



2021 SPS New Mexico Integrated Resource Plan: 2nd Public Advisory Meeting

8/20/2020

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TOPICS FOR DISCUSSION

- Emerging Environmental Impacts for SPS
- Harrington National Ambient Air Quality Standards (NAAQS) Compliance
- Questions and Discussion
- Future Meeting Topics
- Next Meeting



ENVIRONMENTAL IMPACTS FOR SPS

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8/20/2020

MAJOR REGULATIONS AFFECTING SPS

Cross-State Air Pollution Rule (CSAPR)

- Environmental Protection Agency (EPA) adopted in 2011 (Xcel Energy (SPS) made comments and sued EPA)
- Two Main Issues – Texas' Inclusion and EPA Disapproval of Texas State Plan
- DC Circuit Court Stayed CSAPR - December 30, 2011
- Litigation went from DC Circuit Court to Supreme Court and back
- CSAPR largely upheld, but Texas emission budgets were found to over-control and were remanded to EPA

MAJOR REGULATIONS AFFECTING SPS

Cross-State Air Pollution Rule (CSAPR) continued...

- CSAPR program took effect January 1, 2015
- EPA made summer nitrogen oxides (NO_x) budget tighter, and removed Texas from CSAPR limits for annual NO_x and sulfur dioxide (SO₂) in 2016-17
- Changes in SPS since 2011 (added wind and transmission)
- Compliance Strategy – dispatch and allowance purchase
- As of now, no additional controls required

MAJOR REGULATIONS AFFECTING SPS

EGU MACT – MATS Rule Regulates

- Mercury (Hg)
- Particulate Matter (PM) – surrogate for toxic non-mercury metals
- Hydrogen Chloride (HCl) – surrogate for all toxic acid gases
- Compliance Strategy – Activated carbon injection (ACI) and PM Averaging Plan for Harrington 1, Harrington 2, & Harrington 3.
- 2015 Compliance (Tolk and Harrington)

MAJOR REGULATIONS AFFECTING SPS

Coal Combustion Residuals (CCR) Rules

- Regulation of coal ash as nonhazardous
- Increased landfill construction & monitoring requirements once our ash becomes non-saleable
- Potential to affect ash sales – 100% beneficial use

MAJOR REGULATIONS AFFECTING SPS

Affordable Clean Energy Rule (ACE)

- 2018 ACE Rule replaces EPA's Clean Power Plan
- Seeks carbon dioxide (CO₂) reduction through the implementation of Heat Rate Improvement (HRI)
- Impacts Harrington and Tolk in SPS (combustion turbine sources not impacted by ACE)
- Prescriptive list of 7 “candidate technologies” for HRI
- Tasks states with defining unit level plan for compliance
- Compliance 2024

MAJOR REGULATIONS AFFECTING SPS

Affordable Clean Energy Rule (ACE) continued...

- Compliance demonstrated by proposing heat rate improvement that translates to a CO₂ reduction as measured by Continuous Emission Monitoring System (CEMS) (CO₂ lb/net or gross MW basis)
- Baseline CO₂ established from historical data
- Compliance demonstrated by reduction of “X%” from baseline
- States may consider remaining useful life in establishing standard of performance

MAJOR REGULATIONS AFFECTING SPS

Affordable Clean Energy Rule (ACE) continued...

- Texas Commission on Environmental Quality (TCEQ) has issued preliminary information request for impacted sources seeking baseline CO₂ and heat rate information
- Due back October 30th, 2020
- Harrington units will no longer be subject to following fuel switching to gas
- Currently compiling information for Tolk 1 and 2

MAJOR REGULATIONS AFFECTING SPS

Threatened and Endangered Species

- Sand Dune Lizard
- Lesser Prairie Chicken

Avian Protection Plan

- APP

REGULATIONS NOT IMPACTING SPS

- CCR – Coal Combustion Residual rule or Ash Rule
- 316(b) – Water Intake Structure Rule
- WOTUS – Waters of the United States

RECENT PERMITTING ACTIONS IN SPS

- Tolk Permit Reissuance
 - Will likely result in carbon monoxide (CO) continuous monitoring
 - Additional volatile organic compounds (VOC) stack testing
- City of Amarillo and Nichols/Harrington Wastewater Permit
- Sagamore
- Hale
- Potential for additional renewables



HARRINGTON NAAQS COMPLIANCE

8/20/2020

HARRINGTON STATION – NAAQS COMPLIANCE

- Thunder Basin (WY) low-sulfur coal
- Unit 1 – 347 MW – 1976 [45]
- Unit 2 – 347 MW – 1978 [43]
- Unit 3 – 347 MW – 1980 [41]
- 1,041 MW net capability
- Amarillo City effluent cooling water source



BACKGROUND

- The Clean Air Act requires the EPA to set NAAQS (including SO₂)
- In December 2016, TCEQ installed an SO₂ monitor in the vicinity of Harrington Station to collect ambient air data
- Readings from the monitor exceed the standards
- Harrington emits ~99% of the SO₂ emissions in Potter County
- Emphasis will be on SPS to produce implementation plan
- Anticipated compliance date: By 2025

HARRINGTON STATION – NAAQS COMPLIANCE

- None of the three coal units at Harrington have SO₂ scrubbers
 - There has not been a question on SO₂ emission compliance in the past
- In June 2016, the federal EPA deemed Potter County as ‘unclassifiable’ for SO₂ emissions under the NAAQS
- TCEQ installed an air monitor near Harrington Station in December 2016
 - Under NAAQS, TCEQ must get a three-year average of SO₂ emissions to determine if sources in the area exceed the NAAQS standard
- In March 2020, the TCEQ provided SPS information indicating an alleged violation of the NAAQS requirements and referral to enforcement. [115 parts per billion vs 75 ppb NAAQS standard]

HARRINGTON STATION - NAAQS COMPLIANCE

- We believe NAAQS SO₂ emissions compliance will need to be achieved by 2025 – TCEQ has authority to force changes at Harrington to achieve the NAAQS
- Options to achieve compliance are:
 - Install scrubbers
 - Retire units (lose 1100 MW capacity)
 - Convert to natural gas-fueled boilers
- Scrubbers on each unit would cost about \$180 million each
 - The Harrington units have less than 11 to 15 years life at the year 2025
- Least-cost plan is to retro-fit boilers to burn natural gas
- SPS will build a 20-mile approximately \$45 million pipeline to bring more gas supply
 - Boiler burner retro-fits investment is approximately \$10 million

QUESTIONS & DISCUSSION

TOPICS FOR FUTURE MEETINGS

- Sales and Load Forecasting
- Gas & Power Markets
- Coal Supply
- Demand-side Management and Energy Efficiency
- Energy Storage

NM IRP DETAILS

- Web Page -

https://www.xcelenergy.com/company/rates_and_regulations/resource_plans/2022_new_mexico_integrated_resource_plan

** Note: For the Service Area, click on New Mexico. At the bottom of the page click on the Public Advisory Meeting tab, then click on the date for the first public meeting*

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NEXT MEETING

Date: January 12, 2021

Time: 10:00 a.m. Mountain Time

Location: Zoom Meeting

