



**BRAZOS
ELECTRIC
COOPERATIVE**

BRAZOS ELECTRIC POWER COOPERATIVE, INC.
2404 LaSalle Ave. • PO Box 2585
Waco, Texas 76702-2585
Phone: (254) 750-6500
Fax: (254) 750-6292

SENT FEDERAL EXPRESS

TCEQ
Chief Clerk's Office
MC 105
PO Box 13087
Austin, Texas 78711-3087

**RE: Brazos Electric Power Cooperative, Inc.
Johnson County Generation Facility
CN600128821 / RN100223312
Account No. JH-0230-L
Permit No. 25384 / PSD-TX-839
FOP No. O-00543
Filing of Appeal for - Application for Use Determination for Pollution Control
Property Application # 13544**

Brazos Electric Power Cooperative, Inc. ("BEPC") on July 12, 2012 received a "Notice of Negative Use Determination" for the application number listed above. This letter is being submitted as a formal appeal to the negative use determination. The following information is provided, as required in section 30 Tex. Admin. Code § 17.25(b)(1-5), in support of BEPC's appeal:

1. Mike Meyers
Brazos Electric Power Cooperative, Inc.
Manager, Environmental Services
2404 LaSalle Ave.
Waco, Texas 76706
Day Time Phone#: (254) 750-6228

2. Brazos Electric Power Cooperative, Inc.
Johnson County Generation Facility
831 Sparks Drive
Cleburne, Texas 76033

3. Application # 13544

4. BEPC respectfully requests Commission reconsideration of the negative use determination issued on July 10, 2012, and received by BEPC on July 12, 2012.

5. BEPC respectfully submits the following as its basis for appeal:

2012 AUG -1 PM 3:20
CHIEF CLERKS OFFICE
TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

Without citing specific authority, the Texas Commission on Environmental Quality (hereafter the "TCEQ" or "Commission") Executive Director issued a negative use determination to Brazos Electric Power Cooperative, Inc. ("BEPC") on July 10, 2012, regarding Use Determination Application No. 13544.

The TCEQ Executive Director reasoned, "Heat recovery steam generators and associated dedicated ancillary equipment are used solely for production; therefore, are not eligible for a positive use determination." BEPC received notice of this determination on July 12, 2012. See Attachment A. This appeal is therefore timely filed.

BEPC respectfully requests that the Commission reconsider the use determination based on the following:

BEPC's Application Met the Positive Use Determination Eligibility Requirements

BEPC's application meets the statutory and regulatory requirements for eligibility for a positive use determination. First, heat recovery steam generators ("HRSGs") are specifically listed in Tex. Tax Code § 11.31(k)(8) as "facilities, devices, or methods for the control of air, water, or land pollution." Second, HRSGs are included in the Expedited Review List set forth in 30 Tex. Admin. Code § 17.17. Third, BEPC's HRSG is equipment used, constructed or installed wholly or partly to meet or exceed laws, rules, or regulations adopted by an environmental protection agency of the United States, or the State of Texas or a political subdivision thereof. *See id.* at § 17.4(a). Fourth, BEPC's HRSG was acquired, constructed, installed, or replaced after January 1, 1994. *See id.* at § 17.4(a)(1). Finally, BEPC's HRSG was not taxable by any taxing unit in Texas on or before January 1, 1994. *See id.* at § 17.4(a)(3).

BEPC submitted the required application and fee. *See id.* at § 17.10(a). BEPC addressed each of the required elements in the application. *See id.* at § 17.10(d). A copy of BEPC's application, as amended on March 7, 2012, is attached. See Attachment B.

In accordance with the requirements of Chapter 17, BEPC included within its application a cost analysis procedure ("CAP"). The CAP utilizes a calculation to determine the creditable partial percentage that may be claimed for purposes of a positive use determination. BEPC's calculation supports BEPC's claim for a 60.73% positive use determination for its HRSG. TCEQ has not challenged BEPC's calculation under the CAP.

BEPC's application meets all of the statutory and regulatory requirements necessary to establish eligibility for a positive use determination, which would entitle BEPC to a 60.73% positive use determination. The TCEQ Executive Director has not asserted any error or deficiency in BEPC's application as the basis for its negative use determination.

BEPC's HRSG is an Air Pollution Control Device

HRSGs are expressly included in the TCEQ's Expedited Review List, which the TCEQ has classified as "a nonexclusive list of facilities, devices, or methods for the control of air, water and/or land pollution." *See id.* at § 17.17(b). As the TCEQ has noted, this list of equipment includes the equipment identified in Tex. Tax Code § 11.31(k), with changes as authorized by Tex. Tax Code § 11.31(l). *See id.* The Legislature has mandated that HRSGs be considered as air pollution control devices and the TCEQ has confirmed this status through its Chapter 17 rulemaking in 2008 and 2010.

As recently as March 2012, Region 5 ("EPA") confirmed that HRSGs are considered to be an air pollution control device. EPA reasoned that, because combined cycle turbines decrease emissions by increasing the efficiency of fuel burning equipment, a BACT analysis should consider these systems. *See* <http://epa.gov/nsr/ghgdocs/20120315Milwaukee.pdf>. EPA's conclusion that HRSGs represent control technology is further support for the Legislature's directive and BEPC's position in this appeal.

To the extent that the TCEQ has any authority to override the Legislature's directive with respect to the treatment of HRSGs as an air pollution control device, it may only do so through rulemaking. Tex. Gov't Code §§ 2001.003(6), .023, .024, .029. TCEQ's rules recognize that its ability to remove items from the Expedited Review List has been significantly limited by the Legislature, and that such a revision requires "compelling evidence to support the conclusion that the item does not render pollution control benefits." *See* 30 Tex. Admin. Code § 17.17(b). TCEQ has neither taken nor proposed such action. In the absence of such action, the TCEQ has no basis for asserting that BEPC's HRSG generates no pollution control benefits and that BEPC is therefore ineligible for a positive use determination with respect to this equipment.

TCEQ's Basis for its Negative Use Determination is Flawed

The sole basis given by the TCEQ Executive Director for the negative use determination is stated in the letter to BEPC, dated July 10, 2012: "Heat recovery steam generators and associated dedicated ancillary equipment are used solely for production; therefore, are not eligible for a positive use determination." As noted above, this statement is directly contrary to the findings of the Legislature, and to the determination of the TCEQ itself, as evidenced by its rulemakings in 2008 and 2010.

The Legislature's mandate, further implemented by the TCEQ, is consistent with the dual function of an HRSG, which: (1) captures waste heat of combustion which would otherwise be emitted, with significant associated emissions of NOx and other air contaminants; and (2) utilizes this recovered heat to produce steam, which in turn powers a steam turbine-generator set to produce additional electrical power beyond that which would occur using traditional technology. The TCEQ's recognition of these dual purposes serves at the basis, at least in part, for the CAP included in 30 Tex. Admin. Code § 17.17, which provides a mechanism by which the TCEQ can quantify the percentage of the expenditure that should be attributed to the pollution control purpose of an HRSG that is eligible for a positive use determination.

The TCEQ Executive Director's statement that HRSGs are used solely for production is not supported by any evidence. In fact, the TCEQ's historical treatment of HRSGs is directly contrary to such a statement, as the TCEQ has previously granted 100% positive use determinations to approximately 25 HRSGs. Without any evidence supporting its bald assertion, the TCEQ Executive Director's negative use determination is arbitrary and capricious, and should be overturned.

TCEQ's Negative Use Determination Appears One of Universal Application re HRSGs

At the same time that the TCEQ Executive Director issued the negative use determination to BEPC, he issued several other use determinations involving HRSGs. BEPC understands that, in each case, the determination was a negative use determination with respect to the HRSG.

If the TCEQ intends to treat HRSGs as ineligible for positive use determinations, as it appears by recent events, it must do so by rulemaking. The Texas Administrative Procedures Act ("APA") defines a "rule" as "a state agency statement of general applicability that implements, interprets, or prescribes law or policy; or describes the procedure or practice requirements of a state agency." Tex. Gov't Code § 2001.003(6). A rule under the APA "includes the amendment or repeal of a prior rule." *Id.* Before a rule can be adopted, a state agency must provide notice and an opportunity for public comment. *Id.* at §§ 2001.023, .024, .029.

As noted above, in the context of Tex. Tax Code § 11.31, the TCEQ Executive Director's threshold for conducting such a rulemaking is higher than is normally the case. The Legislature has mandated that such a rulemaking must be based on compelling evidence to support the conclusion that the item does not render pollution control benefits. *See* Tex. Tax Code § 11.31(k). TCEQ has not proposed rulemaking and its recent series of negative use determinations, even as ad hoc rulemaking, are not supported by any evidence, much less compelling evidence to support a conclusion that HRSGs do not render pollution control benefits. Therefore, TCEQ Executive Director's apparent intent to treat HRSGs as ineligible for positive use determinations is arbitrary and capricious, and should be overturned.

Conclusion

Based on the foregoing, BEPC respectfully requests that the Commission reconsider the negative use determination issued by TCEQ Executive Director with respect to BEPC's application and that, following such reconsideration, the Commission direct the Executive Director to grant a 60.73% positive use determination for BEPC's HRSG, as reflected in Use Determination Application No. 13544.

In addition, given the short time allowed for providing this response to the negative use determination, BEPC respectfully requests the opportunity to supplement this filing with any additional materials that may be relevant to the Commission's consideration of the appeal. It is BEPC's understanding that it will have an opportunity to reply to any response that may be filed by the Executive Director or the tax appraisal district.

TCEQ
Chief Clerk's Office
MC 105
July 31, 2012
Page 5

If additional information is needed, please feel free to contact me at (254) 750-6228 or by email at mmeyers@brazoselectric.com.

Sincerely,



Mike Meyers, ADR
Manager, Environmental Services
Risk & Compliance Division

JHC-01-AIR-1200-01
mm
Attachment

cc: Clifton Karnei – BEPC Executive Vice President and General Manager
Khaki Bordovsky – BEPC Vice President Service
Josh Clevenger – Vice President of Power Supply and Generation
Mark Fagan – BEPC Chief Risk Officer
Jeff Nottingham - Jack County Plant Manager
Jim Harris
H&H Associates
406 FM 3016
Grapeland, Texas 75844
Paul Sarahan
Fulbright & Jaworski
98 San Jacinto Boulevard, Suite 1100
Austin, Texas 78701-4255

Attachment A

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



*Rec'd
7-12-12*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 10, 2012

Attachment A

Mr. Jim Harris
Agent
H&H Associates
406 FM 3016
Grapeland, Texas 75844

Re: Notice of Negative Use Determination
Brazos Electric Power Cooperative, Inc.
Johnson County Generation Facility
831 Sparks Drive
Cleburne (Johnson County)
Regulated Entity Number: RN100221985
Customer Reference Number: CN600128821
Application Number: 13544

Dear Mr. Harris:

This letter responds to Brazos Electric Power Cooperative, Inc.'s Application for Use Determination, received April 27, 2009, pursuant to the Texas Commission on Environmental Quality's (TCEQ) Tax Relief for Pollution Control Property Program for the Johnson County Generation Facility.

The TCEQ has completed the review for application #13544 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 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

TCEQ
Chief Clerk's Office
MC 105
July 31, 2012
Page 7

Attachment B

13544 Revised
NO MONEY

Received and Original
Forward to Dept.

MAR 07 2012

TCEQ/Revenue Section

Brazos Electric Power Cooperative, Inc
Johnson County Generation Facility
Use Determination Application # 13544

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 or lease-to-own agreement? 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
Sole Proprietor

Partnership
Limited Partner

Utility
Other:

2. Size of Company: Number of Employees

1 to 99
100 to 499

500 to 999
1,000 to 1,999

2,000 to 4,999
5,000 or more

3. Business Description: (Briefly describe the type of business or activity at the facility)

Electric Power Generation and Transmission Cooperative

4. Provide the North American Industry Classification System (NAICS) six-digit code for this facility. 221112

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:

Payment Amount:

Name on payment:

Total Amount:

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: Brazos Electric Power Cooperative, Inc.

2. Mailing Address: 2404 LaSalle Ave. ; PO Box 2585

3. City, State, Zip: Waco, Texas, 76702-2585

4. Customer Number (CN): 600128821

5. Regulated Entity Number (RN):100221985

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

If the answer is 'No,' please explain:

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

If the answer is 'Yes,' please explain:

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

If the answer is 'No,' please explain:

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

1. Company Name:

2. Mailing Address:

3. City, State, Zip:

4. Customer Number (CN):

5. Regulated Entity Number (RN):

Section 6. Physical Location of Property/Equipment

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

2. Type of Mfg. Process or Service: Electric Power Generation

3. Street Address: 831 Sparks Drive

4. City, State, Zip: Cleburne, Texas, 76033

Section 7. Appraisal District with Taxing Authority

1. Appraisal District: Johnson County
2. District Account Number(s):

Section 8. Contact Name

1. Company Name: H&H Associates
2. First Name of Contact: Jim
3. Last Name of Contact: Harris
4. Salutation: Mr. Mrs. Ms. Dr. Other:
5. Title: President
6. Mailing Address: 406 FM 3016
7. City, State, Zip: Grapeland, Texas, 75844
8. Phone Number/Fax Number: (936) 687-4230 / (936) 687-9064
9. Email Address: h-h@hughes.net
10. Tracking Number (optional):

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: 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:
3. Does the property/equipment generate a Marketable Product? Yes No
If the answer is 'Yes,' describe the marketable product: Electric Power
4. What is the appropriate Tier I Table or Expedited Review List number? B-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: 25384/PSD-TX-839 ; Title V O-00543

Incremental Cost Difference

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

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

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

Property/Equipment Description

11. Describe the property/equipment. (What is it? Where is it? How is it used?) See Attachment 1

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.

Environmental Benefit

13. What is the anticipated environmental benefit related to the construction or installation of the property/equipment? See Attachment 2

Section 10. Process Flow Diagram (Optional)

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

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.

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 and Dedicated Ancillary Sys	B-8	60.73	\$28,111,986
Property:			
Property:			
Total:			\$17,072,753

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: Mike Meyers

Date:

Signature: Mike Meyers

3/5/2012

Title: Manager, Environmental Services *jm*

Company Name: Brazos Electric Power Cooperative, Inc.

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.

Application Submission

Send the completed application and the appropriate fee, along with a complete copy of the completed application for the appraisal district, to:

U.S. Mail

Cashiers Office, MC 214
Tax Relief Program
TCEQ
PO Box 13088
Austin TX 78711-3088

Physical Address

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

Brazos Electric Power Cooperative, Inc.
Johnson County Generation Facility
HRSG

Pollution Control Property/Equipment Use Determination

Attachment 1

9.11. Describe the property. (What is it? Where is it? How is it used?)

The pollution control property described in this application is the heat recovery steam generator (HRSG) and dedicated ancillary systems (PC Property) installations.

Johnson County – HSRG

The Facility consists of a combined-cycle gas turbine power plant with (1) gas combustion turbine (CT) equipped with a heat recovery steam generator (HRSG) and dedicated ancillary systems necessary to capture heat from the CTs exhaust and convert it into electrical power. The HRSG is installed at the exit of the CT to capture and utilize the waste heat of combustion from the CTs exhaust gas and utilizes this waste heat to produce steam, which in turn powers a steam turbine-generator set to produce electrical power at the Facility in addition to the electrical 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 HRSG creates a thermal efficiency benefit for the Facility. Specifically, the use of waste heat from the CT exhaust gas results in the conversion of some of 50-55% of the chemical energy of the natural gas utilized at the Facility into electricity (HHV basis), a gain over the approximately 36% efficiency of the CTs alone use of the fuel in a simple cycle gas turbine (Brayton Cycle). Secondly, due to this efficiency gain, the Facility is able to generate fewer emissions (particularly NOx 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.

9.12. What adopted environmental rule or regulation is being met by the construction or installation of this property?

The Pollution Control Property (PC) 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 (BACT) emission limitations established in federal operating permit # O-543. Per 30 Texas Administration 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.

9.13. What is the anticipated environmental benefit related to the construction or installation of the property?

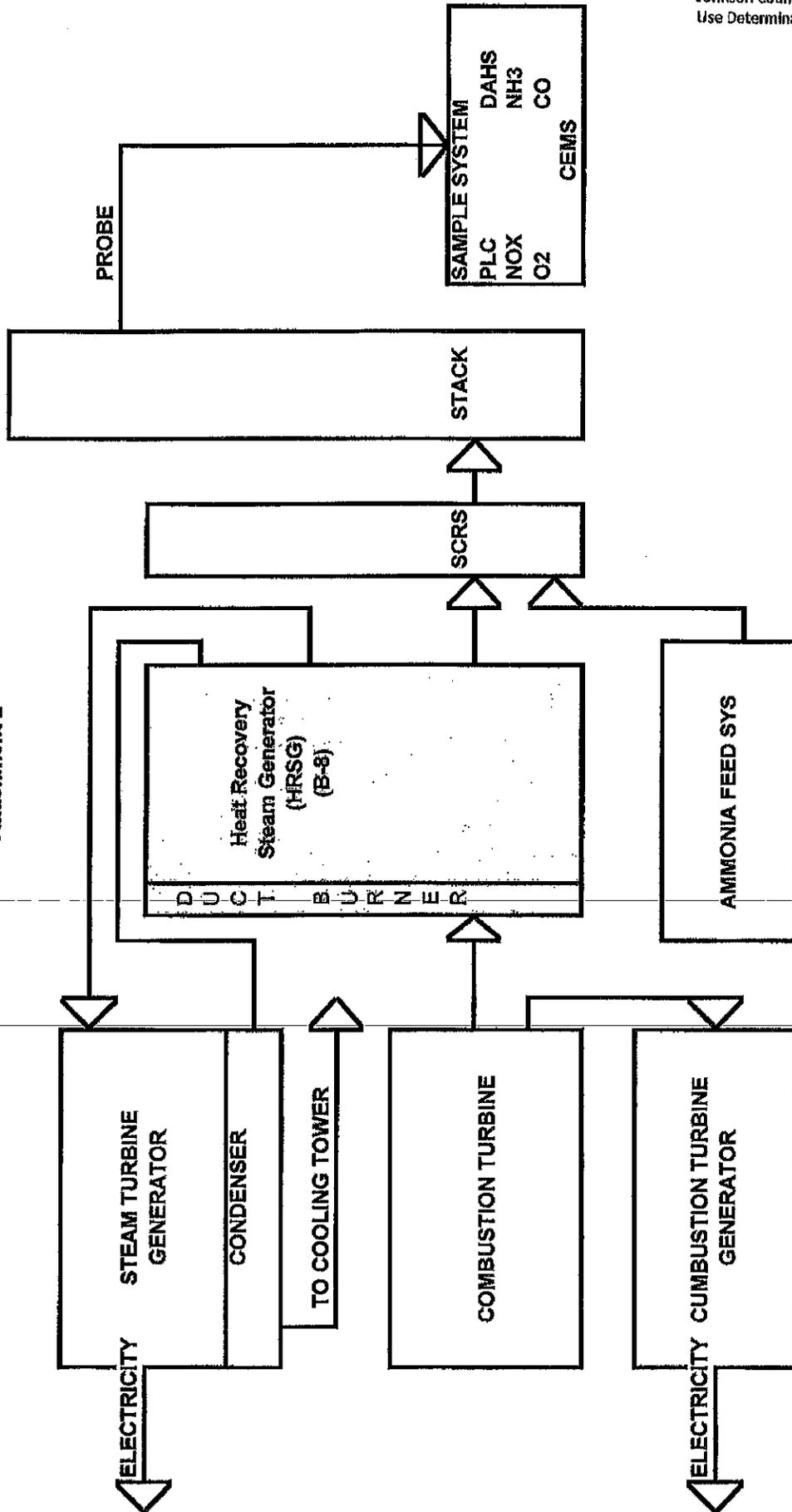
The PC Property reduces the formation of and/or controls the emission of NOx and other air emissions associated with the combustion of natural gas used in combined cycle power generation at the Facility. Since less fuel is required per kilowatt of power produced, less exhaust gas emissions (NOx, CO, CO2) are emitted. Therefore, the HRSG's primary purpose of capturing and converting waste heat from the combustion turbine results in meaningful environmental benefits.

See Attachment 4 for calculation methodology used to calculate the partial use determination per requirements of TCEQ Pub. No. RG-461.

Brazos Electric Power Cooperative, Inc
Johnson County Generation Facility
Use Determination Application # 13544

**Brazos Electric Power Cooperative, Inc.
Johnson County Generation Facility**

**Pollution Control Equipment Use Determination Document
Attachment 2**



Attachment 4

TCOQ Use Determination Application Section 11 uses:
 Company: Brazos Electric Power Cooperative, Inc.
 Plant: Johnson County Generation Facility
 Unit: 2SS Unit 1 x 1 Configuration, Combined Cycle Power Plant (2SS6)
 Address: Caddo, Texas
 Project: Tier III Cost Analysis Procedure
 Date: 10-Feb-22

L. Assumptions

Pollution Control Property (PC)

Property Cost	Source	Conversion Factors	Economic Assumptions	Scalitz
Capital Cost (\$/MW):	BEC Auction	Hrs/yr	Discount Rate (%)	Standard project rate
TC Capacity (MW):	PC/TC	KW/MW	Periods (Yrs)	RUS Form 12
CT Capacity (MW)	2(C)1ST	lb/kg	PC Property Fixed O&M Cost (\$/KW-yr)	86C2010 RUS Form 12
2010 Net Annual ST Generation Capacity (MW/yr):	172 BEC 2010 RUS Form 12	\$/hr	ST Fixed O&M Costs (\$)	Formula
2010 Net Annual ST Generation Capacity (MW/yr):	86 BEC 2010 RUS Form 12	\$/hr	Fuel Cost (\$/MMBTU)	Formula
2010 ST Capacity Factor:	487,215,000 BEC 2010 RUS Form 12	\$/hr	PC Property Variable Cost (\$/MWh)	Note 1
2010 Plant Heat Rate (lbw/kwh):	66.87 Energy/TC * 8760	\$/hr	BECOT Electricity Pricing (\$/MWh)	Check with O&E
2010 Plant Heat Rate (mmBtu/kwh):	7,783 BEC 2010 RUS Form 12	\$/hr	Interest Rate (%)	Formula
2010 Operating Hours	0.008 NPHR/2836	\$/hr		Note 2
Capital Cost Old:	7,808 BEC 2010 RUS Form 12	\$/hr		Formula

Comparable Technology Cost:
 Comparable Technology:
 Design Capacity Factor:
 Capacity (MW):

Note 1: Average cost for fuel (2009 - 2011) weighted by monthly steam turbine generation
 Note 2: Average Settlement Point price for resources weighted by hourly steam turbine generation, reflected by North Texas Zone Market Clearing Price for Energy (MCPSE) for Jan 1, 2009 - Nov 30, 2010 and Real-time

II. Cost Analysis Procedure
 A. [(Production Capacity Factor x Capital Cost New) - Capital Cost Old - Marketable Product]

B. Cost Analysis Procedure Formulas (TCOQ)
 Partial Use Determination
 [(Production Capacity Factor x Capital Cost New) - Capital Cost Old - Marketable Product Value]

where: Marketable Product Value =
 $n =$ estimated useful life in years of year equipment
 $t =$ year one
 interest Rate = 10%

C. Cost Analysis Procedure for Pollution Control Property
 Marketable Product Value = Electricity Price (\$/MWh) x MWh per Year
 Direct Cost of Production = Levelized Cost of Energy x kWh per Year

LCOE (\$/MWh) [(Capital Cost x Capital Recovery Factor) + Fixed O&M Costs] / (Annual cost to carry) (CRF)
 = \$28,111,986.00 / 10.29% = \$2,875,855.17

Levelized Cost of Energy (LCOE) Model Outputs
 Capital Recovery Factor (%) 10.81%
 LCOE (\$/MWh) 0.09079

Marketable Product Value - Production Costs (A + Interest Rate)ⁿ

Capital Recovery Factor (CRF) $\frac{i \times (1+i)^n}{(1+i)^n - 1}$
 Fuel Cost x Heat Rate (FCM) (Total Annual FC) \$4,917,876.17
 (Fuel x NPHR) / MWh \$0.001
 LCOE \$0.0920 (\$/MWh)

Attachment 4, cont'

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

III. Cost Analysis Procedure Calculations for Jack County (Jack 1) HRS&I and HRS&Z

A. Marketable Product Value (MPV)

Electricity Price	\$		
	MWh	x	Plant MWh
			Year
\$44.48	x	487,215	

B. Production Cost (PC)

Levelized Cost Of Energy (LCOE)	\$		
	KWh	x	Plant MWh
			Year
\$0.04208	x	487,215,000	

C. Production Capacity Factor (PCF)

Production Capacity of Existing Equipment or Process

Production Capacity of New Equipment or Process

PCF	
PCF	1.00

D. Capital Cost New (CCN)

Pollution Control Property (PC)

CCN	\$28,111,986.00
-----	-----------------

E. Capital Cost Old (CCO)

Comparable Technology

CCO	\$0.00
-----	--------

Partial Use Determination Calculation

[PCF x CCN]	CCO	MP
\$28,111,986.00	\$0.00	\$11,089,258.23
\$28,111,986.00		

Eligible HRS&I Cases

(Partial Use Determination % x PC Property)

Partial Use Determination %	60.73%
Eligible HRS&I Cases	\$17,072,752.77

Net Present Value/Marketable Product (NPVMP) Calculation.

NPVMP (\$)	
NPVMP	\$11,089,258.23

Net Present Value/Marketable Product (NPVMP) Calculation:

Marketable Product Value - Production Cost	
(1 + Interest Rate) ⁿ	
\$21,671,323.20	\$20,500,259.54
1.30	

Partial Use Determination Calculation

[PCF x CCN]	CCO	MP
\$28,111,986.00	\$0.00	\$11,089,258.23
\$28,111,986.00		

Eligible HRS&I Cases

(Partial Use Determination % x PC Property)

Partial Use Determination %	60.73%
Eligible HRS&I Cases	\$17,072,752.77

Partial Use Determination Calculation

[PCF x CCN]	CCO	MP
\$28,111,986.00	\$0.00	\$11,089,258.23
\$28,111,986.00		

Eligible HRS&I Cases

(Partial Use Determination % x PC Property)

Partial Use Determination %	60.73%
Eligible HRS&I Cases	\$17,072,752.77