

Notice Concerning Proposed Kansas Air Quality  
Construction Permit and Public Hearing

Notice is hereby given that the Kansas Department of Health and Environment (KDHE) is soliciting comments regarding a proposed air quality construction permit. Tradewind Energy, Inc. located at 16105 W 113<sup>th</sup> Street, Suite 105, Lenexa, Kansas, 66219, has applied for an air quality construction permit in accordance with the provisions of K.A.R. 28-19-300 to install 10 new spark ignition Wartsila four stroke lean burn (4SLB) reciprocating internal combustion engine (RICE) electric generating units using pipeline quality natural gas. Each engine will be nominally rated at 9.4 megawatts (MW) of electricity for a combined power output of approximately 94 MW. The facility will also include a 3 million British thermal units (MMBtu) per hour gas heater, a 150 horsepower (hp) emergency fire pump, a 324 hp emergency diesel generator, up to 4 circuit breakers, and a 309,000 gallon fuel oil storage tank. The proposed facility, known as the Lacey Randall Generation Facility, LLC (Lacey Randall Generation), will be located in the Southwest Quarter of Section 17, Township 7 South, Range 33 West, Thomas County, Kansas, approximately 3.5 miles northeast of Colby, Kansas.

Emissions of particulate matter (PM), PM equal to or less than 10 microns in diameter (PM<sub>10</sub>), PM equal to or less than 2.5 microns in diameter (PM<sub>2.5</sub>), volatile organic compounds (VOCs), oxides of nitrogen (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>), hazardous air pollutants (HAPs) and greenhouse gases (GHGs) were evaluated during the permit review process.

The proposed permit is to be issued in accordance with the provisions of K.A.R. 28-19-350, *Prevention of Significant Deterioration* (PSD), which adopts the federal standards, procedures and requirements of 40 CFR 52.21 by reference. These air quality regulations apply to major stationary emission sources located in areas designated as “attainment” under the federal Clean Air Act (CAA). Attainment areas are areas where the air quality meets or is better than the National Ambient Air Quality Standards (NAAQS).

The PSD regulations require evaluation of emission reduction techniques to identify the best available control technology (BACT) for each regulated pollutant, including GHGs, for which the emission rate exceeds the PSD significant level. The purpose of BACT is to affect the maximum degree of reduction achievable, taking into account energy, environmental and economic impacts for each regulated pollutant under review. Evaluation of the estimated emissions for the proposed Lacey Randall Generation project indicates that the emission rates of NO<sub>x</sub>, CO, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, VOCs and GHGs all exceed the significance levels. The facility conducted the required BACT analyses. The department has reviewed the BACT analyses for the Lacey Randall Generation Project and concurs with its findings as follows:

- For the Wartsila 4SLB RICE, lean burn combustion with clean burn technology and selective catalytic reduction (SCR) is BACT for NO<sub>x</sub>, oxidation catalyst and good combustion practices are BACT for CO and VOC, combustion controls and low ash fuels are BACT for PM, PM<sub>10</sub> and PM<sub>2.5</sub>, use of efficient lean burn engines, use of pipeline quality natural gas fuel, and good combustion practices are BACT for GHGs;
- For the fuel gas heater, low NO<sub>x</sub> burners are BACT for NO<sub>x</sub>, good combustion practices is BACT for CO, VOC, PM, PM<sub>10</sub>, and PM<sub>2.5</sub>, and use of pipeline quality natural gas as fuel and good combustion practices are BACT for GHGs.
- For the emergency diesel generator, combustion control is BACT for NO<sub>x</sub>, CO, VOC, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and selection of the most efficient engines that meet the project needs is BACT for GHGs;
- For the emergency fire pump, combustion control is BACT for NO<sub>x</sub>, CO, VOC, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and selection of the most efficient engines that meet the project needs is BACT for GHGs.

- For the circuit breakers, use of state-of-the-art enclosed sulfur hexafluoride technology with leak detection systems and a density monitor alarm system is BACT for GHGs.
- For the fuel oil storage tank, the use of a submerged fill pipe is BACT for VOC.

An ambient impact analysis was performed on the potential air emissions of NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and CO from the Lacey Randall Generation project.

- Detailed modeling for the 1-hour and annual NO<sub>2</sub> demonstrated that the proposed Lacey Randall Generation project will not cause or significantly contribute to any violation of the 1-hour or annual NO<sub>2</sub> NAAQS. It also demonstrated that 4.44% of the annual NO<sub>2</sub> Class II area maximum allowable increment is expected to be consumed by the proposed project. EPA has not established a Class II area maximum allowable increment for 1-hour NO<sub>2</sub>. Accordingly, no calculation of the potential consumption of such increment is possible.
- Detailed modeling for PM<sub>10</sub> demonstrated that the proposed Lacey Randall Generation project will not cause or significantly contribute to any violation of the 24-hour PM<sub>10</sub> NAAQS. It also demonstrated that 25.9% of the 24-hour PM<sub>10</sub> and 6.41% of the annual PM<sub>10</sub> Class II area maximum allowable increment is expected to be consumed by the proposed project.
- Detailed modeling for PM<sub>2.5</sub> demonstrated the proposed Lacey Randall Generation project will not cause or significantly contribute to any violation of the 24-hour or annual PM<sub>2.5</sub> NAAQS. It also demonstrated that 86.2% of the 24-hour PM<sub>2.5</sub> and 27.2 % of the annual PM<sub>2.5</sub> Class II area maximum allowable increment are expected to be consumed by the proposed project.
- The CO screening modeling analysis demonstrated no significant impact on the 1- hour or 8-hour ambient air quality and that the emissions would not cause or contribute to any violation of ambient air standards. EPA has not established any Class II maximum allowable increments for CO. Accordingly, no calculation of the potential consumption of such increment is possible.
- An analysis of visibility was conducted for Scott State Park. The VISCREEN model results indicate no exceedances of the screening criteria. No adverse impacts on soils and vegetation in the area are expected.
- Any federal land manager who has reason to believe they may have a class I area adversely impacted by the emissions from the proposed project has the opportunity to present KDHE with a demonstration of the adverse impact on the air quality-related values of the federal class I area during the comment period.

A public comment period has been established to allow citizens the opportunity to express any concerns they may have about this proposed permitting action. The public comment period is to begin on December 19, 2013, and will end on January 21, 2014 at noon. All comments should be submitted in writing to Mindy Bowman, Bureau of Air, 1000 SW Jackson, Suite 310, Topeka, KS 66612-1366.

Any member of the public may request to hold a public hearing to provide comments on the proposed issuance of the draft air quality construction permit. A written request to hold a public hearing should be sent to the attention of Mindy Bowman at the address listed above or by FAX to (785) 291-3953 and must be received by noon on January 21, 2014. *If a pertinent request is received, a public hearing is tentatively scheduled by the Kansas Department of Health and Environment (KDHE), on Wednesday, January 22, 2014, beginning at 5:00 p.m. and continuing until audience members have an opportunity to submit comments. The hearing is tentatively scheduled to be held at the Colby Community Bldg. in the Little Theater Room, located at 285 East 5<sup>th</sup> Street, Colby, Kansas, 67701. If no pertinent requests to hold the public hearing are received by noon January 21, 2014, the public hearing will be cancelled. A notice of the cancellation will be posted at the KDHE website at <http://www.kdheks.gov/bar/publicnotice.html>*

If a hearing is conducted, all interested parties will be given a reasonable opportunity to present their views orally or by submission of written materials during the hearing. In order to give all parties an opportunity to present their views, it may be necessary to limit oral presentations to a specific time limit.

Any individual with a disability may request accommodation in order to participate in the public hearing and may request the proposed materials in an accessible format. Requests for accommodation must be made no later than Monday, January 13, 2014 by contacting *the Bureau of Air* at (785) 296-6421.

A copy of the proposed permit, permit application, all supporting documentation, and all information relied upon during the permit application review process for the PSD permit are available for public review for a period of 30 days from the date of publication during normal business hours (8:00 AM to 5:00 PM) at the KDHE, Bureau of Air (BOA), 1000 SW Jackson, Suite 310, Topeka, KS 66612-1366 and at the KDHE Northwest District Office, 2301 East 13<sup>th</sup> Street, Hays, KS 67601-2651. To obtain or review the proposed permit and supporting documentation, contact Mindy Bowman, (785) 296-6421, at the KDHE central office, or Larissa Parker, (785) 625-5663, at the KDHE Northwest District Office. The standard departmental cost will be assessed for any copies requested.

These same materials are available, free of charge, at the KDHE Bureau of Air website, <http://www.kdheks.gov/bar/index.html>.

Robert Moser, MD, Secretary  
Kansas Department of Health and Environment