (2) of the three (3) proposed CAP calculations presented in Applicant's June 2013 supplemental application and NOD response include the cost of the steam turbine and dedicated ancillary equipment costs within CCN. Although Cottonwood does not agree with the regulatory interpretations reflected in the CAP instructions provided in the NOD, in an effort to fully comply with the ED staff request, Cottonwood has applied the CAP as prescribed in the NOD (see Table 1 below). The fact that equipment which the Legislature has explicitly recognized is pollution control property and which the Commission has previously described as "a means of providing efficient, reliable, and clean energy" somehow generates a use determination of negative 749.4% demonstrates how flawed the ED's CAP is.

Table 1 in Attachment B of the June 2013 NOD response summarizes this requested CAP Model's inputs and the resulting CAP Model outcome. As noted in the Table, CCN is defined as the Cost of the Facility HRSGs only. For reference, we have provided this Table again below with no changes to the version submitted in June 2013.

⁵ EPA, *PSD and Title V Permitting Guidance for Greenhouse Gases*, p. 21 (March 2011).

Table 1: Results of CAP Model Using TCEQ Variable Assumptions

	TCEQ CAP Model Variable Assumption	TCEQ CAP Model Inputs	TCEQ CAP Model Output
1	Production Capacity Factor (PCF): Calculated by dividing the capacity of the existing equipment or process by the capacity of the new equipment or process.	PCF = 0; undefined Capacity of Existing Equipment = 0 MW Capacity of New Equipment/Process = 156 MW	-
2	Capital Cost New (CCN): Cost of HRSGs ONLY	CCN = \$ 23,260,694	-
3	Capital Cost Old (CCO): Cost of a boiler(s) required to produce the same amount of steam produced by the HRSGs.	CCO = \$ 27,590,022 See developed assumption for CCO in attached model.	-
4	Net Present Value of the Marketable Product (NPVMP): The net present value of the marketable product recovered for the expected lifetime of the property, calculated using the equation in §17.17(c)(2) 1. If steam is used to generate electricity that is sold to external parties or used on site, then the value of the marketable product is considered the value of electricity sold or used on site as a result of the steam generated by the HRSG. For 1 above, the thermal power of steam generated by the facility is converted into electrical power. Using steam tables and basic thermodynamic equations, the thermal power of the steam can be determined.	Substituted actual steam turbine net generation in Megawatt-Hours for the 2005-2007 period[1]	N/A
5	Production Cost (PC): Itemized costs directly attributed to the operation of the HRSG excluding non-cash costs, such as overhead and depreciation and excluding costs related to operating the gas turbine, associated duct burners, or the steam turbine including fuel costs.	HRSG-Only O&M: \$ 238,266 (NOTE: No Fuel Costs Included)	
6	Interest Rate:	10%; Use in current CAP Model	Assumed
7	n: Estimated Useful Life in years of the HRSG	Use 20 year useful life, Assumed	Assumed
8	ALL Assumptions Above	All	-749.4%

NOTE: (Capital Cost New = HRSG Capital Costs only in Line 2 above)

Applicant disagrees with the ED that the steam turbine and other dedicated equipment costs included in our additional two (2) CAP Model scenarios provided in the June 2013 supplemental application and NOD response should be removed from the CCN. Without these Balance-of-Plant equipment installations, HRSGs would not and could not produce a byproduct or marketable product. That is, no electricity or steam could be produced, measured and sold through the installation and use of Facility HRSGs. If required to remove the steam turbine and other dedicated equipment costs from the two additional CAP Model scenarios' CCN variable

assumptions, then one should also eliminate any Marketable Product Value (revenue) estimated for any byproduct or marketable product within the CAP Model. Such revenue could not be generated by the HRSG equipment alone; this equipment must be installed within a total productive plant configuration.

As discussed in detail later in this response, Applicant's two (2) additional CAP Model scenarios incorporate Production Cost variable assumptions that include O&M costs associated with the steam turbine and other dedicated equipment. Such equipment is essential to the HRSG's functions - both in the contribution to pollution control and production output - and, therefore, such O&M costs should be included in the Production Cost and Net Present Value of Marketable Product ("NPVMP") calculations within these CAP Model alternatives.

B. CAP Calculations / CCO: CCO = Zero or CCO = Ductwork/Spool Piece

30 TAC §17.2(2) provide a definition of the CAP Model variable Capital Cost Old (or "CCO") as follows:

The cost of the equipment that is being or has been replaced by the equipment covered in an application. The value of this variable in the cost analysis procedure is calculated using one of the four hierarchal methods for this variable in the figure in §17.17(b)(1) of this title (relating to Partial Determinations).

Conversely, CCO is defined in 30 TAC §17.17(c)(1), Note 3, as:

...the cost of comparable equipment or process without the pollution control....

30 TAC §17.17(c)(1), Note 3, goes on further to provide four (4) calculation methods for CCO.

These two definitions of CCO are very different. The former definition would require that the HRSG be a replacement or a partial replacement of existing equipment.

Such an event is represented in the CAP Model scenario provided in Applicant's June 2013 supplemental application and NOD response in which CCO equals the cost of ductwork or a "spool piece". In this case, the HRSG's installation in a combined-cycle retrofit of an existing simple-cycle facility represents the upgrade or retrofit of a simple-cycle combustion turbine ("CT") configuration. Specifically, it would require the replacement of that section of ductwork between the Facility's CT(s) and stack(s). Further, the 30 TAC §17.2(2) definition of CCO, when applied to units originally constructed in a combined cycle configuration, would be zero (0), since no equipment is being replaced.

In the definition of CCO in 30 TAC §17.17(c)(1), Note 3, comparable equipment or process without the pollution control feature would be considered. Sub notes 3.2 and 3.3 to this section consider a replacement scenario that would revert to the 30 TAC §17.2(2) definition of CCO. Sub notes 3.1 and 3.4 require that a HRSG without the pollution control benefits actually exist, which is not the case. The pollution control benefits are inherent in the HRSG design, where heat from the combustion turbine is utilized to create efficiencies and, as a consequence, reduce emissions from power generation.

Further, a natural gas boiler could not be considered as a "comparable equipment or process," as suggested in the NOD. Such a natural gas boiler would not be installed in a combined cycle configuration with a combustion turbine and would, therefore, *not* be replaced by a HRSG, per 30 TAC §17.2(2) and 30 TAC §17.17(c)(1), Note 3. Additionally, a natural gas boiler is not comparable equipment because a boiler can self-generate heat to create steam, while the HRSG is incapable of creating its own heat for steam and/or electric generation.

Finally, Applicant disagrees that allowing CCO to be \$0 or the cost of ductwork/spool pieces represents a determination that the HRSG was installed for the sole purpose of preventing pollution. Indicating CCO is \$0 or cost of ductwork/spool pieces simply means that no equipment is being replaced by the HRSG. Subtracting the NPVMP from the cost of the HRSG (CCN) accounts for the production benefits of the HRSG, and any further deduction would be superfluous.

C. CAP Calculations – Production Costs

Applicant disagrees that Production Costs in the CAP should exclude costs related to operating the gas turbine, including fuel, or the steam turbine and dedicated equipment. As described in the CCN discussion above, the steam turbine and dedicated equipment are essential to production of a byproduct or marketable product from the HRSG. If the use determination calculation is going to use the value of the marketable product generated by the HRSG, it must also take into account the equipment and costs associated with producing that marketable product.

Operating & Maintenance ("O&M") costs associated with the steam turbine and dedicated equipment are necessary for the operation of these systems and their contribution to the manufacture of steam and/or electricity by the HRSG, and should be included in the Production Cost and NPVMP calculations within the CAP Model scenarios.

O&M costs and fuel costs related to the gas turbine and/or duct burners are also essential to producing a byproduct or marketable product from the HRSG. While the HRSG uses waste heat, such a heat source is not "free" and must be generated through combustion of natural gas within the combustion turbine. The TCEQ's allowance of the duct burner O&M and fuel costs to be included in Production Costs is correct, but such allowance accounts only for a small fraction of the heat needed to generate the byproduct and/or marketable product.

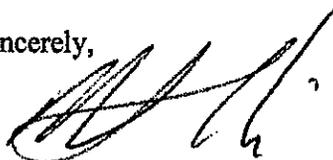
Finally, by updating the Production Cost assumptions used in the "CAP Model Using TCEQ Variable Assumptions" scenario with the inclusion of the Fuel Costs associated with the HRSGs' duct burners, the results of this CAP Model scenario are still a large negative percentage, at negative 339.99%. A copy of the revised "CAP Model Using TCEQ Variable Assumptions" incorporating the duct burner fuel costs is attached.

In summary, it is unreasonable for the Executive Director to interpret its regulations and apply its CAP model in a way that generates significantly negative percentages for equipment which the Legislature took pains to specifically list as pollution control equipment. Put simply, the Executive Director has tools to do this job, but it needs to liberate itself from narrow views of the CAP that prevent it from doing the job the Legislature has told it to do.

Conclusion

The ED's position that HRSGs and ESTs are not eligible for a positive use determination because they do not meet or exceed an environmental rule is based on a misapplication of the controlling statute. Texas Tax Code specifically describes the equipment listed in §11.31(k) as "facilities, devices, or methods for the control of air, water or land pollution." This term "facility, device, or method for the control of air, water, or land pollution" is defined in the statute to mean equipment that is "installed wholly or partly to meet or exceed [environmental] rules." The ED's current position fails to recognize the importance of these statutory definitions and does not comply with the controlling statute. Even so, Applicant has provided multiple examples of environmental rules that the HRSGs and ESTs help meet or exceed - rules that the Commission has expressly recognized as "valid rules" in multiple positive use determinations. Finally, Applicant has provided the ED with more than enough technical support to understand and rely upon the Avoided Emissions and Clarified CAP Models. Applicant looks forward to a timely completion of the Executive Director's technical review and the issuance of a well-reasoned and technically supportable partial positive use determination. We stand ready to discuss the information provided to help expedite that process.

Sincerely,



Michael J. Nasi

cc: Chance Goodin, TCEQ Air Quality Division

Via Email

<< CONFIDENTIAL >>

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 1
Plant Summary: 1,280 MW sM Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: March 21, 2014
Rev: 7

Source Legend	Source	Eff. Date
C	Calculated Assumption	6/17/2013
CW	Cottonwood Client-Provided Data	4/23/2013
HH	Henry Hub Hub Natural Gas Pricing	6/17/2013
SERC	SERC Electricity Pricing	6/17/2013
D&P	D&P Combined Cycle Cost Database	6/17/2013
30 TAC	30 TAC Chapter 17	12/13/2010

I. Assumptions

Plant Design Profile

	Source
PC Property	CW
PC Property Capital Cost	\$ 23,250,694
PC Property Cost (\$/kW)	\$ 149
PC Property Capacity (MW)	156
PC Property Net Annual Generation Capacity (kWht)	658,209,619
PC Property Net Annual Generation Capacity (MWh)	558,210
Plant Capacity Factor	40.85%
Plant Heat Rate (lb/kWh)	7,467
Plant Heat Rate (MMBTU/kWh)	0.01
Capital Cost OIR ("CCO")	D&P
Comparable Technology Cost	\$ 27,550,022
Design Technology	NG Fired Boiler
Design Capacity Factor	0.00%
Capacity ("MW")	

Conversion Factors

Hours/Year	8,760
KWh/MWh	1,000
lb/kg	2.20
s/hour	3,600
h/minute	1,090,000

Economic Assumptions

	Source
NPV/MW Discount Rate	10.0%
NPV/MW Interest Rate	10.0%
Periods	20
PC Property Annual O&M Cost (\$)	\$ 238,266
Fuel Cost (\$/MMBTU) ⁽¹⁾	\$ 3.70
SERC Electricity Pricing (\$/MWh) ⁽¹⁾	\$ 31.30

⁽¹⁾ 3-year average daily historical gas pricing for Henry Hub, 2006-2010

⁽²⁾ 3-year average daily historical electricity rates for SERC, 2006-2010

<< CONFIDENTIAL >>

Transmitter: Cottonwood Energy Company, LP
Plant Name: Cottonwood Energy Plant
Plant Location: Newton County, Texas
Date: March 24, 2014
Rev:

II. Cost Analysis Procedure (CAP)

$$\text{Formula: } \frac{[(PCF \times CCN) + (CCO - NPV)/IP]}{CCN}$$

B. CAP Formula (provided by TCEQ)

Where:
 Annual Capacity Factor (ACF) = Production Capacity of Existing Equipment or Production
 Production Capacity of New Equipment or Process
 NPV = Net Present Value
 IP = Interest Rate

C. CAP Formula for PC Property

Where:
 Annual Capacity Factor (ACF) = Production Capacity of Existing Equipment or Production
 Production Capacity of New Equipment or Process
 NPV = Net Present Value
 IP = Interest Rate

A. Definitions (provided by TCEQ)

- Production Capacity Factor (PCF): The ratio of the capacity of the new equipment or process to the capacity of the existing equipment or process.
- Net Present Value (NPV): The sum of the present values of all cash flows over the life of the investment, discounted at the cost of capital rate.
- Interest Rate (IP): The rate of return required to justify the investment.
- Annual Capacity Factor (ACF): The ratio of the capacity of the new equipment or process to the capacity of the existing equipment or process.
- Production Capacity of Existing Equipment or Process (PCEN): The capacity of the existing equipment or process.
- Production Capacity of New Equipment or Process (PCNN): The capacity of the new equipment or process.
- Net Present Value (NPV): The sum of the present values of all cash flows over the life of the investment, discounted at the cost of capital rate.
- Interest Rate (IP): The rate of return required to justify the investment.

1. If the conditions in variables 3.1, 3.2 and 3.3 do not apply, and the company can obtain an estimate to manufacture the alternative equipment without the pollution control feature, then an average estimate cost to manufacture the unit must be used. The comparison unit must be the most recent generation of technology. A copy of the estimate must be provided with the worksheet including the specific source of the information.

2. If the material is used as an intermediate material in a particular process, then the value assigned to the material for internal accounting purposes may be based on the recoverability of the material to other parts of the plant. The internally assigned value is comparable to the value assigned to other similar products at the project.

3. The net value of the product produced by the equipment for one year period. Typically, the project recent three-year average price of the material as used in the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average price for the state where the figures were determined.

4. The net value of the product produced by the equipment for one year period. Typically, the project recent three-year average price of the material as used in the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average price for the state where the figures were determined.

5. The net value of the product produced by the equipment for one year period. Typically, the project recent three-year average price of the material as used in the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average price for the state where the figures were determined.

6. The net value of the product produced by the equipment for one year period. Typically, the project recent three-year average price of the material as used in the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average price for the state where the figures were determined.

7. The net value of the product produced by the equipment for one year period. Typically, the project recent three-year average price of the material as used in the market should be used in the calculation. If the price varies from state-to-state, the applicant shall calculate an average price for the state where the figures were determined.

<< CONFIDENTIAL >>

Taxpayer: Cottonwood Energy Company, LP
Plant: Cottonwood Energy Center - Unit 1
Plant Summary: 1,260 MW 4x4 Configuration Combined Cycle Power Plant (2003)
Plant Location: Newton County, Texas
Project: Tier III Cost Analysis Procedure ("CAP") Calculations
Date: March 21, 2014
Rev: 7

III. Cost Analysis Procedure ("CAP") Calculations for Cottonwood Unit 1 HRSG

A. Marketable Product Value ("MPV")

$$\text{Electricity Price} \frac{\$}{\text{MWh}} \times \frac{\text{PC MWh}}{\text{Year}} = (\text{\$}) \text{ MPV}$$

$$\$31.30 \frac{\$}{\text{MWh}} \times \frac{598,210 \text{ MWh}}{\text{Year}} = \$17,472,601$$

B. Production Cost ("PC")

$$\text{Annual O\&M Cost} + \text{Duct Burner Fuel Costs} = \text{Annual Production Cost (\$)}$$

$$\$238,266 + \$11,185,771 = \$11,424,037$$

Formula:
$$\frac{(\text{PC} \times \text{CON}) - \text{CCO} - \text{NPVMP}}{\text{CON}}$$

Net Present Value Marketable Product ("NPVMP") Calculation

$$\sum_{t=1}^n \frac{(\$) \text{ MPV}}{(1 + \text{Interest Rate})^t} - \frac{(\$) \text{ PC}}{(1 + 10\%)^0} = \text{NPVMP (\$)}$$

$$\sum_{t=1}^n \frac{\$17,472,601}{(1 + 10\%)^t} - \frac{\$11,424,037}{(1 + 10\%)^0} = \$51,494,860$$

¹ If MP is < 0, then MP = 0

<< CONFIDENTIAL >>

Taxpayer: Cottonwood Energy Company, LP
 Plant: Cottonwood Energy Center - Unit 1
 Plant Summary: 1,260 MW x4 Configuration Combined Cycle Power Plant (2003)
 Plant Location: Newton County, Texas
 Project: Tier III Cost Analysis Procedure ("CAP") Calculations
 Date: March 21, 2014
 Rev: 7

C. Production Capacity Factor ("PCF")

Production Capacity of Existing Equipment or Process
 Production Capacity of New Equipment or Process
 156 MW * 40.85%

PCF = 0.000

D. Capital Cost New ("CCN")

PC Property = \$23,260,694

E. Capital Cost Old ("CCO")

Comparable Technology = \$27,590,022

Partial Use Determination Calculation

$$\frac{(PCF \times CCN)}{CCN} = \frac{0.000 \times \$23,260,694}{\$23,260,694} = \frac{\$0}{\$23,260,694} = 0.000\%$$

TCEQ Use Determination Application Section 12, use:
 Use Percentage: 339.59%
 Estimated Dollar Value: \$ 23,260,694

Eligible HRSG Costs
 (Partial Use Determination % x PC Property Cost)

\$ (74,964,840)

<< CONFIDENTIAL >>

Electricity - PV Calculations

Difference	Period	Interest Rate	PV - Period
\$6,048,565	1	1.10	\$ 5,498,695
\$6,048,565	2	1.21	\$ 4,998,814
\$6,048,565	3	1.331	\$ 4,544,376
\$6,048,565	4	1.4641	\$ 4,131,251
\$6,048,565	5	1.61051	\$ 3,755,683
\$6,048,565	6	1.771561	\$ 3,414,257
\$6,048,565	7	1.9487171	\$ 3,103,870
\$6,048,565	8	2.14358881	\$ 2,821,700
\$6,048,565	9	2.357947691	\$ 2,565,182
\$6,048,565	10	2.59374246	\$ 2,331,983
\$6,048,565	11	2.853116706	\$ 2,119,985
\$6,048,565	12	3.138428377	\$ 1,927,259
\$6,048,565	13	3.452271214	\$ 1,752,054
\$6,048,565	14	3.797498336	\$ 1,592,776
\$6,048,565	15	4.177248169	\$ 1,447,978
\$6,048,565	16	4.594972986	\$ 1,316,344
\$6,048,565	17	5.054470285	\$ 1,196,676
\$6,048,565	18	5.559917313	\$ 1,087,888
\$6,048,565	19	6.115909045	\$ 988,989
\$6,048,565	20	6.727499949	\$ 899,081
NPVMP:			\$ 51,494,840

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 6, 2014

Ms. Kathryn Tronsberg Macciocca
Director
Duff & Phelps, LLC
2000 Market Street, Ste 2700
Philadelphia, PA 19103

Re: Notice of Negative Use Determination
Cottonwood Energy Company, LP
Cottonwood Energy Center Unit 1
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Numbers: 15505
Tracking Numbers: CC-2011-48

Dear Ms. Macciocca:

This letter responds to Cottonwood Energy Company, LP's Application for Use Determination for the Cottonwood Energy Center Unit 1, originally submitted on July 5, 2011 and remanded to the executive director (ED) on December 5, 2012 by the Texas Commission on Environmental Quality (TCEQ) commissioners. Your Tier III application seeks a use determination for a Heat Recovery Steam Generator (HRSG) and dedicated ancillary systems.

The ED has completed the review for application #15505 and the associated notice of deficiency (NOD) responses and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) Chapter 17. The Negative Use Determination is issued for the following reasons: 1) the ED cannot find that the property is used, constructed, acquired, or installed wholly or partly to meet or exceed any cited laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas for the prevention, monitoring, control, or reduction of air, water, or land pollution; and 2) even if there were an applicable law cited in the application for the subject property, the ED does not find your methods for determining the use determination percentage to be reasonable.

Commission rule at 30 TAC §17.10(d) requires an applicant to cite to a specific law, rule, or regulation that is being met or exceeded by the use, construction, acquisition, or installation of the pollution control property. As specified in 30 TAC §17.4(a) and authorized by Article VIII, § 1-1, of the Texas Constitution, for a property to be eligible for an exemption from ad valorem taxation, all or part of property must be used,

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constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision for the prevention, monitoring, control, or reduction of air, water, or land pollution. Commission rules do not allow an applicant to omit the requirement to cite a specific environmental law even for property that is specified on the list of property in Texas Tax Code §11.31(k).

The ED does not require a citation to a law or rule that mandates the installation of a specific type of equipment. However, the ED does not find that the HRSG is used to meet or exceed any of the environmental laws that were cited in your application. While the application and responses provided numerous rule citations, none were to rules that the HRSG was required to meet. Therefore, the HRSG does not meet the applicability requirements of 30 TAC §17.4(a) to be eligible for exemption from ad valorem taxation.

After careful review of the three methods for calculating a partial positive use determination included in the applicant's submittals, the ED has determined that all but one of the methods are unacceptable. The two methods proposed by the applicant do not reasonably distinguish the proportion of the HRSG and dedicated ancillary systems that provides a purported pollution control benefit from the proportion of the HRSG and dedicated ancillary systems that produces steam that is used in a process or to produce electricity for use or sale. The one method that the ED does find acceptable, the Cost Analysis Procedure (CAP) adopted by the commission, produces a negative number. Therefore, the property is not eligible for a positive use determination.

The following is an explanation of the ED's review of the methodologies presented in your application:

- **Modified CAP Calculation (87%):** Capital Cost New (CCN) includes dedicated ancillary systems. Allowing Capital Cost Old (CCO) to be equal a spool piece ignores that HRSGs are alternative production equipment. CCO is the cost of comparable equipment without the pollution control. If the HRSGs produce steam, then comparable equipment that produces steam without pollution control is a boiler. The ED does not find it reasonable to equate CCO to a spool piece.
- **Modified CAP Calculation (87%):** Capital Cost New (CCN) includes dedicated ancillary systems. Allowing Capital Cost Old (CCO) to be \$0 ignores that HRSGs are alternative production equipment. CCO is the cost of comparable equipment without the pollution control. If the HRSGs produce steam, then comparable equipment that produces steam without pollution control is a boiler. The ED does not find it reasonable to attribute \$0 cost to CCO in the CAP.
- **CAP as proposed by the executive director (-340%):** The CAP formula was adopted by the commission to provide a methodology for determinations that distinguishes the proportion of property that is used to control, monitor, prevent, or reduce pollution from the proportion of property that is used to produce goods

Ms. Kathryn Tronsberg Macciocca
June 5, 2014
Page 3

or services. The fact that the CAP calculated results in a negative number shows that the HRSG's and dedicated ancillary equipment's pollution prevention benefit is negated by its ability to produce a product.

Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at ronald.hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,



David Brymer, Director
Air Quality Division

DB/rh

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St., Newton,
Texas, 75966-3202



Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 5, 2014

Ms. Kathryn Tronsberg Macciocca
Director
Duff & Phelps, LLC
2000 Market Street, Ste 2700
Philadelphia, PA 19103

Re: Notice of Negative Use Determination
Cottonwood Energy Company, LP
Cottonwood Energy Center Unit 2
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Numbers: 16412
Tracking Numbers: CC-2012-02

Dear Ms. Macciocca:

This letter responds to Cottonwood Energy Company, LP's Application for Use Determination for the Cottonwood Energy Center Unit 2, originally submitted on December 2, 2011 and remanded to the executive director (ED) on December 5, 2012 by the Texas Commission on Environmental Quality (TCEQ) commissioners. Your Tier III application seeks a use determination for a Heat Recovery Steam Generator (HRSG) and dedicated ancillary systems.

The ED has completed the review for application #16412 and the associated notice of deficiency (NOD) responses and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) Chapter 17. The Negative Use Determination is issued for the following reasons: 1) the ED cannot find that the property is used, constructed, acquired, or installed wholly or partly to meet or exceed any cited laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas for the prevention, monitoring, control, or reduction of air, water, or land pollution; and 2) even if there were an applicable law cited in the application for the subject property, the ED does not find your methods for determining the use determination percentage to be reasonable.

Commission rule at 30 TAC §17.10(d) requires an applicant to cite to a specific law, rule, or regulation that is being met or exceeded by the use, construction, acquisition, or installation of the pollution control property. As specified in 30 TAC §17.4(a) and authorized by Article VIII, § 1-1, of the Texas Constitution, for a property to be eligible for an exemption from ad valorem taxation, all or part of property must be used,

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Ms. Kathryn Tronsberg Macciocca

June 5, 2014

Page 2

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The ED does not require a citation to a law or rule that mandates the installation of a specific type of equipment. However, the ED does not find that the HRSG is used to meet or exceed any of the environmental laws that were cited in your application. While the application and responses provided numerous rule citations, none were to rules that the HRSG was required to meet. Therefore, the HRSG does not meet the applicability requirements of 30 TAC §17.4(a) to be eligible for exemption from ad valorem taxation.

After careful review of the three methods for calculating a partial positive use determination included in the applicant's submittals, the ED has determined that all but one of the methods are unacceptable. The two methods proposed by the applicant do not reasonably distinguish the proportion of the HRSG and dedicated ancillary systems that provides a purported pollution control benefit from the proportion of the HRSG and dedicated ancillary systems that produces steam that is used in a process or to produce electricity for use or sale. The one method that the ED does find acceptable, the Cost Analysis Procedure (CAP) adopted by the commission, produces a negative number. Therefore, the property is not eligible for a positive use determination.

The following is an explanation of the ED's review of the methodologies presented in your application:

- Modified CAP Calculation (87%): Capital Cost New (CCN) includes dedicated ancillary systems. Allowing Capital Cost Old (CCO) to be equal a spool piece ignores that HRSGs are alternative production equipment. CCO is the cost of comparable equipment without the pollution control. If the HRSGs produce steam, then comparable equipment that produces steam without pollution control is a boiler. The ED does not find it reasonable to equate CCO to a spool piece.
- Modified CAP Calculation (87%): Capital Cost New (CCN) includes dedicated ancillary systems. Allowing Capital Cost Old (CCO) to be \$0 ignores that HRSGs are alternative production equipment. CCO is the cost of comparable equipment without the pollution control. If the HRSGs produce steam, then comparable equipment that produces steam without pollution control is a boiler. The ED does not find it reasonable to attribute \$0 cost to CCO in the CAP.
- CAP as proposed by the executive director (-340%): The CAP formula was adopted by the commission to provide a methodology for determinations that distinguishes the proportion of property that is used to control, monitor, prevent, or reduce pollution from the proportion of property that is used to produce goods

Ms. Kathryn Tronsberg Macciocca
June 5, 2014
Page 3

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Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at ronald.hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

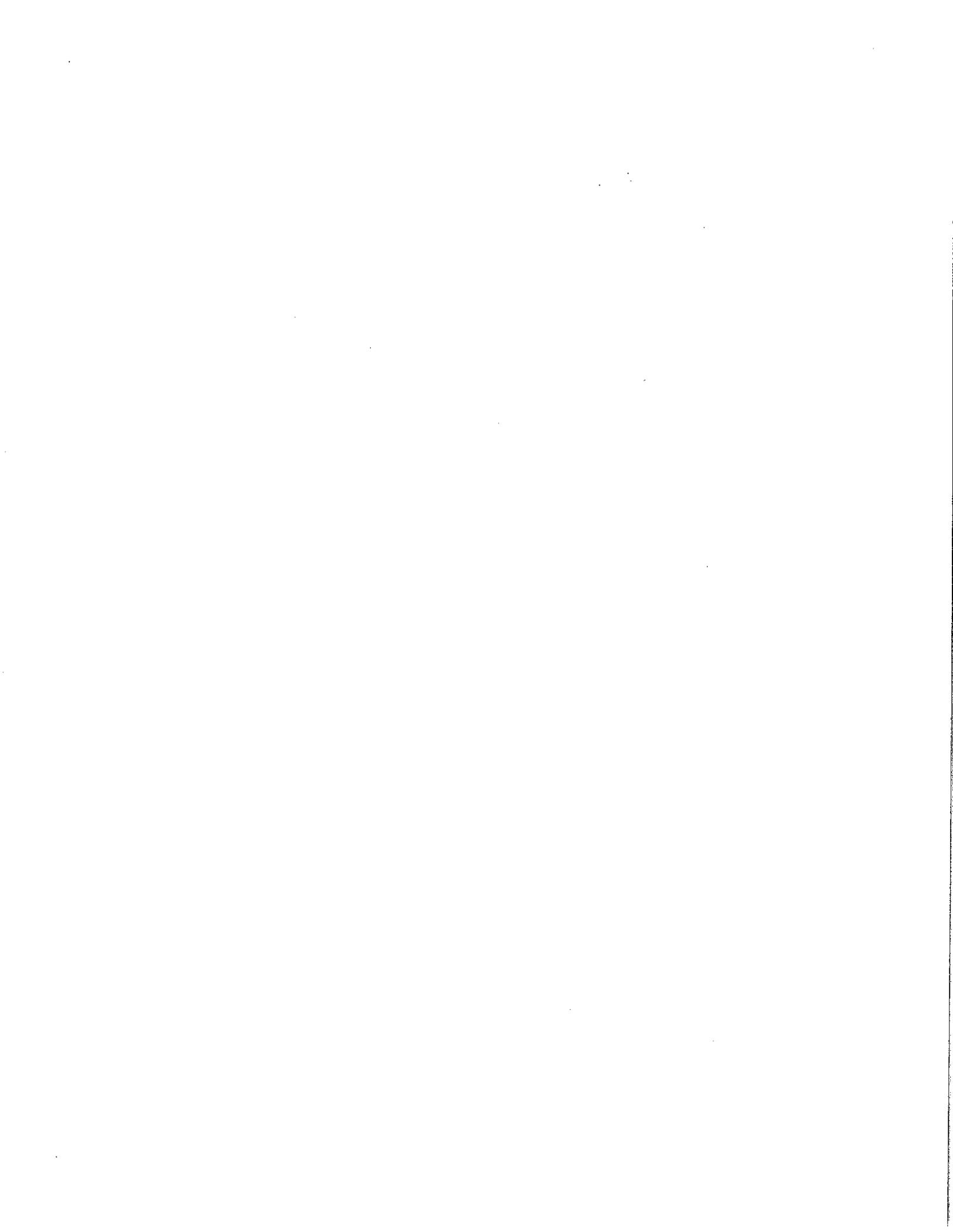
Sincerely,



David Brymer, Director
Air Quality Division

DB/rh

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St., Newton,
Texas, 75966-3202



Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 5, 2014

Ms. Kathryn Tronsberg Macciocca
Director
Duff & Phelps, LLC
2000 Market Street, Ste 2700
Philadelphia, PA 19103

Re: Notice of Negative Use Determination
Cottonwood Energy Company, LP
Cottonwood Energy Center Unit 3
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Numbers: 16411
Tracking Numbers: CC-2012-03

Dear Ms. Macciocca:

This letter responds to Cottonwood Energy Company, LP's Application for Use Determination for the Cottonwood Energy Center Unit 3, originally submitted on December 2, 2011 and remanded to the executive director (ED) on December 5, 2012 by the Texas Commission on Environmental Quality (TCEQ) commissioners. Your Tier III application seeks a use determination for a Heat Recovery Steam Generator (HRSG) and dedicated ancillary systems.

The ED has completed the review for application #16411 and the associated notice of deficiency (NOD) responses and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) Chapter 17. The Negative Use Determination is issued for the following reasons; 1) the ED cannot find that the property is used, constructed, acquired, or installed wholly or partly to meet or exceed any cited laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas for the prevention, monitoring, control, or reduction of air, water, or land pollution; and 2) even if there were an applicable law cited in the application for the subject property, the ED does not find your methods for determining the use determination percentage to be reasonable.

Commission rule at 30 TAC §17.10(d) requires an applicant to cite to a specific law, rule, or regulation that is being met or exceeded by the use, construction, acquisition, or installation of the pollution control property. As specified in 30 TAC §17.4(a) and authorized by Article VIII, § 1-1, of the Texas Constitution, for a property to be eligible for an exemption from ad valorem taxation, all or part of property must be used,

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Ms. Kathryn Tronsberg Macciocca
June 5, 2014
Page 3

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Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at ronald.hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,



David Brymer, Director
Air Quality Division

DB/rh

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St., Newton,
Texas, 75966-3202



Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 5, 2014

Ms. Kathryn Tronsberg Macciocca
Director
Duff & Phelps, LLC
2000 Market Street, Ste 2700
Philadelphia, PA 19103

Re: Notice of Negative Use Determination
Cottonwood Energy Company, LP
Cottonwood Energy Center Unit 4
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Numbers: 16410
Tracking Numbers: CC-2012-04

Dear Ms. Macciocca:

This letter responds to Cottonwood Energy Company, LP's Application for Use Determination for the Cottonwood Energy Center Unit 4, originally submitted on December 2, 2011 and remanded to the executive director (ED) on December 5, 2012 by the Texas Commission on Environmental Quality (TCEQ) commissioners. Your Tier III application seeks a use determination for a Heat Recovery Steam Generator (HRSG) and dedicated ancillary systems.

The ED has completed the review for application #16410 and the associated notice of deficiency (NOD) responses and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) Chapter 17. The Negative Use Determination is issued for the following reasons: 1) the ED cannot find that the property is used, constructed, acquired, or installed wholly or partly to meet or exceed any cited laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas for the prevention, monitoring, control, or reduction of air, water, or land pollution; and 2) even if there were an applicable law cited in the application for the subject property, the ED does not find your methods for determining the use determination percentage to be reasonable.

Commission rule at 30 TAC §17.10(d) requires an applicant to cite to a specific law, rule, or regulation that is being met or exceeded by the use, construction, acquisition, or installation of the pollution control property. As specified in 30 TAC §17.4(a) and authorized by Article VIII, § 1-1, of the Texas Constitution, for a property to be eligible for an exemption from ad valorem taxation, all or part of property must be used,

constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision for the prevention, monitoring, control, or reduction of air, water, or land pollution. Commission rules do not allow an applicant to omit the requirement to cite a specific environmental law even for property that is specified on the list of property in Texas Tax Code §11.31(k).

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After careful review of the three methods for calculating a partial positive use determination included in the applicant's submittals, the ED has determined that all but one of the methods are unacceptable. The two methods proposed by the applicant do not reasonably distinguish the proportion of the HRSG and dedicated ancillary systems that provides a purported pollution control benefit from the proportion of the HRSG and dedicated ancillary systems that produces steam that is used in a process or to produce electricity for use or sale. The one method that the ED does find acceptable, the Cost Analysis Procedure (CAP) adopted by the commission, produces a negative number. Therefore, the property is not eligible for a positive use determination.

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- **Modified CAP Calculation (87%):** Capital Cost New (CCN) includes dedicated ancillary systems. Allowing Capital Cost Old (CCO) to be equal a spool piece ignores that HRSGs are alternative production equipment. CCO is the cost of comparable equipment without the pollution control. If the HRSGs produce steam, then comparable equipment that produces steam without pollution control is a boiler. The ED does not find it reasonable to equate CCO to a spool piece.
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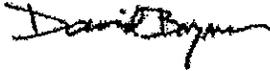
Ms. Kathryn Tronsberg Macciocca
June 5, 2014
Page 3

or services. The fact that the CAP calculated results in a negative number shows that the HRSG's and dedicated ancillary equipment's pollution prevention benefit is negated by its ability to produce a product.

Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at ronald.hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

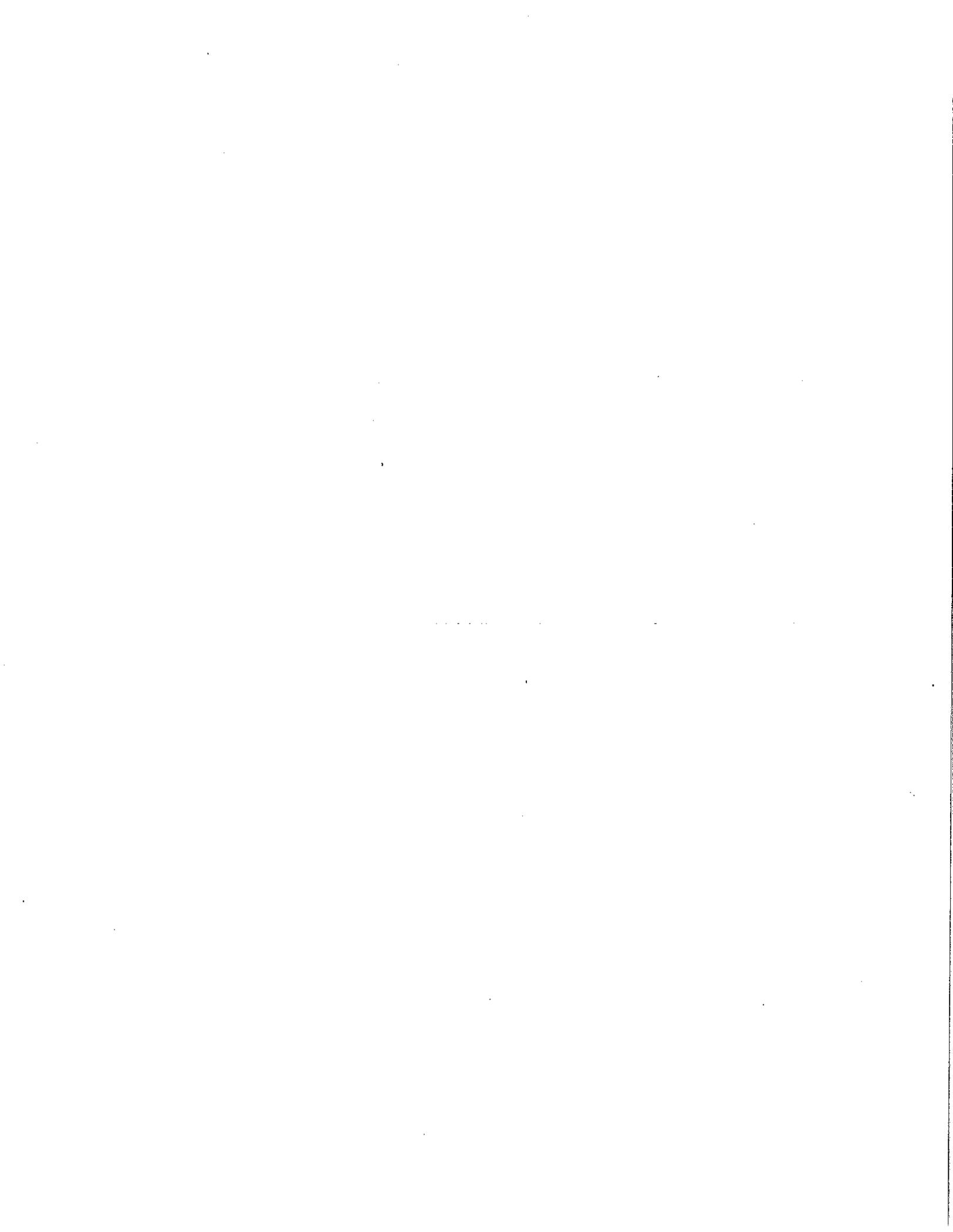
Sincerely,



David Brymer, Director
Air Quality Division

DB/rh

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St., Newton,
Texas, 75966-3202



Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 17, 2014

Ms. Kathryn Tronsberg Macciocca
Director
Duff & Phelps, LLC
2000 Market Street, Ste 2700
Philadelphia, PA 19103

Re: Notice of Negative Use Determination
Cottonwood Energy Company, LP
Cottonwood Energy Center Unit 1
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Numbers: 15505
Tracking Numbers: CC-2011-48

Dear Ms. Macciocca:

This letter responds to Cottonwood Energy Company, LP's Application for Use Determination for the Cottonwood Energy Center Unit 1, originally submitted on July 5, 2011 and remanded to the executive director (ED) on December 5, 2012 by the Texas Commission on Environmental Quality (TCEQ) commissioners. Your Tier III application seeks a use determination for a Heat Recovery Steam Generator (HRSG) and dedicated ancillary systems.

The ED has completed the review for application #15505 and the associated notice of deficiency (NOD) responses and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) Chapter 17. The Negative Use Determination is issued for the following reasons: 1) the ED cannot find that the property is used, constructed, acquired, or installed wholly or partly to meet or exceed any cited laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas for the prevention, monitoring, control, or reduction of air, water, or land pollution; and 2) even if there were an applicable law cited in the application for the subject property, the ED does not find your methods for determining the use determination percentage to be reasonable.

Commission rule at 30 TAC §17.10(d) requires an applicant to cite to a specific law, rule, or regulation that is being met or exceeded by the use, construction, acquisition, or installation of the pollution control property. As specified in 30 TAC §17.4(a) and authorized by Article VIII, § 1-1, of the Texas Constitution, for a property to be eligible for an exemption from ad valorem taxation, all or part of property must be used,

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constructed, acquired, or installed wholly or partly to meet or exceed rules or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision for the prevention, monitoring, control, or reduction of air, water, or land pollution. Commission rules do not allow an applicant to omit the requirement to cite a specific environmental law even for property that is specified on the list of property in Texas Tax Code §11.31(k).

The ED does not require a citation to a law or rule that mandates the installation of a specific type of equipment. However, the ED does not find that the HRSG is used to meet or exceed any of the environmental laws that were cited in your application. While the application and responses provided numerous rule citations, none were to rules that the HRSG was required to meet. Therefore, the HRSG does not meet the applicability requirements of 30 TAC §17.4(a) to be eligible for exemption from ad valorem taxation.

After careful review of the three methods for calculating a partial positive use determination included in the applicant's submittals, the ED has determined that all but one of the methods are unacceptable. The two methods proposed by the applicant do not reasonably distinguish the proportion of the HRSG and dedicated ancillary systems that provides a purported pollution control benefit from the proportion of the HRSG and dedicated ancillary systems that produces steam that is used in a process or to produce electricity for use or sale. The one method that the ED does find acceptable, the Cost Analysis Procedure (CAP) adopted by the commission, produces a negative number. Therefore, the property is not eligible for a positive use determination.

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Ms. Kathryn Tronsberg Macciocca

June 17, 2014

Page 3

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Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at ronald.hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,



David Brymer, Director
Air Quality Division

DB/rh

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St., Newton,
Texas, 75966-3202

Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 17, 2014

Ms. Kathryn Tronsberg Macciocca
Director
Duff & Phelps, LLC
2000 Market Street, Ste 2700
Philadelphia, PA 19103

Re: Notice of Negative Use Determination
Cottonwood Energy Company, LP
Cottonwood Energy Center Unit 2
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Numbers: 16412
Tracking Numbers: CC-2012-02

Dear Ms. Macciocca:

This letter responds to Cottonwood Energy Company, LP's Application for Use Determination for the Cottonwood Energy Center Unit 2, originally submitted on December 2, 2011 and remanded to the executive director (ED) on December 5, 2012 by the Texas Commission on Environmental Quality (TCEQ) commissioners. Your Tier III application seeks a use determination for a Heat Recovery Steam Generator (HRSG) and dedicated ancillary systems.

The ED has completed the review for application #16412 and the associated notice of deficiency (NOD) responses and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) Chapter 17. The Negative Use Determination is issued for the following reasons: 1) the ED cannot find that the property is used, constructed, acquired, or installed wholly or partly to meet or exceed any cited laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas for the prevention, monitoring, control, or reduction of air, water, or land pollution; and 2) even if there were an applicable law cited in the application for the subject property, the ED does not find your methods for determining the use determination percentage to be reasonable.

Commission rule at 30 TAC §17.10(d) requires an applicant to cite to a specific law, rule, or regulation that is being met or exceeded by the use, construction, acquisition, or installation of the pollution control property. As specified in 30 TAC §17.4(a) and authorized by Article VIII, § 1-1, of the Texas Constitution, for a property to be eligible for an exemption from ad valorem taxation, all or part of property must be used,

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The ED does not require a citation to a law or rule that mandates the installation of a specific type of equipment. However, the ED does not find that the HRSG is used to meet or exceed any of the environmental laws that were cited in your application. While the application and responses provided numerous rule citations, none were to rules that the HRSG was required to meet. Therefore, the HRSG does not meet the applicability requirements of 30 TAC §17.4(a) to be eligible for exemption from ad valorem taxation.

After careful review of the three methods for calculating a partial positive use determination included in the applicant's submittals, the ED has determined that all but one of the methods are unacceptable. The two methods proposed by the applicant do not reasonably distinguish the proportion of the HRSG and dedicated ancillary systems that provides a purported pollution control benefit from the proportion of the HRSG and dedicated ancillary systems that produces steam that is used in a process or to produce electricity for use or sale. The one method that the ED does find acceptable, the Cost Analysis Procedure (CAP) adopted by the commission, produces a negative number. Therefore, the property is not eligible for a positive use determination.

The following is an explanation of the ED's review of the methodologies presented in your application:

- **Modified CAP Calculation (87%):** Capital Cost New (CCN) includes dedicated ancillary systems. Allowing Capital Cost Old (CCO) to be equal a spool piece ignores that HRSGs are alternative production equipment. CCO is the cost of comparable equipment without the pollution control. If the HRSGs produce steam, then comparable equipment that produces steam without pollution control is a boiler. The ED does not find it reasonable to equate CCO to a spool piece.
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Ms. Kathryn Tronsberg Macciocca

June 17, 2014

Page 3

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Please be advised that a Negative Use Determination may be appealed. The appeal must be filed with the TCEQ Chief Clerk within 20 days after the receipt of this letter in accordance with 30 TAC §17.25.

If you have questions regarding this letter or need further assistance, please contact Ronald Hatlett of the Tax Relief for Pollution Control Property Program by telephone at (512) 239-6348, by e-mail at ronald.hatlett@tceq.texas.gov, or write to the Texas Commission on Environmental Quality, Tax Relief for Pollution Control Property Program, MC-110, P.O. Box 13087, Austin, Texas 78711-3087.

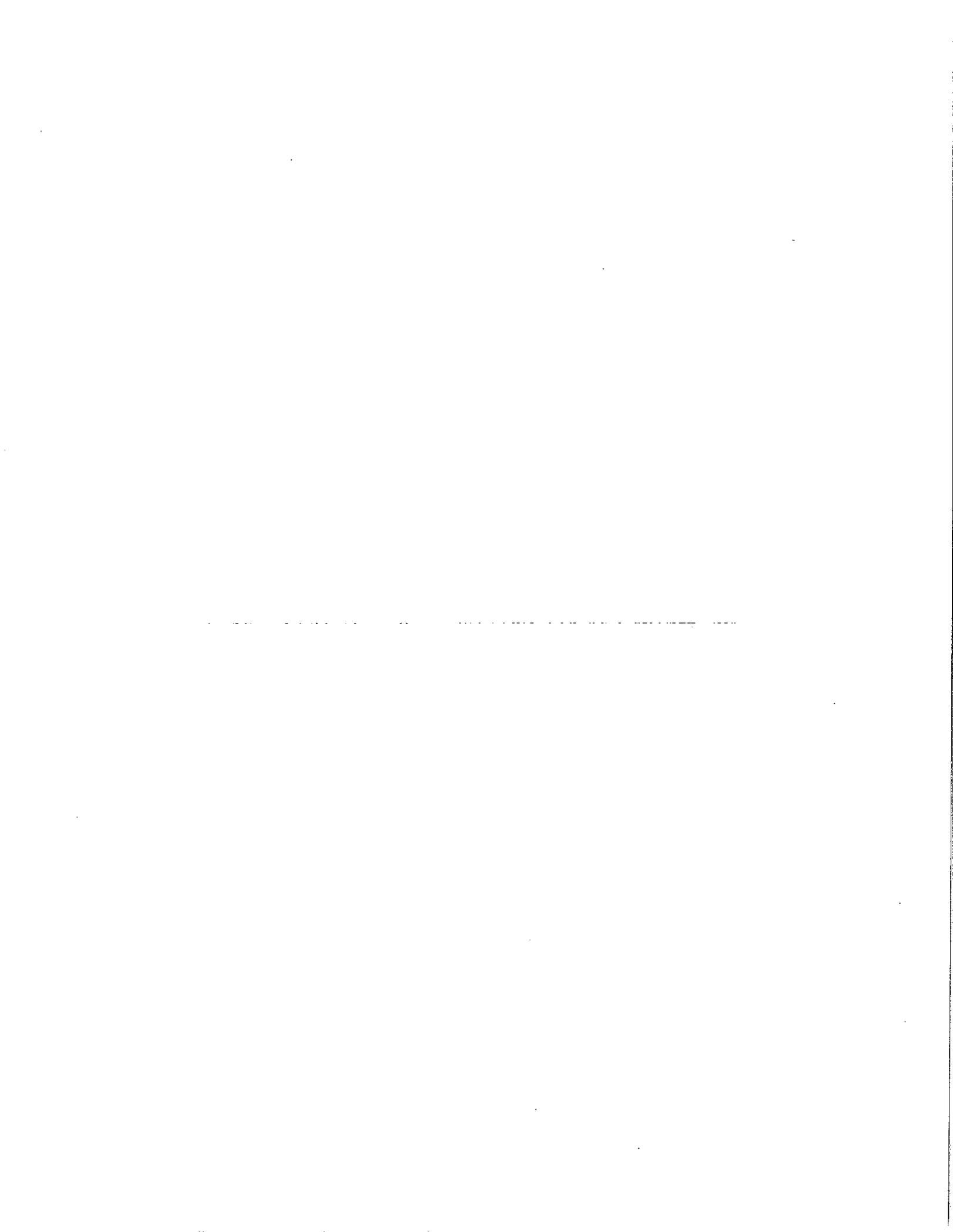
Sincerely,



David Brymer, Director
Air Quality Division

DB/rh

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St., Newton,
Texas, 75966-3202



Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 17, 2014

Ms. Kathryn Tronsberg Macciocca
Director
Duff & Phelps, LLC
2000 Market Street, Ste 2700
Philadelphia, PA 19103

Re: Notice of Negative Use Determination
Cottonwood Energy Company, LP
Cottonwood Energy Center Unit 3
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Numbers: 16411
Tracking Numbers: CC-2012-03

Dear Ms. Macciocca:

This letter responds to Cottonwood Energy Company, LP's Application for Use Determination for the Cottonwood Energy Center Unit 3, originally submitted on December 2, 2011 and remanded to the executive director (ED) on December 5, 2012 by the Texas Commission on Environmental Quality (TCEQ) commissioners. Your Tier III application seeks a use determination for a Heat Recovery Steam Generator (HRSG) and dedicated ancillary systems.

The ED has completed the review for application #16411 and the associated notice of deficiency (NOD) responses and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) Chapter 17. The Negative Use Determination is issued for the following reasons: 1) the ED cannot find that the property is used, constructed, acquired, or installed wholly or partly to meet or exceed any cited laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas for the prevention, monitoring, control, or reduction of air, water, or land pollution; and 2) even if there were an applicable law cited in the application for the subject property, the ED does not find your methods for determining the use determination percentage to be reasonable.

Commission rule at 30 TAC §17.10(d) requires an applicant to cite to a specific law, rule, or regulation that is being met or exceeded by the use, construction, acquisition, or installation of the pollution control property. As specified in 30 TAC §17.4(a) and authorized by Article VIII, § 1-l, of the Texas Constitution, for a property to be eligible for an exemption from ad valorem taxation, all or part of property must be used,

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Ms. Kathryn Tronsberg Macciocca

June 17, 2014

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Ms. Kathryn Tronsberg Macciocca
June 17, 2014
Page 3

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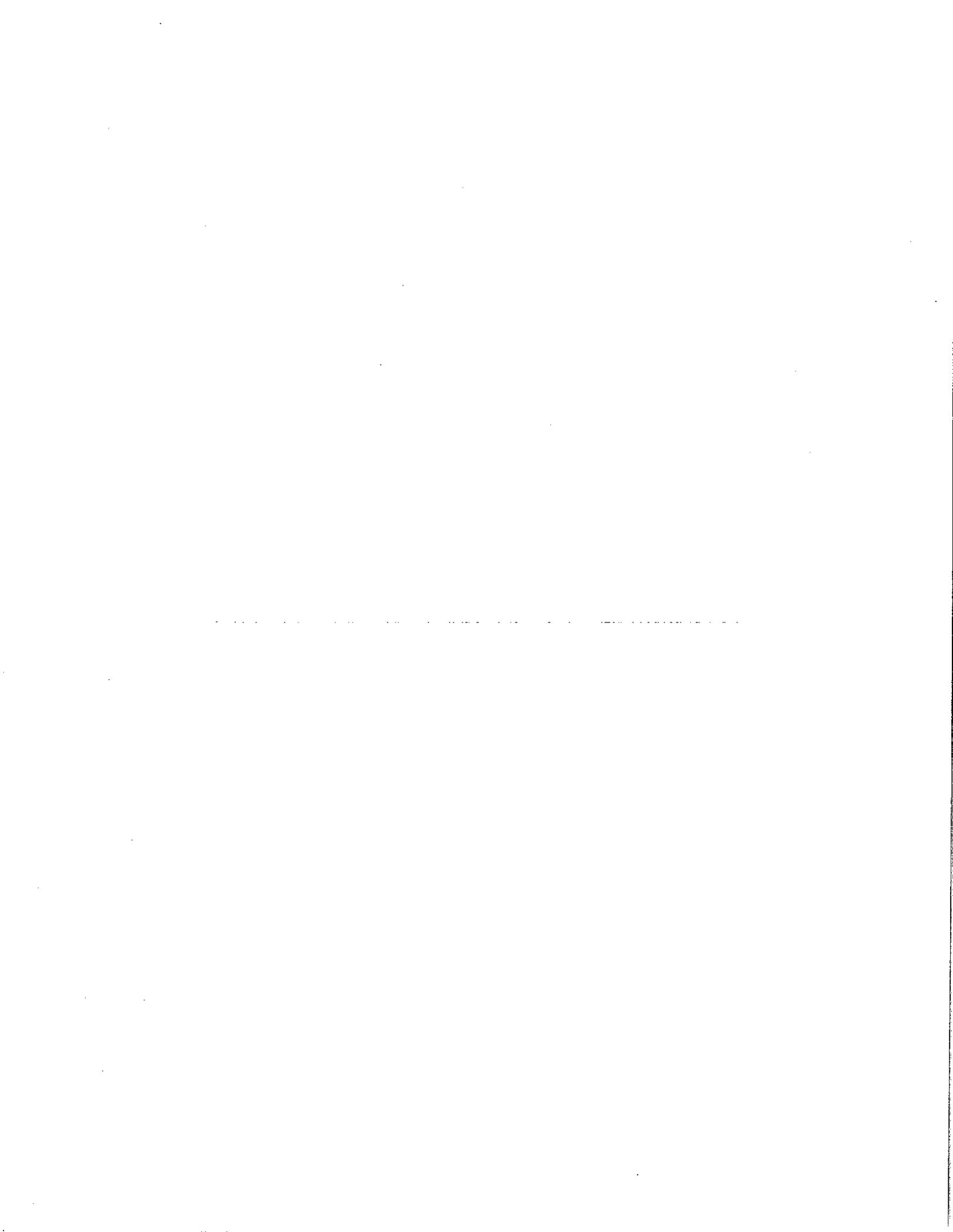
Sincerely,



David Brymer, Director
Air Quality Division

DB/rh

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St., Newton,
Texas, 75966-3202



Bryan W. Shaw, Ph.D., P.E., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Commissioner*
Richard A. Hyde, P.E., *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 17, 2014

Ms. Kathryn Tronsberg Macciocca
Director
Duff & Phelps, LLC
2000 Market Street, Ste 2700
Philadelphia, PA 19103

Re: Notice of Negative Use Determination
Cottonwood Energy Company, LP
Cottonwood Energy Center Unit 4
Deweyville (Newton County)
Regulated Entity Number: RN100226109
Customer Reference Number: CN602765687
Application Numbers: 16410
Tracking Numbers: CC-2012-04

Dear Ms. Macciocca:

This letter responds to Cottonwood Energy Company, LP's Application for Use Determination for the Cottonwood Energy Center Unit 4, originally submitted on December 2, 2011 and remanded to the executive director (ED) on December 5, 2012 by the Texas Commission on Environmental Quality (TCEQ) commissioners. Your Tier III application seeks a use determination for a Heat Recovery Steam Generator (HRSG) and dedicated ancillary systems.

The ED has completed the review for application #16410 and the associated notice of deficiency (NOD) responses and has issued a Negative Use Determination for the property in accordance with Title 30 Texas Administrative Code (TAC) Chapter 17. The Negative Use Determination is issued for the following reasons: 1) the ED cannot find that the property is used, constructed, acquired, or installed wholly or partly to meet or exceed any cited laws, rules, or regulations adopted by any environmental protection agency of the United States, Texas, or a political subdivision of Texas for the prevention, monitoring, control, or reduction of air, water, or land pollution; and 2) even if there were an applicable law cited in the application for the subject property, the ED does not find your methods for determining the use determination percentage to be reasonable.

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Ms. Kathryn Tronsberg Macciocca

June 17, 2014

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Ms. Kathryn Tronsberg Macciocca

June 17, 2014

Page 3

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Sincerely,



David Brymer, Director
Air Quality Division

DB/rh

cc: Chief Appraiser, Newton County Appraisal District, 109 Court St., Newton,
Texas, 75966-3202

