July 14, 2014

Zak Covar
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: Petition for Rulemaking - 30 Tex. Admin. Code §20.15

Dear Zak:

Attached please find a *Petition for Rulemaking* under 30 Tex. Admin. Code §20.15 to remove the offsetting of foreign greenhouse gas pollution by Texas citizens and businesses in Texas Ozone State Implementation Plans.

I appreciate your consideration of this Petition. If you have any questions, please feel free to contact me at (832) 428-4257 or jedanderson@jedlaw.net. Thank you.

Sincerely,

Jed Anderson

PETITION FOR RULEMAKING	§	
	§	
BY JED ANDERSON	§	**BEFORE THE TEXAS COMMISSION**
	§	
TO REMOVE THE OFFSETTING	§	**ON ENVIRONMENTAL QUALITY**
OF FOREIGN GREENHOUSE	§	
GAS POLLUTION BY TEXAS	§	
CITIZENS AND BUSINESSES IN	§	
OZONE STATE	§	
IMPLEMENTATION PLANS	§	

ORIGINAL PETITION FOR RULEMAKING

TO THE HONORABLE COMMISSIONERS:

Now comes Jed Anderson ("Petitioner"), and pursuant to the provisions of 30 Texas Administrative Code ("TAC") Chapter 20 hereby presents this Petition for Rulemaking to the Texas Commission on Environmental Quality ("Commission") seeking to remove the offsetting of foreign greenhouse gas pollution by Texas citizens and businesses in current and future ozone State Implementation Plans ("SIPs").

According to the President, EPA, and numerous research institutions around the world—climate change is exasperating ozone in many parts of the U.S. (see below). If such is the case, then the President and EPA cannot have it both ways. Either climate change is occurring and increasing ozone—and States therefore are being required to offset the foreign component of this pollution. Or climate change is not occurring or increasing ozone—and States therefore are not being required to offset this pollution. Since the President and EPA have concluded that climate change is occurring and increasing ozone, it follows that States are currently offsetting the foreign component of this pollution—in addition to reducing their own pollution impacts—since SIPs must demonstrate attainment.

With regard to Texas, EPA and numerous research institutions have indicated that climate change has increased ozone levels and will continue to do so in the future. Studies predict potential impacts from 1-10 ppb over the next 40 years (see below). Because Texas ozone SIPs must demonstrate attainment, and because Texas has not requested relief from offsetting the approximate 80% of the world's greenhouse gases that emanate from foreign countries, the State of Texas is requiring its own citizens and businesses to offset foreign greenhouse gas impacts in order to demonstrate attainment with the ozone NAAQS. Such offsetting of foreign pollution translates into tens of millions of dollars in additional NOx and VOC controls for Texas citizens and businesses.

The citizens and businesses of Texas should be held responsible for reducing their own pollution impacts. This is inarguable. This in no way is being contested in this petition. What is being contested is the fact that Texas citizens and businesses are also being held responsible for reducing greenhouse gas pollution impacts from other parts of the world. This is an inefficient approach to

rectifying foreign pollution impacts—as well as being an unfair and unjust approach without the express consent of Texas citizens. The State of Texas should request relief from offsetting foreign pollution, as both EPA and Congress have suggested, and recommend that Congress realign authority and responsibility for addressing foreign pollution under the Clean Air Act (see below).

The above line of reasoning can be further explained as follows:

1. **According to the EPA, the United Nations, and other research institutions around the world--- climate change is increasing ozone levels in many parts of the U.S.** (see below). This is often referred to as the "climate change penalty".

2. **Approximately 80% of the world's greenhouse gases are emitted by other countries** (see http://www.epa.gov/climatechange/ghgemissions/global.html)

3. **The State of Texas must achieve the ozone standard via the SIP process. EPA has approved numerous Texas ozone SIPs over the last 20 years** (see 42 U.S.C. § 7407(a)).

4. **Texas SIPs currently do not request relief from offsetting 80% of the climate change penalty caused by foreign nations.**

5. **The State of Texas is requiring its citizens and businesses to install additional NOx and VOC controls for the purpose of offsetting greenhouse gas pollution from other parts of the world in order to demonstrate attainment with the ozone NAAQS.**

Petitioner specifically requests that the Commission submit a Section 179B petition(s) to the U.S. Environmental Protection Agency ("EPA") and, if approved, commence a rulemaking to reduce compliance burdens in impacted nonattainment areas for the purpose of rectifying the offsetting of foreign greenhouse gas pollution by Texas citizens and to ensure that future SIPs incorporate a Section 179B demonstration. Petitioner respectfully requests that the Commission consider this Petition as set out herein and initiate proceedings necessary to effectuate the Section 179B petition(s) and corresponding SIP revision(s). Pursuant to the provisions of 30 TAC § 20.15, Petitioner would respectfully show the following:

I. Public Policy Benefits

This Petition is submitted in the interest of ensuring that the State of Texas and its citizens are no longer held responsible for paying for the growing cost of offsetting foreign pollutant transport in order to achieve the ozone National Ambient Air Quality Standard (NAAQS).

Under the Federal Clean Air Act, States are responsible for demonstrating attainment with the NAAQS (42 U.S.C. § 7407(a)). States generally cannot control foreign pollution (U.S. Const. Art. I, Sec.10). Since States must demonstrate attainment, and cannot generally control foreign pollution, States are essentially being forced to further control local emission sources in order to offset the growing impacts of foreign pollution and achieve attainment. The Clean Air Act provides the following:

> **"Each State shall have the primary responsibility for assuring air quality within the entire geographic area comprising such state by submitting an implementation plan for such State which will specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained . . ." (42 U.S.C. § 7407(a)).**

One potential exception to States offsetting foreign pollution is if a State successfully pursues a Section 179B petition. Section 179B provides the following:

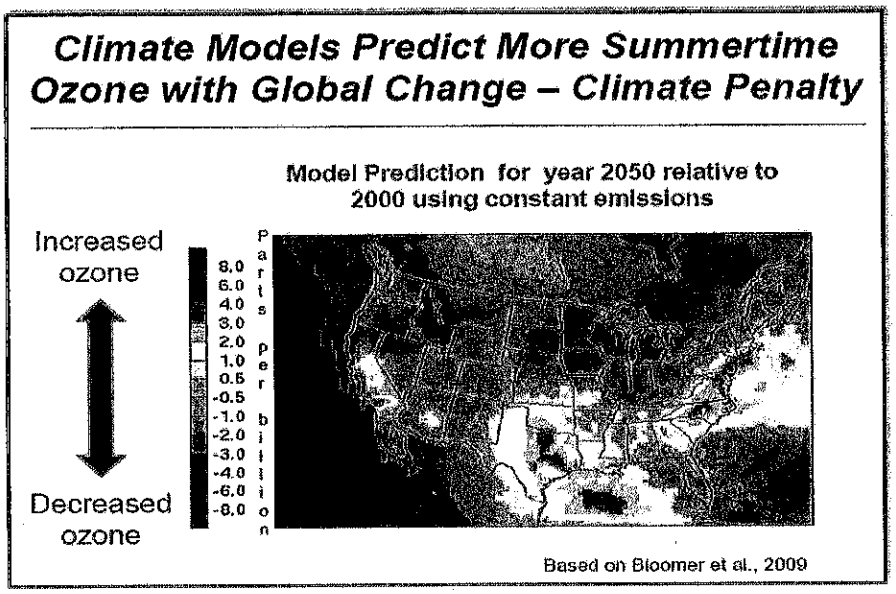
> **A SIP shall be approved if "the submitting State establishes to the satisfaction of [EPA] that the implementation plan of such State would be adequate to attain [the NAAQS] . . . but for emissions emanating from outside the United States." (42 USC § 7509a).**

A section 179B petition was successfully obtained by the Commission for the El Paso region (*see* 68 FR 39457 and 59 FR 2532). Other SIPs in Texas however do not provide for or include such a request for relief—even though EPA has expressly stated in rulemaking preambles that States should not be required to offset foreign pollution:

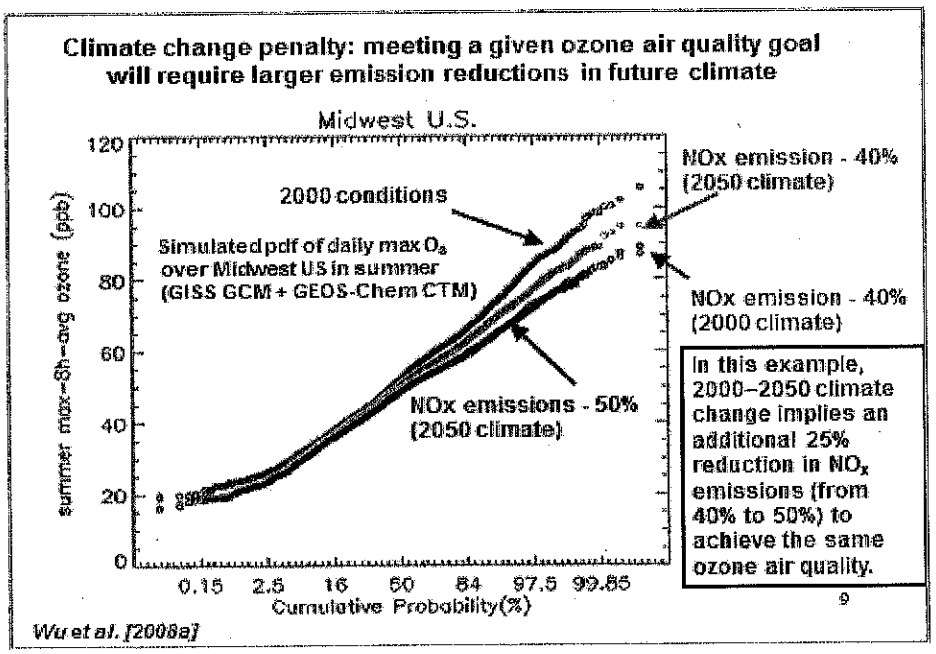
- **"The EPA does not expect States to restrict emissions from domestic sources to offset the impacts of international transport of pollution."** -----U.S. EPA (64 Fed. Reg. 35714)
- **"[T]he EPA will not hold States responsible for developing strategies to "compensate" for the effects of emissions from foreign sources".** ----U.S. EPA (64 Fed. Reg. 35714).
- **"Congress clearly wanted to avoid penalizing such areas by not making them responsible for control of emissions emanating from a foreign country over which they have no jurisdiction."** ---U.S. EPA (see http://www.epa.gov/ttncaaa1/t1/fr_notices/pm-add.pdf)

According again to EPA and numerous research institutions, climate change has been increasing ozone levels in the State of Texas for many years. This impact is projected to increase. The

following map depicts this expected impact. As will be noted, the State of Texas appears to potentially be more significantly impacted by the climate change penalty than many other states according to this study.



Because States cannot sufficiently reduce world-wide climate change in order to reduce ozone levels in nonattainment areas, States must compensate for the "climate change penalty" by further reducing VOC and NOx from local sources in order to demonstrate attainment with the NAAQS. Below is a slide from Harvard University depicting expected additional NOx and VOC controls necessary to compensate for the "climate change penalty". According to Harvard University, an additional **25% reduction** in NOx emissions might be required. Since approximately 80% of the climate change penalty is due to foreign pollution, **this would mean that approximately 20% of the additional NOx reduction needed from domestic sources would be required because of foreign greenhouse gas pollution.**



The offsetting of foreign greenhouse gases appears to be already costing the citizens and businesses of Texas tens of millions of dollars. Texas has submitted numerous ozone attainment demonstration SIPs to EPA over the last 20 years. Even assuming that climate change has only increased ozone by 1 ppb since the industrial revolution, which is lower than what some studies indicate, the Texas ozone SIPs included tens of millions of dollars in additional local NOx and VOC controls to offset the foreign greenhouse gas component of this pollution. The State of Texas for example spent approximately $150 million to reduce 0.434 ppb of ozone in the Dallas area using the TERP program (see below). This translates into approximately $350 million per ppb of ozone reduced.

The Texas SIP(s) should be revised so that all nonattainment areas throughout Texas include a Section 179B petition to reflect the growing impacts of foreign pollution on the ability of the State to achieve attainment. Although Texas cannot use foreign pollution as an excuse, it is unfair and unjust for the State of Texas to require its own citizens and businesses to further reduce their own emissions in order to offset and make-up for the growing impacts of foreign pollutant transport. It is also unfair and unjust for the State of Texas to essentially show favoritism toward foreign pollution by further requiring domestic emission reductions in order to allow for more foreign emissions growth in future SIP planning.

Below are several examples of studies from EPA and research institutions around the world indicating that Texas is requiring its businesses and citizens to offset foreign greenhouse gas pollution. Even though it might be difficult to determine exactly how much foreign greenhouse gas impacts should be recognized for Section 179B SIP planning purposes, it should be given some value by EPA. To not give it a value, while EPA at the same time is upholding its existence, would seem nonsensical. It would be better to be potentially relatively wrong than absolutely wrong.

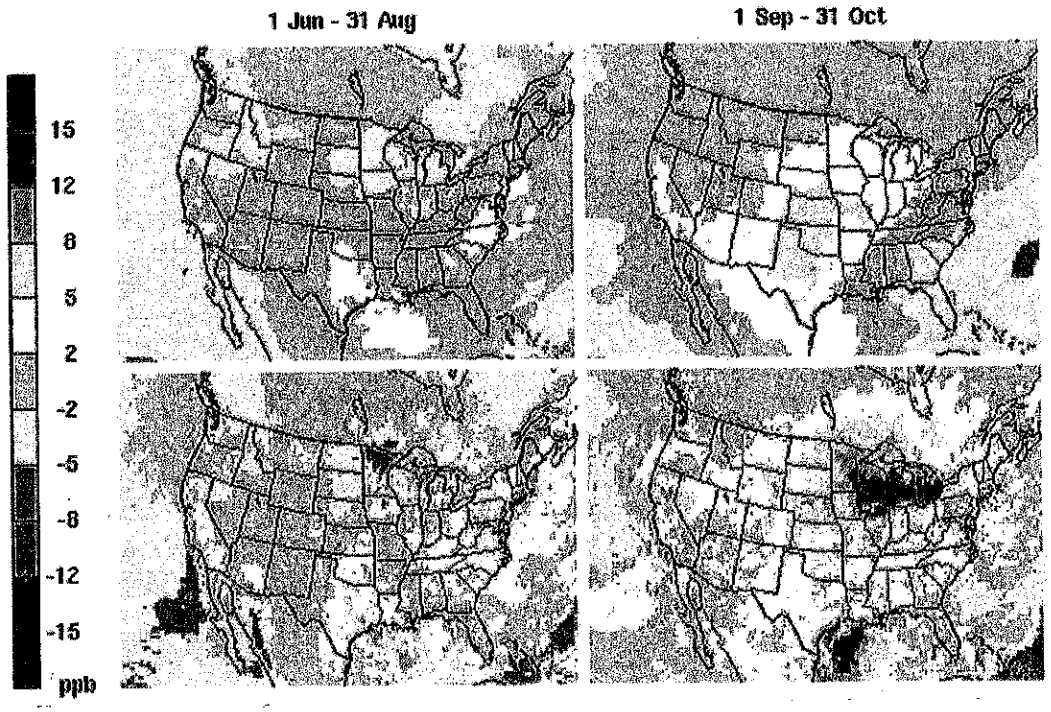
Because of the size of the following studies, full copies of these studies are hereby incorporated by reference in this Petition for Rulemaking and are available online at the weblinks listed below for the Commission's review as part of this Petition for Rulemaking.

► **"Projections of Future Summertime Ozone over the U.S."**, G. G. Pfister, S. Walters, J.-F. Lamarque, J. Fast, M. C. Barth, J. Wong, J. Done, G. Holland, C. L. Bruyère. *Journal of Geophysical Research: Atmospheres*, 2014; DOI:10.1002/2013JD020932. (see http://onlinelibrary.wiley.com/doi/10.1002/2013JD020932/abstract).

- Study estimated a 70 percent increase in unhealthy summertime ozone levels by 2050 due to climate change.

- "Predicted changes in regional climate and globally enhanced ozone are estimated to increase surface ozone over most of the U.S.; the 95th percentile for daily 8 hour maximum surface ozone increases from 79 ppb to 87 ppb."

► **"Climate Impact on Regional Air Quality (CIRAQ)",** U.S. Environmental Protection Agency (see http://www.epa.gov/AMD/Research/Climate/ciraq.html).



- "Differences (5-year future − 5-year current) in mean (top) and 95th percentile (bottom) maximum daily 8-hour average (MDA8) ozone concentrations. Results show summertime increases of 2-5 parts per billion in mean MDA8 concentrations in Texas and parts of the eastern U.S."

► **"A Preliminary Synthesis of Modeled Climate Change Impacts on U.S. Regional Ozone Concentrations",** Weaver, C. P., and Coauthors, 2009: *Bull. Amer. Meteor. Soc.*, **90**, 1843–1863. **(see** http://journals.ametsoc.org/doi/pdf/10.1175/2009BAMS2568.1**)**

- "Substantial regions of the country show increases in O3 concentrations of roughly 2–8 ppb under a future climate."

- "Across all of the modeling experiments carried out by the different groups, simulated global climate change causes increases in summertime O3 concentrations over substantial regions of the country. For summertime-mean MDA8 O3, the increases are in the 2-8 ppb range. The increases in O3 concentrations in these simulations are larger during peak pollution events, as exhibited by the greater increases in 95th percentile MDA8 O3 than those for summertime-mean MDA8 O3."

► **"Climate Change Impacts on Regional and Urban Air Quality in South Texas"**, Jhumoor Biswas and Kuruvilla John, Houston Advanced Research Center, Chapter 5 (pp. 91-107) in South Texas Climate 2100: Problems and Prospects, Impacts and Implications (J. Norwine and K. John, eds.), ISBN-13: 978-0-9798426-0-3, Library of Congress Control Number 2007933151, BookMasters, Inc., Columbus, Ohio, 2007. (see http://www.texasclimate.org/Portals/6/Books/SouthTX/Chapter_5.pdf)

- "The results revealed conclusively that global temperature augmentations could significantly impact peak eight-hour ozone concentrations and eight-hour ozone exceedances, especially in the urban regions of South Texas."

- "[T]he number of ozone exceedances in these areas increases significantly with every 1°C (1.8 degree F) rise in temperatures."

Table 2. Episode maximum ozone concentrations (ppb) at South Texas urban sites

	Perturbed Temperatures					
	Base	+2°C	+3°C	+4°C	+5°C	+6°C
San Antonio	79.80	85.45	86.34	87.19	88.02	88.80
Corpus Christi	71.28	76.11	77.12	78.08	78.99	79.80
Victoria	74.06	78.29	79.18	80.00	80.74	81.42

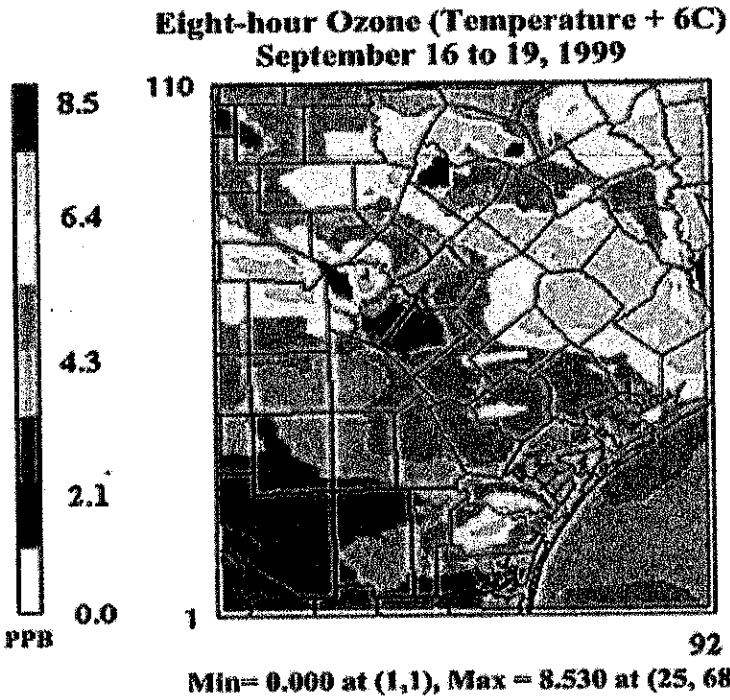


Figure 6. Spatial distribution of the differences in episode maxima of eight-hour ozone concentrations between base case and perturbed temperature case (+6°C [10.80°F])

Table 1. Maximum impact of perturbed temperature

	+2°C	+3°C	+4°C	+5°C	+6°C
Difference in eight-hour ozone concentration in ppb	3.04	4.49	5.88	7.24	8.53

► **"Impact Assessment of Global Temperature Perturbations on Urban and Regional Ozone Levels in South Texas"**, Jhumoor Bisas, Kuruvilla John, and Zuber Farooqui, (2009) Advances in Geosciences: pp. 197-211. (see http://www.worldscientific.com/doi/abs/10.1142/9789812836120_0016?queryID=%24%7BresultBean.queryID%7D&) .

- "Significantly large changes in peak ozone concentrations were predicted by the photochemical model."
- "For the 6°C temperature perturbation, the greatest amplification in the maximum 8-h ozone concentrations within urban areas of the modeling domain was approximately 12 ppb."
- "Temperatures had an appreciable spatial impact on the 8-h ozone exceedances with a considerable increase in spatial area exceeding the NAAQS for the 8-h ozone levels within the study region for each successive augmentation in temperature."
- "The number of exceedances of the 8-h ozone standard increased significantly with each degree rise of temperature with the problem becoming even more acute in light of stricter future proposed standards of ozone."

► **"Effect of Climate Change on Air Quality"**, Jacob, Daniel J., and Darrel A. Winner. 2009. Harvard University and the U.S. EPA. Atmospheric Environment 43(1): 51-63. (see

http://dash.harvard.edu/bitstream/handle/1/3553961/Jacob_EffectClimate.pdf?sequence=2).

- "The observed correlation between surface ozone and temperature in polluted regions points to a detrimental effect of warming."

- "Coupled GCM–CTM studies find that climate change alone will increase summertime surface ozone in polluted regions by 1–10 ppb over the coming decades, with the largest effects in urban areas and during pollution episodes."

- "This climate penalty means that stronger emission controls will be needed to meet a given air quality standard."

- "Strong correlation of elevated ozone with temperature is a ubiquitous feature of observations in polluted regions, even in prevailingly hot climates such as the southwestern U.S. (Wise and Comrie, 2005) and Egypt (Elminir, 2005)."

- "Model perturbation studies consistently identify temperature as the single most important meteorological variable affecting ozone concentrations in polluted regions (Morris et al., 1989; Aw and Kleeman, 2003; Sanchez-Ccoyllo et al., 2006; Steiner et al., 2006;Dawson et al., 2007a)."

- "The model dependence of ozone on temperature is due to two principal factors (Jacob et al., 1993; Sillman and Samson, 1995): (1) the temperature-dependent lifetime of peroxyacetylnitrate (PAN), a major sequestering reservoir for NOx and HOx radicals even at high temperatures; and (2) the temperature dependence of biogenic emission of isoprene, a major VOC precursor for ozone formation under high-NOx conditions. Model slopes (v½O3 =vT) are typically in the range 2–10 ppb K1, with maximum values in urban areas having high ozone formation potential (Sillman and Samson,1995; Baertsch-Ritter et al., 2004; Steiner et al., 2006)."

► **"Potential Regional Climate Change and Implications to US Air Quality**, Leung RL, Gustafson WI., Jr Potential regional climate change and implications to US air quality. Geophys Res Lett. 2005:32(16) (see http://meteora.ucsd.edu/cap/pdffiles/Leung_regional_climatechg_US_airquality_2005GL022911.pdf)

- "During summer, Texas is marked by warming (1 –3 C), increased downward solar radiation (up to 40 W/m2), less frequent rainfall (more than8 days less per season), and slightly more frequent solar radiation (up to 4 days more per season) that all suggest an increase in ozone concentrations."

► **"Climate Change, Ambient Ozone, and Health in 50 U.S. Cities",** Bell, M. L., R. Goldberg, C. Hogrefe, P. L. Kinney, K. Knowlton, B. Lynn, J. Rosenthal, C. Rosenzweig, and J. A. Patz, 2007: Climate change, ambient ozone, and health in 50 US cities. *Climatic Change*, **82**, 61-76, doi:10.1007/s10584-006-9166-7 (see http://pubs.giss.nasa.gov/abs/be00100w.html).

- "The cities' ozone levels are estimated to increase under predicted future climatic conditions, with the largest increases in cities with present-day high pollution. On average across the 50 cities, the summertime daily 1-h maximum increased 4.8 ppb, with the largest increase at 9.6 ppb."

- "The average number of days/summer exceeding the 8-h regulatory standard increased 68%."

► **"Observed Relationships of Ozone Air Pollution with Temperature and Emissions"**, Bryan J. Bloomer, Jeffrey W. Stehr, Charles A. Piety, Ross J. Salawitch, and Russell R. Dickerson, 5 May 2009, GEOPHYSICAL RESEARCH LETTERS, VOL. 36, L09803, doi:10.1029/2009GL037308, 2009 (see http://www.atmos.umd.edu/~stehr/BloomerEtAl2009GRL_2009GL037308.pdf)

- "Higher temperatures caused by increasing greenhouse gas concentrations are predicted to exacerbate photochemical smog if precursor emissions remain constant."

► **"EPA, 2009: Assessment of the Impacts of Global Change on Regional U.S. Air Quality: A Synthesis of Climate Change Impacts on Ground-Level Ozone."** An Interim Report of the U.S. EPA Global Change Research Program. U.S. Environmental Protection Agency, National Center for Environmental Assessment, Office of Research and Development, Washington, D.C. URL

- "The new modeling studies discussed in this report show increases in summertime O3 concentrations over substantial regions of the country as a result of simulated 2050 climate change."

- "For nearly every region of the country, at least one (usually multiple) of the modeling groups found that climate change caused increases in summertime O3 concentrations. Where these increases occur, the amount of increase in summertime average Maximum Daily 8-hour Average (MDA8) O3 concentrations across all the modeling studies tends to fall in the range 2–8 ppb."

- "These studies suggest that EPA's Office of Air Quality Planning and Standards should begin to consider climate change, for example, in the next update of EPA's ozone modeling guidance, especially for planning horizons in 2020 and beyond. In other words, they may need to account for a "climate penalty" that could influence the amount of controls needed in some locations."

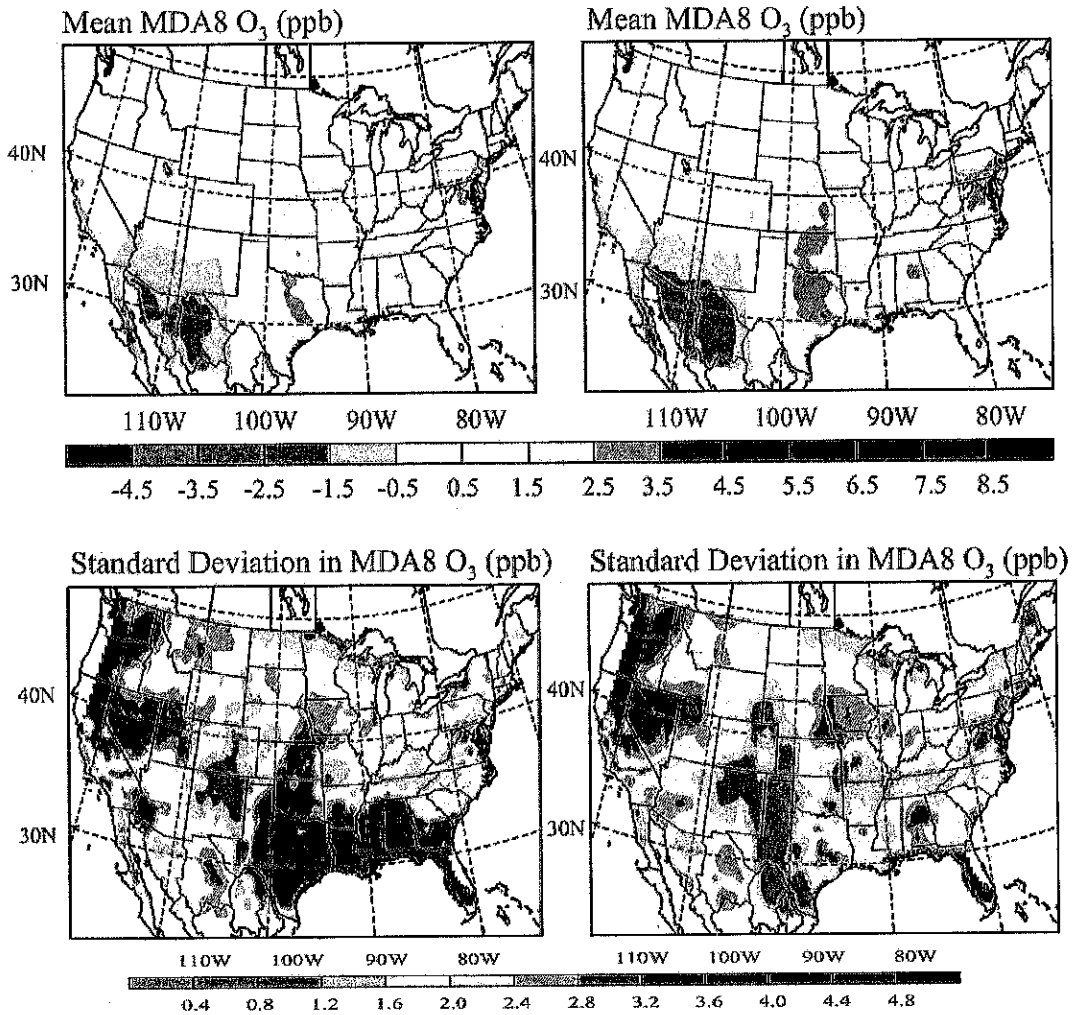
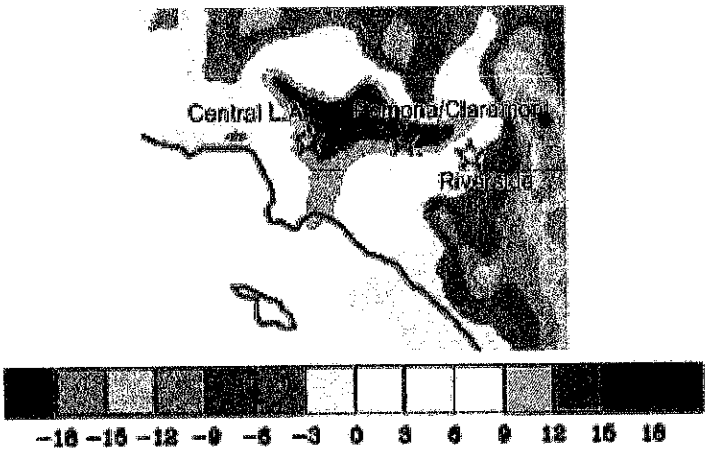


Figure 3-11. The mean (top two panels) and standard deviation (bottom two panels) in future-minus-present MDA8 O_3 concentration differences across (left-hand panels) all seven experiments (five regional and two global) shown in Figures 3-1, 3-9, and 3-10 and, for comparison purposes, (right-hand panels) not including the WSU experiment because it shows differences for July only, while the other experiments show JJA differences.

► **"Variation in Estimated Ozone-Related Health Impacts of Climate Change Due to Modeling Choices and Assumptions"**, Post, E. S., A. Grambsch, C. Weaver, P. Morefield, J. Huang, L. - Y. Leung, C. G. Nolte, P. Adams, X. - Z. Liang, J. - H. Zhu, and H. Mahone, 2012: *Environmental Health Perspectives*, **120**, 1559-1564, doi:10.1289/ehp.1104271. URL

- "[C]oncentration changes estimated using the different climate–air quality simulations indicate that 50–90% of the future U.S. population would be subject to increases in O3 exposure . . . ."

► **"Climate Change Impact on Air Quality in California"**, Kleeman, Chen, and Harley, U.C. Davis, Report to the California Air Resources Board, 2010 (see http://www.arb.ca.gov/research/apr/past/04-349.pdf).



This illustration shows projected ozone changes in California's south coast region due to climate change in the year 2050. Areas in orange and red could see ozone concentrations elevated by nine to 18 parts per billion.

► **"Impacts of 21st Century Climate Change on Global Air Pollution-Related Premature Mortality"**, Yuanyuan Fang, Denise L. Mauzerall, Junfeng Liu, Arlene M. Fiore, Larry W. Horowitz. *Climatic Change*, 2013; DOI: 10.1007/s10584-013-0847-8 (see http://link.springer.com/article/10.1007%2Fs10584-013-0847-8).

- "This climate penalty indicates that stronger emission controls will be needed in the future to meet current air quality standards and to avoid higher health risks associated with climate change induced worsening of air quality over populated regions."

- "[S]tudies consistently predict an increase in O3 concentrations (+1–10 ppbv annually or during summers) over highly polluted northern mid-latitude regions (Jacob and Winner 2009; Weaver et al. 2009; Murazaki and Hess 2006; Liao et al. 2006; Fiore et al. 2012)."

► **"Linking Global to Regional Models to Assess Future Climate Impacts on Surface Ozone Levels in the United States"**, Christopher G. Nolte, Alice B. Gilliland, Christian Hogrefe and Loretta J. Mickley, 22 JUL 2008, DOI: 10.1029/2007JD008497, (see http://onlinelibrary.wiley.com/doi/10.1029/2007JD008497/abstract).

- "Without ozone precursor emissions changes, increases from 2–5 ppb in summer mean 8-h ozone mixing ratios are projected in Texas and parts of the eastern U.S. . . ."

- "Comparison of the present and future air quality model predictions shows increases in ozone in Texas and portions of the eastern United States on the order of 2–5 ppb as a result of climate change alone. A larger increase in ozone is predicted for the September and October future months, suggesting an extension of the ozone season, which may have implications for air quality management applications."

► **"Occurrence and Persistence of Future Atmospheric Stagnation Events"**, Daniel E. Horton, Christopher B. Skinner, Deepti Singh & Noah S. Diffenbaugh, *Nature Climate Change* (2014), doi:10.1038/nclimate2272 (see http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate2272.html).

- "By the late twenty-first century, robust increases of up to 40 days per year are projected throughout the majority of the tropics and subtropics, as well as within isolated mid-latitude regions. Potential impacts over India, Mexico and the western US are particularly acute owing to the intersection of large populations and increases in the persistence of stagnation events, including those of extreme duration. These results indicate that anthropogenic climate change is likely to alter the level of pollutant management required to meet future air quality targets."

► "Predicted Impacts of Climate and Land Use Change on Surface Ozone in the Houston, Texas, Area", Xiaoyan Jiang, Christine Wiedinmyer, Fei Chen, Zong-Liang Yang,and Jeff Chun-Fung Lo, published 30 October 2008, JOURNAL OF GEOPHYSICAL RESEARCH, VOL. 113, D20312, doi:10.1029/2008JD009820, 2008 (see http://nldr.library.ucar.edu/repository/assets/osgc/OSGC-000-000-001-873.pdf).

- "In the urban area, the effect of climate change alone accounts for an increase of 2.6 ppb in daily maximum 8-h O3 concentrations . . . "

► Other Examples of Studies

Table 2
GCM–CTM studies of the effect of climate change on ozone air quality.[a]

Reference	Domain[b]	Scenario[c]	Time horizon[d]	Metric reported	Surface ozone change (ppb)[e]
Hogrefe et al. (2004)	Eastern U.S.	A2	2080 vs. 1990	JJA MDA8[f]	50 eastern U.S. cities: +4.4 (2050)[g] Eastern U.S.: +2.7 (2020), +4.2 (2050), +5.0 (2080)
Liao et al. (2006)	Global	A2	2100 vs. 2000	July mean	Northeastern U.S.: +4–8 Central Europe: +2–6
Murazaki and Hess (2006)	Global	A1	2090 vs. 1990	JJA MDA8	Eastern U.S.: +2–5 Western U.S.: insignificant
Racherla and Adams (2006)	Global	A2	2050 vs. 1990	Summer mean	Eastern U.S.: +1–5
Kunkel et al. (2007)	Global/ northeastern U.S.	A1FI, B1	2090 vs. 1990	JJA MDA8	Northeastern U.S.: +10–25% (A1FI), +0–10% (B1)
Tagaris et al. (2007)	U.S.	A1B	2050 vs. 1990	JJA MDA8	Midwest U.S.: −2.5% Northeastern U.S.: +2.8%
Jacobson (2008)	Global/urban		Present vs. preindustrial CO_2	Jul–Nov means	Mean U.S.: +0.12[h] Los Angeles: +5
Lin et al. (2008a)	Global	A1FI, B1	2090 vs. 1990	JJA MDA8	U.S.: +3–12 (A1FI), +3–6 (B1) Eastern China: +3–12 (A1FI), +1–5 (B1)
Nolte et al. (2008)	Global/U.S.	A1B	2050 vs. 2000	JJA MDA8[i]	Texas, eastern U.S.: +1–8 Midwest, northwestern U.S.: −1–3
Wu et al. (2008a)	Global	A1B	2050 vs. 2000	JJA MDA8	Midwest, northeastern U.S.: +2–5 Southeastern U.S.: insignificant
Avise et al. (submitted for publication)	U.S.	A2	2050 vs. 2000	July MDA8	Northeastern U.S.: +4 Southeastern U.S.: −6
Langner et al. (2005)	Europe	IS92a[j]	2060 vs. 2000	Apr–Sept MDA[k]	South-central Europe: +0–12% Scandinavia: −0–4%
Forkel and Knoche (2006, 2007)	Europe	IS92a	2030 vs. 1990	JJA MDA	N. Italy: +10 S. Germany, E. France: +5–7
Meleux et al. (2007)	Europe	A2, B2	2085 vs. 1975	JJA MDA	West-central Europe: +10–18 (A2), +2–8 (B2)

(See http://dash.harvard.edu/bitstream/handle/1/3553961/Jacob_EffectClimate.pdf?sequence=2)

II. Petitioner's Name and Address

Petitioner's name is Jed Anderson and his address is 6118 Soaring Pine Court, Kingwood, TX 77345.

III. Brief Explanation of the Proposed Rule

The proposed rule would be to revise the Texas SIP(s) to include Section 179B petition(s) for all of the ozone nonattainment regions throughout Texas. The purpose would be to recognize the growing impact of foreign pollution on the ability of Texas to achieve attainment and to rectify the situation where Texas citizens and businesses are paying for the cost of offsetting foreign emissions by further reducing emissions from their own sources in order to make-up for the impact of foreign emissions on NAAQS attainment.

IV. Text of the Proposed Rule

The proposed rule change would be made to the Texas SIP(s) as a SIP revision(s) to the attainment demonstration plan(s). Examples of SIP revisions are provided at the following TCEQ weblink: http://www.tceq.texas.gov/airquality/sip/sipplans.html. A suggested text for inclusion in the SIP narrative, once the underlying Section 179B petition is approved, would be the following:

Foreign Pollutant Transport

The Federal Clean Air Act provides that the State of Texas SIP shall be approved if "the submitting State establishes to the satisfaction of [EPA] that the implementation plan of such State would be adequate to attain [the NAAQS] . . . but for emissions emanating from outside the United States." (42 USC § 7509a). In order to properly reflect the impacts of foreign pollution on the ability of the State of Texas to achieve attainment, and to rectify any situation where Texas citizens and businesses are paying for the cost of offsetting foreign pollution in order to attain the NAAQS, the Commission has submitted and received approval for a Section 179B petition from EPA. The modeling and control strategies in the SIP have therefore been adjusted to properly reflect the contribution from foreign pollution to the States ability to achieve the ozone NAAQS in Texas.

V. Statement of the Statutory Authority for the Rule Petition

Below is the statutory authority allowing the Commission to pursue a Section 179B petition and revise its State Implementation Plan accordingly:

Statutory Authority to Pursue a Section 179B Petition

Section 179B of the Federal Clean Air Act provides the following:

> **A SIP shall be approved if "the submitting State establishes to the satisfaction of [EPA] that the implementation plan of such State would be adequate to attain [the NAAQS] . . . but for emissions emanating from outside the United States." (42 USC § 7509a).**

The State of Texas has already successfully pursued a Section 179B petition for the El Paso nonattainment area (*see* 68 FR 39457 and 59 FR 2532).

Statutory Authority to Revise the SIP

- The Federal Clean Air Act (FCAA), 42 USC, §7410, et. seq., requires states to submit SIP revisions that specify the manner in which the NAAQS will be achieved and maintained within each air quality control region of the state;

- Tex. Health & Safety Code § 382.002, which provides that the policy and purpose of the TCAA is to safeguard the state's air resources from pollution;

- Tex. Health & Safety Code §382.011,which authorizes the commission to control the quality of the state's air;

- Tex. Health & Safety Code §382.012, which authorizes the commission to prepare and develop a general, comprehensive plan for the control of the state's air;

- Tex. Health & Safety Code §382.0172, which delineates the Section 179B petition process;

- Texas Water Code §5.102, General Powers; and

- Texas Water Code §5.013, General Jurisdiction of Commission

VI. Injury or Inequity Resulting from Failure to Adopt the Proposed Rule

The injury and inequity resulting from the failure of the State of Texas to remove the offsetting of foreign greenhouse gas pollution by Texas citizens and businesses in current and future ozone would be significant. It is both unfair and unjust to require Texas citizens and businesses to further reduce their own emissions in order to offset foreign pollution impacts. It is also unfair and unjust to prejudice foreign sources over Texas sources in terms of requiring Texas sources to further reduce their own emissions to allow for more future expected growth from foreign emissions in the SIP planning process.

Based on the above studies, it appears that the State of Texas is currently requiring citizens and businesses to offset foreign greenhouse gas pollution. This impact is expected to increase over the next 40 years—from potentially 1 to 10 ppb. Even if EPA assumed that climate change only increased ozone by 1 ppb in Texas since the industrial revolution, which is lower than what some studies indicate, the Texas ozone SIPs include tens of millions of dollars in additional local NOx and VOC controls to offset the foreign greenhouse gas component of this pollution. According to EPA and TCEQ calculations, it appears that it cost around $150 million to reduce 0.434 ppb of ozone in the Dallas area using the TERP program (see below). That's about $350 million per ppb of ozone reduced.

Excerpts from EPA and TCEQ on Cost-Effectiveness of TERP Program in the DFW Area:

► *Air quality benefits over and above those modeled for the SIP are expected from the additional*

TERP funding. [. . .] A model-based analysis indicating a 14.2 tpd change in NOX, using the EPA's duplication of the TCEQ's Combo 10 and the EPA's sensitivity test, results in an estimated ozone reduction of 0.487 ppb at the Frisco monitor and 0.650 ppb at the Denton monitor. When evaluated over all the DFW monitors, the average reduction is 0.434 ppb. Attachment C: Model-Based Ozone Response Calculations provides additional information about these estimated ozone reductions. (see http://www.tceq.state.tx.us/assets/public/implementation/air/sip/dfw/TCEQ_Response.pdf).

► *In the April 2008 submittal, the TCEQ posited that it could achieve the additional 14.2 tpd of TERP NOX reductions by spending in the DFW area 50% of the FY2008 TERP funds and 70% of the FY2009 TERP funds. Whether funds are spent in exactly these percentages each year however, is not the issue; the essential point is that TCEQ enters into TERP grant contracts worth at least $149,100,000 in the DFW area for projects to achieve 14.2 tpd in calendar years 2008 and early 2009. (see* http://www.gpo.gov/fdsys/pkg/FR-2009-01-14/html/E9-118.htm).

Based on the above TCEQ calculations, if a 1 ppb climate change penalty is assumed, and approximately 80% of this climate change penalty is due to foreign greenhouse gas pollution, then it would have cost approximately $280 million in additional local NOx and VOC controls to demonstrate attainment in the Dallas-Fort Worth area.

National studies have also been conducted on the potential costs of the climate change penalty. According to one study, the estimated annual cost of the climate change penalty for just 5 cities will be $4.1 billion per year in 2049. That means that 80% of this penalty, or $3.28 billion per year, would be paid to offset foreign greenhouse gas pollution via the SIP process.

► **Cost Analysis of Impacts of Climate Change on Regional Air Quality,** *Kuo-Jen Liao, Efthimios Tagaris, Armistead G. Russell, Praveen Amar, Shan He, Kasemsan Manomaiphiboon & Jung-Hun Woo, Journal of the American Waste Management Association, 2012, (see http://www.tandfonline.com/doi/abs/10.3155/1047-3289.60.2.195#.U8QfT_ldWVM).*

- *"On the basis of the IPCC A1B emission scenario and current control technologies, least-cost sets of emission reductions for simultaneously offsetting impacts of climate change on regionally averaged 4th highest daily maximum 8-hr average ozone and yearly averaged [PM.sub.2.5] (particulate matter [PM] with an aerodynamic diameter less than 2.5 [micro]m) for the six regions examined are predicted to range from $36 million (1999$) [yr.sup.-1] in the Southeast to $5.5 billion [yr.sup.-1] in the Northeast. However, control costs to offset climate-related pollutant increases in urban areas can be greater than the regional costs because of the locally exacerbated ozone levels. An annual cost of $4.1 billion is required for offsetting climate-induced air quality impairment in 2049-2051 in the five cities alone. Overall, an annual cost of $9.3 billion is estimated for offsetting climate change impacts on air quality for the six regions and five cities examined."* http://www.highbeam.com/doc/1G1-220015306.html

It must again be emphasized that Texas cannot use foreign emissions as an excuse, but it simply is unfair and unjust to require Texas citizens and businesses to further reduce their own emissions in order to offset foreign emissions impacts and achieve attainment.

For the above reasons it appears incumbent upon the Commission to pursue this Petition for Rulemaking in order to ensure justice and fairness to Texas citizens—and to acknowledge the growing impacts of foreign pollutant transport on the Texas SIP. Most importantly, Petitioner would encourage the Commission to pursue changes to the Clean Air Act to realign authority and responsibility. It's a small multi-pollutant world after all. Time to transform the Clean Air Act for the betterment of our environment, businesses, and our nation. We can make it happen.

VII. Prayer

WHEREFORE, premises considered, Petitioner respectfully requests that the Commission submit a Section 179B petition(s) to EPA in order to address the growing impacts of foreign pollutant transport on ozone nonattainment areas throughout the State of Texas and to revise the Texas SIP accordingly. The Petitioner further prays for any and all other relief to which Petitioner may be entitled.

Respectfully submitted,

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