

Mr. Frederick Weston
The Regulatory Assistance Project
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Mark MacLeod
Environmental Defense
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Austin, TX 78701

Re: Comments of Environmental Defense on Draft Model Regulation for Air Emissions

Dear Mr. Weston,

Environmental Defense appreciates the opportunity to submit these comments on the draft *Model Regulation for the Output of Specified Air Emissions from Smaller-Scale Electric Generation Resources*. Environmental Defense was closely engaged in the development of similar regulations in Texas and believes that this Model Rule could benefit from that experience.

Background

The Texas regulations were predicated on two simultaneously occurring events. The 1999 Texas Electric Restructuring Act gave consumers the right to use distributed generation units (DG) smaller than 10 MW in size. The Public Utility Commission then adopted rules to expedite interconnection of these units, including pre-certification of make and models. At the same time, Texas has been grappling with significant air quality problems with over 70% of the population living in areas with unhealthy air. To address the air quality problem, current State Implementation Plans (SIPs) proposed for Dallas and Houston require powerplant NOx reductions of 88% and 93% respectively; plants located in the rest of eastern Texas must reduce NOx by 50%.

Policymakers became aware that these independent utility and emissions policies were on a collision course. The proliferation of small generation units, lacking meaningful emissions standards, could undermine measures adopted to reduce NOx emissions in the SIPs. Awareness of this problem by the Texas Natural Resource Conservation Commission (TNRCC) created an opportunity to develop rules to prevent excessive emissions growth from small scale or distributed generation sources.

The following table illustrates the potential of increased DG emissions to undermine significant financial investment in emissions reduction technologies for central station power plants. The table demonstrates the impact of 100 MW of additional generation in the Dallas-Ft. Worth nonattainment area from various types of generation, operated for 4 hours at times of peak demand.

Impact on DFW Airshed of Additional 100 MW of Generation by Type

Emissions Comparisons	
New CCGT	0.08 lb/MWh
Existing Gas Plants (2005)	0.23 lb/MWh
Microturbine	0.40 lb/MWh
Gas-powered ICE	3.20 lb/MWh
Diesel ICE	17.0 lb/MWh
Daily NOx Emissions (additional 100 MW, assuming 4 hours peak generation)	
New CCGT	0.02 tons/day
Existing Gas Plants (2005)	0.05 tons/day
Microturbine	0.08 tons/day
Gas-powered ICE	0.64 tons/day
Diesel ICE	3.40 tons/day
Current Daily Cap for entire TXU system (greater than 5,000 MW)	13.8 tons/day

It quickly becomes clear that just 400 MW of diesel-powered generation, operated for only 4 hours a day, could exceed the emissions budget assigned to TXU's entire generation system of more than 5,000 MW. Even the 6.2 lb/MWh standard proposed by some parties would result in emissions of 5 tons a day for 400 MW.

Summary of Texas Permit Provisions

To address the air quality concerns in Texas, the TNRCC adopted a standard permit that applies to newly installed small-scale electric generators. Because Texas' primary air quality concern is ground-level ozone, the permit limitations focus on NOx emissions. The permit does not apply to units that are used exclusively in emergency situations (distribution grid failures) or portable generation units. The permit divides the state into two sections, East Texas which includes the Major metropolitan areas of Dallas-Ft. Worth and Houston as well as mid size cities including San Antonio and Austin, and West Texas which is largely characterized by desert, brush, and plains. Some variance is allowed for units used in a combined heat and power application or fueled with waste gas.

NOx Emissions Limits for Small-Scale electric Generators

East Texas ≤ 10 MW	Above 300 hrs	300 hrs or less
prior to January 1, 2005	0.47 lb/MWh	1.65 lb/MWh
after January 1, 2005	0.14 lb/MWh	0.47 lb/MWh
West Texas ≤ 10 MW		
	3.11 lb/MWh	21 lb/MWh
All Texas > 10 MW		

	0.14 lb/MWh	0.38 lb/MWh
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Implications of the Texas Permit for the Model Rule

The Texas Permit was adopted after nearly a yearlong process. TNRCC Staff attended or hosted two meetings at the request of the major engine manufacturers. There was public testimony on the draft permit, and the resulting decisions of the Commission were broadly viewed as a compromise between several stakeholder positions. The Texas rule demonstrates the principles that aggressive emissions targets, with increasing levels of efficiency is the only pathway to achieve the benefits of greater deployment of distributed generation without imposing additional costs to public health and the economy.

Specific Comments on the Model Rule

Carbon Dioxide. Environmental Defense recommends that the Model Rule adopt the Texas principle of technology-forcing targets and establish standards for 2009 that would require real gains in efficiency. Appropriate targets are: 1300 lbs/MWh for emergency units, 1350 lbs/MWh for peaking units, and 1250 lbs/MWh for baseload units.

Definition of Peaking Unit. Environmental Defense believes that a provision that allows less stringent emissions limitations for units that operate up to 700 hours a year is inappropriate. In all cases where the summertime ozone season is of concern, the operation of peaking units will be coincident with peak ozone days. For this reason, the Texas draft permit never contained a peaking provision. Only at the Final Order meeting, upon strong lobbying by the engine manufacturers, did the TNRCC relent and allow a 300 hour peaking definition. This level should be the maximum for any such provision.

Emergency Units. The Texas permit does not specifically address emergency generators. However, other provisions of the Texas Health and Safety Code expressly limit the operation of those units. They are prohibited from operating “supplemental to the electric grid.” The TNRCC interprets this to mean that any generator that intends to operate for economic reasons (other than a distribution failure) must apply under the new permit or for an NSR permit. In other words, TNRCC regulations restrict operation of backup generators to testing, maintenance, and emergencies. This approach should be reflected in the Model rule. If parties want to establish an hourly operation limit, it should be for no greater than 100 hours a year.

Treatment of Existing Units

While establishment of standards for new generation units is a step in the right direction, as with central station power plants, the existing fleet of generation units represents an even greater stock of actual or potential emissions. Environmental Defense encourages the Regulatory Assistance Project to address existing units in this model rule development or in a subsequent proceeding.

