



**WRITTEN-ONLY REMARKS**

**TO: Joint Committee on Energy and Environmental Policy**

**FROM: The Empire District Electric Company  
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**RE: EPA Regulations Update**

**DATE: November 19, 2012**

Empire outlined these environmental considerations in their 2012 Third Quarter 10K filing, which is available on their website:

[www.empiredistrict.com](http://www.empiredistrict.com)

**Environmental Matters**

We are subject to various federal, state, and local laws and regulations with respect to air and water quality and with respect to hazardous and toxic materials and hazardous and other wastes, including their identification, transportation, disposal, record-keeping and reporting, as well as remediation of contaminated sites and other environmental matters. We believe that our operations are in material compliance with present environmental laws and regulations. Environmental requirements have changed frequently and become more stringent over time. We expect this trend to continue. While we are not in a position to accurately estimate compliance costs for any new requirements, we expect any such costs to be material, although recoverable in rates.

***Electric Segment***

**Air**

The Federal Clean Air Act (CAA) and comparable state laws regulate air emissions from stationary sources such as electric power plants through permitting and/or emission control and related requirements. These requirements include maximum emission limits on our facilities for

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sulfur dioxide (SO<sub>2</sub>), particulate matter, nitrogen oxides (NO<sub>x</sub>) and mercury. In the future they are also likely to include limits on other hazardous pollutants (HAPs) and so-called greenhouse gases (GHG) such as carbon dioxide (CO<sub>2</sub>) and methane.

### Permits

Under the CAA we have obtained, and renewed as necessary, site operating permits, which are valid for five years, for each of our plants.

### Compliance Plan

In order to comply with forthcoming environmental regulations, Empire is taking actions to implement its compliance plan and strategy (Compliance Plan). While the Cross State Air Pollution Rule (CSAPR) that was set to take effect on January 1, 2012 was stayed in late December 2011 then vacated in August 2012 by the District of Columbia Circuit Court of Appeals, the Mercury Air Toxics Standard (MATS) was signed by the Environmental Protection Agency (EPA) Administrator on December 16, 2011 and became effective on April 16, 2012. MATS requires compliance by April 2015 (with flexibility for extensions for reliability reasons). Our Compliance Plan largely follows the preferred plan presented in our most recent Integrated Resource Plan. As described above under New Construction, we have begun the installation of a scrubber, fabric filter, and powder activated carbon injection system at our Asbury plant. The addition of this air quality control equipment is expected to be completed by early 2015 at a cost ranging from \$112 million to \$130 million, excluding AFUDC. Initial construction costs through September 30, 2012 were \$24.2 million for 2012 and \$25.4 million for the project to date, excluding AFUDC. The addition of this air quality control equipment will require the retirement of Asbury Unit 2, an 18 megawatt steam turbine that is currently used for peaking purposes.

In September 2012, we completed the transition of our Riverton Units 7 and 8 from operation on coal to operating completely on natural gas. Riverton Units 7 and 8, along with Riverton Unit 9, a small combustion turbine that requires steam from Unit 7 or 8 for start-up, will be retired upon the conversion of Riverton Unit 12, a simple cycle combustion turbine, to a combined cycle unit. This conversion is currently scheduled to be completed in 2016.

### SO<sub>2</sub> Emissions

The CAA regulates the amount of SO<sub>2</sub> an affected unit can emit. Currently SO<sub>2</sub> emissions are regulated by the Title IV Acid Rain Program and the Clean Air Interstate Rule (CAIR). On January 1, 2012, CAIR was to have been replaced by the Cross-State Air Pollution Rule (CSAPR- formerly the Clean Air Transport Rule). But, on December 30, 2011 the District of Columbia Circuit Court of Appeals issued a stay of the CSAPR. On August 21, 2012, following the review of the case challenging the CSAPR, the Court released its decision that the CSAPR will be vacated and CAIR will remain in effect until the EPA develops a valid replacement for CAIR. In addition, on October 5, 2012, the Department of Justice, on behalf of the EPA, requested that the Court of Appeals grant a request for a re-hearing of CSAPR. In the meantime both the Title IV Acid Rain Program and CAIR will remain in effect.

The Mercury Air Toxics Standards (MATS), discussed further below, was signed on December 16, 2011, and will affect SO<sub>2</sub> emission rates at our facilities. In addition, the compliance date for the revised SO<sub>2</sub> National Ambient Air Quality Standards (NAAQS) is August of 2017; this will also affect SO<sub>2</sub> emissions from our facilities. The SO<sub>2</sub> NAAQS is discussed in more detail below.

#### Title IV Acid Rain Program:

Under the Title IV Acid Rain Program, each existing affected unit has been allocated a specific number of emission allowances by the U.S. Environmental Protection Agency (EPA). Each allowance entitles the holder to emit one ton of SO<sub>2</sub>. Covered utilities, such as Empire, must have emission allowances equal to the number of tons of SO<sub>2</sub> emitted during a given year by each of their affected units. Allowances in excess of the annual emissions are banked for future use. In 2011, our SO<sub>2</sub> emissions exceeded the annual allocations. This deficit was covered by our banked allowances. We estimate our Title IV Acid Rain Program SO<sub>2</sub> allowance bank plus annual allocations will be more than our projected emissions through 2016. Long-term compliance with this program will be met by the Compliance Plan detailed above along with possible procurement of additional SO<sub>2</sub> allowances. We expect the cost of compliance to be fully recoverable in our rates.

#### CAIR:

In 2005, the EPA promulgated CAIR under the CAA. CAIR generally calls for fossil-fueled power plants greater than 25 megawatts to reduce emission levels of SO<sub>2</sub> and/or NO<sub>x</sub> in 28 eastern states and the District of Columbia, including Missouri, where our Asbury, Energy Center, State Line and Iatan Units No. 1 and No. 2 are located. Kansas was not included in CAIR and our Riverton Plant was not affected. Arkansas, where our Plum Point Plant is located, was included for ozone season NO<sub>x</sub> but not for SO<sub>2</sub>.

In 2008, the U.S. Court of Appeals for the District of Columbia vacated CAIR and remanded it back to EPA for further consideration, but also stayed its vacatur. As a result, CAIR became effective for NO<sub>x</sub> on January 1, 2009 and for SO<sub>2</sub> on January 1, 2010 and required covered states to develop State Implementation Plans (SIPs) to comply with specific SO<sub>2</sub> state-wide annual budgets.

SO<sub>2</sub> allowance allocations under the Title IV Acid Rain Program are used for compliance in the CAIR SO<sub>2</sub> Program. Beginning in 2010, SO<sub>2</sub> allowances were utilized at a 2:1 ratio for our Missouri units. As a result, based on current SO<sub>2</sub> allowance usage projections, we expected to have sufficient allowances to take us through 2016.

In order to meet CAIR requirements for SO<sub>2</sub> and NO<sub>x</sub> emissions (NO<sub>x</sub> is discussed below in more detail) and as a requirement for the air permit for Iatan 2, a Selective Catalytic Reduction system (SCR), a Flue-Gas Desulfurization (FGD) scrubber system and baghouse were installed at our jointly-owned Iatan 1 plant and a SCR was installed at our Asbury plant in 2008. Our jointly-owned Iatan 2 and Plum Point plants were originally constructed with the above technology.

#### CSAPR- formerly the Clean Air Transport Rule:

On July 6, 2010, the EPA published a proposed CAIR replacement rule entitled the Clean Air Transport Rule (CATR). As proposed and supplemented, the CATR included Missouri and Kansas under both the annual and ozone season for NO<sub>x</sub> as well as the SO<sub>2</sub> program while Arkansas remained in the ozone season NO<sub>x</sub> program only. The final CATR was released on July 7, 2011 under the name of the CSAPR, and was set to become effective January 1, 2012. However, as mentioned above, the District of Columbia Circuit Court of Appeals vacated CSAPR on August 21, 2012, and the CAIR will be in effect until a valid replacement for CAIR is developed by the EPA. In addition, on October 5, 2012 the EPA petitioned the Court to re-hear the case against CSAPR. When it was published, the final CSAPR required a 73% reduction in

SO2 from 2005 levels by 2014. The SO2 allowances allocated under the EPA's Title IV Acid Rain Program cannot be used for compliance with CSAPR but would continue to be used for compliance with the Title IV Acid Rain Program. Therefore, new SO2 allowances would be allocated under CSAPR and retired at one allowance per ton of SO2 emissions emitted. Based on current projections, we would receive more SO2 allowances than would be emitted. Long-term compliance with this Rule will be met by the Compliance Plan detailed above along with possible procurement of additional SO2 allowances. A number of states, including Kansas, various electric utilities and industrial organizations commenced litigation in the District of Columbia Court of Appeals and challenged the CSAPR, resulting in the August 2012 vacatur of the rule. We anticipate compliance costs associated with CAIR or its subsequent replacement to be recoverable in our rates.

#### Mercury Air Toxics Standard (MATS):

The MATS standard was fully implemented and effective as of April 16, 2012, thus requiring compliance by April 16, 2015 (with flexibility for extensions for reliability reasons). The MATS regulation does not include allowance mechanisms, instead, it establishes alternative standards for certain pollutants, including SO2 (as a surrogate for hydrogen chloride (HCl)), which must be met to show compliance with hazardous air pollutant limits (see additional discussion in the MATS section below).

#### SO2 National Ambient Air Quality Standard (NAAQS):

In June 2010, the EPA finalized a new 1-hour SO2 NAAQS which, for areas with no SO2 monitor, originally required modeling to determine attainment and non-attainment areas within each state, but in April 2012, the EPA announced that it is reconsidering this approach. The modeling of emission sources was to have been completed by June 2013 with compliance with the SO2 NAAQS required by August 2017. Because the EPA is reconsidering the compliance determination approach, the compliance time-frame may be pushed back. Draft guidance for 1-hour SO2 NAAQS has been published by the EPA to assist states as they prepare their SIP submissions. The EPA is also planning a rulemaking to address some of the 1-hour SO2 NAAQS implementation program elements. It is likely coal-fired generating units will need scrubbers to be capable of meeting the new 1-hour SO2 NAAQS. In addition, units will be required to include SO2 emissions limits in their Title V permits or execute consent decrees to assure attainment and future compliance.

#### NOx Emissions

The CAA regulates the amount of NOx an affected unit can emit. As currently operated, each of our affected units is in compliance with the applicable NOx limits. Currently, revised NOx emissions are limited by the CAIR as a result of the vacated CSAPR rule and by ozone NAAQS rules (discussed below) which were established in 1997 and in 2008.

#### CAIR:

The CAIR required covered states to develop SIPs to comply with specific annual NOx state-wide allowance allocation budgets. Based on existing SIPs, we had excess NOx allowances during 2011 which were banked for future use and will be sufficient for compliance at least through the end of 2016. The CAIR NOx program also was to have been replaced by the CSAPR program January 1, 2012 but because the Court vacated CSAPR, CAIR will remain in effect until the EPA develops a valid replacement for CAIR.

#### CSAPR:

As published, the CSAPR would have required a 54% reduction in NOx from 2005 levels by 2014. The NOx annual and ozone season allowances that were allocated and banked under CAIR could not be used for compliance under CSAPR. New allowances would have been issued under CSAPR. However, as discussed above, CSAPR was vacated by the District of Columbia Court of Appeals on August 21, 2012. On October 5, 2012, the EPA petitioned for a re-hearing.

#### Ozone NAAQS:

Ozone, also called ground level smog, is formed by the mixing of NOx and Volatile Organic Compounds (VOCs) in the presence of sunlight. On January 6, 2010, the EPA proposed to lower the primary NAAQS for ozone designed to protect public health to a range between 60 and 70 ppb and to set a separate secondary NAAQS for ozone designed to protect sensitive vegetation and ecosystems.

On September 2, 2011, President Obama ordered the EPA to withdraw proposed air quality standards lowering the 2008 ozone standard pending the CAA 2013 scheduled reconsideration of the ozone NAAQS (the normal 5 year reconsideration period). States will move forward with area designations based on the 2008 75 ppb standard using 2008-2010 quality assured monitoring data. Our service territory will be designated as attainment, meaning it will be in compliance with the standard. In the interim, the 1997 ozone NAAQS will remain in effect.

#### PM NAAQS:

Particulate matter (PM) is the term for particles found in the air which comes from a variety of sources. On June 14, 2012 the US EPA proposed the following actions: 1) to strengthen the annual PM 2.5 (particle size (microns)) NAAQS, also known as fine particulate matter and 2) set a separate 24-hour PM 2.5 standard to improve visibility primarily in urban areas. The EPA plans to take final action by December 14, 2012 and states are required to meet the primary standard in 2020.

Currently, the proposed standards should have no impact on our existing generating fleet because the PM 2.5 ambient monitor results are below the level required by these proposed standards. However, the proposed standards could impact future major modifications/construction projects that require a Prevention of Significant Deterioration (PSD) permit.

#### Mercury Air Toxics Standard (MATS)

In 2005, the EPA issued the Clean Air Mercury Rule (CAMR) under the CAA. It set limits on mercury emissions by power plants and created a market-based cap and trade system expected to reduce nationwide mercury emissions in two phases. New mercury emission limits for Phase 1 were to go into effect January 1, 2010. On February 8, 2008, the U.S. Court of Appeals for the District of Columbia vacated CAMR. This decision was appealed to the U.S. Supreme Court which denied the appeal on February 23, 2009.

The EPA issued Information Collection Requests (ICR) for determining the National Emission Standards for Hazardous Air Pollutants (NESHAP), including mercury, for coal and oil-fired electric steam generating units on December 24, 2009. The ICRs included our Iatan, Asbury and Riverton plants. All responses to the ICRs were submitted as required. The EPA

ICRs were intended for use in developing regulations under Section 112(r) of the CAA maximum achievable emission standards for the control of the emission of hazardous air pollutants (HAPs), including mercury. The EPA proposed the first ever national mercury and air toxics standards (MATS) in March 2011, which became effective April 16, 2012. MATS establishes numerical emission limits to reduce emissions of heavy metals, including mercury (Hg), arsenic, chromium, and nickel, and acid gases, including HCl and hydrogen fluoride (HF). For all existing and new coal-fired electric utility steam generating units (EGUs), the proposed standard will be phased in over three years, and allows states the ability to give facilities a fourth year to comply.

The MATS regulation of HAPs in combination with CSAPR is the driving regulation behind our Compliance Plan and its implementation schedule. We expect compliance costs to be recoverable in our rates.

### Greenhouse Gases

Our coal and gas plants, vehicles and other facilities, including EDG (our gas segment), emit CO<sub>2</sub> and/or other Greenhouse Gases (GHGs) which are measured in Carbon Dioxide Equivalents (CO<sub>2</sub>e).

On September 22, 2009, the EPA issued the final Mandatory Reporting of Greenhouse Gases Rule under the CAA which requires power generating and certain other facilities that equal or exceed an emission threshold of 25,000 metric tons of CO<sub>2</sub>e to report GHGs to the EPA annually commencing in September 2011. EDE and EDG's GHG emissions for 2010 and 2011 have been reported as required to the EPA.

On December 7, 2009, responding to a 2007 U.S. Supreme Court decision that determined that GHGs constitute "air pollutants" under the CAA, the EPA issued its final finding that GHGs threaten both the public health and the public welfare. This "endangerment" finding did not itself trigger any EPA regulations, but was a necessary predicate for the EPA to proceed with regulations to control GHGs. Since that time, a series of rules including the Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule (Tailoring Rule) have been issued by the EPA and several parties have filed petitions with the EPA and lawsuits have been filed challenging these rules. On June 26, 2012, the D.C. Circuit Court issued its opinion in the principal litigation of the EPA GHG rules (Endangerment, the Tailoring Rule, GHG emission standards for light-duty vehicles, and the EPA's rule on reconsideration of the PSD Interpretive Memorandum). The three-judge panel upheld the EPA's interpretation of the Clean Air Act provisions as unambiguously correct. This opinion solidifies the EPA's position that the CAA requires PSD and Title V permits for major emitters of greenhouse gases, such as Empire. Our ongoing projects are currently being evaluated for the projected increase or decrease of CO<sub>2</sub>e emissions as required by the Tailoring Rule.

As the result of an agreement to settle litigation pending in the U.S. Court of Appeals, on March 27, 2012, the EPA proposed a Carbon Pollution Standard for new power plants. This action is designed to limit the amount of carbon emitted by electric utility generating units. The New Source Performance Standard would require all new power plants to meet a CO<sub>2</sub> emissions limit of 1,000 pounds per megawatt hour. This is equal to a coal-fired power plant capturing 50% or more of its emissions. The rule does offer some flexibility but would still require an average of 1,000 pounds per megawatt hour over a 30-year period. It is expected that most new natural gas-fired combined cycles will meet the new standard. The proposed rule would apply only to new fossil-fuel-fired electric utility generating units. The proposal would not apply to existing units including modifications such as changes needed to meet other air pollution standards such as is currently being undertaken by the Asbury facility. At this time, the

EPA has publicly announced no plans to restrict GHG emissions from existing power plants, but we expect proposed regulations in the future. Comments for the proposed regulation are currently under consideration by the EPA, and Empire will determine the impact on the Riverton Unit 12 conversion after the final rule is released. At this time, the regulation does not propose a standard of performance for modifications, and we do not expect the Riverton 12 combined cycle permitting to be affected.

A variety of proposals have been and are likely to continue to be considered by Congress to reduce GHGs. Proposals are also being considered in the House and Senate that would delay, limit or eliminate EPA's authority to regulate GHGs. At this time, it is not possible to predict what legislation, if any, will ultimately emerge from Congress regarding control of GHGs.

Certain states have taken steps to develop cap and trade programs and/or other regulatory systems which may be more stringent than federal requirements. For example, Kansas is a participating member of the Midwestern Greenhouse Gas Reduction Accord (MGGRA), one purpose of which is to develop a market-based cap and trade mechanism to reduce GHG emissions. The MGGRA has announced, however, that it will not issue a CO<sub>2</sub>e regulatory system pending federal legislative developments. Missouri is not a participant in the MGGRA.

The ultimate cost of any GHG regulations cannot be determined at this time. However, we expect the cost of complying with any such regulations to be recoverable in our rates.

## **Water Discharges**

We operate under the Kansas and Missouri Water Pollution Plans that were implemented in response to the Federal Clean Water Act (CWA). Our plants are in material compliance with applicable regulations and have received necessary discharge permits.

The Riverton Units 7 and 8 and Iatan Unit 1, which utilize once-through cooling water, were affected by regulations for Cooling Water Intake Structures issued by the EPA under the CWA Section 316(b) Phase II. The regulations became final on February 16, 2004. In accordance with these regulations, we submitted sampling and summary reports to the Kansas Department of Health and Environment (KDHE) which indicate that the effect of the cooling water intake structure on Empire Lake's aquatic life is insignificant. KCP&L, who operates Iatan Unit 1, submitted the appropriate sampling and summary reports to the Missouri Department of Natural Resources (MDNR).

In 2007 the United States Court of Appeals for the Second Circuit remanded key sections of these CWA regulations to the EPA. As a result, the EPA suspended the regulations and revised and signed a pre-publication proposed regulation on March 28, 2011. The EPA has secured an additional year to finalize the standards for cooling water intake structures under a modified settlement agreement. The EPA is obligated to finalize the rule by July 27, 2013. We will not know the full impact of these rules until they are finalized. If adopted in their present form, we expect regulations of Cooling Water Intake Structures issued by the EPA under the CWA Section 316(b) to have an impact at Riverton ranging from minor improvements to the cooling water intake structure to retirement of units 7 and 8. Impacts at Iatan 1 could range from flow velocity reductions or traveling screen modifications for fish handling to installation of a closed cycle cooling tower retrofit. Our new Iatan Unit 2 and Plum Point Unit 1 are covered by the proposed regulation but were constructed with cooling towers, the proposed Best Technology Available. We expect them to be unaffected or minimally impacted by the final rule.

## Surface Impoundments

We own and maintain coal ash impoundments located at our Riverton and Asbury Power Plants. Additionally, we own a 12% interest in a coal ash impoundment at the Iatan Generating Station and a 7.52% interest in a coal ash impoundment at Plum Point. The EPA has announced its intention to revise its wastewater effluent limitation guidelines under the CWA for coal-fired power plants sometime in 2012. Once the new guidelines are issued, the EPA and states would incorporate the new standards into wastewater discharge permits, including permits for coal ash impoundments. We do not have sufficient information at this time to estimate additional costs that might result from any new standards. All of the coal ash impoundments are compliant with existing state and federal regulations.

On June 21, 2010, the EPA proposed a new regulation pursuant to the Federal Resource Conservation and Recovery Act (RCRA) governing the management and storage of Coal Combustion Residuals (CCR). In the proposal, the EPA presents two options: (1) regulation of CCR under RCRA subtitle C as a hazardous waste and (2) regulation of CCR under RCRA subtitle D as a non-hazardous waste. The public comment period closed in November 2010. It is anticipated that the final regulation will be published in late 2012. We expect compliance with either option as proposed to result in the need to construct a new landfill and the conversion of existing ash handling from a wet to a dry system(s) at a potential cost of up to \$15 million at our Asbury and Riverton Power Plants. This preliminary estimate will likely change based on the final CCR rule and its requirements. We expect resulting costs to be recoverable in our rates.

On September 23, 2010 and on November 4, 2010 representatives from GEI Consultants, on behalf of the EPA, conducted on-site inspections of our Riverton and Asbury coal ash impoundments, respectively. The consultants performed a visual inspection of the impoundments to assess the structural integrity of the berms surrounding the impoundments, requested documentation related to construction of the impoundments, and reviewed recently completed engineering evaluations of the impoundments and their structural integrity. In response to the inspection comments, a qualified engineering firm has been selected to complete the recommended geotechnical studies and install new flow monitoring devices and settlement monuments at both coal ash impoundments. Draft project reports for both plants are being developed. The final report is expected to be completed by December 2012. The project will comply with all corrective measures and recommendations made by the EPA in the site assessment reports.



Empire District, a Kansas corporation, located at 602 S. Joplin Ave., Joplin, Missouri is an investor-owned utility serving over 169,000 electric and 44,000 natural gas customers in the states of Missouri, Kansas, Oklahoma and Arkansas. Our electric service territory includes Cherokee County in southeast Kansas.

