

IMPACTS of EPA's CLEAN POWER PLAN

KANSAS CITY BOARD of PUBLIC UTILITIES

February 8, 2016



Impacts of the Clean Power Plan (CPP)

- The CPP will be detrimental to the Kansas City Board of Public Utilities (BPU) customers and lower income earners in the service area, and will cause an estimated 20% electric rate increase without escalation cost
- Total added costs to comply with CPP in years 2022-2030 is expected to be between \$175 and \$480 million.
- CPP will potentially cause stranded assets including a \$250,000,000 air pollution control project initiated prior to the CPP to comply with CSAPR and MATS
- BPU expects a negative impact on reliability
- BPU supports comments filed by the Kansas Department of Health and Environment (KDHE) and all other Kansas utilities

CPP Impact on Rate Payers

- BPU generation and production costs have direct impact on the citizens of this county and in turn industry that relies on reliable and affordable power
- Since consumer spending accounts for 70% of the GDP, the cost associated with the CPP could cause catastrophic effects on the citizens of this country and in particular Wyandotte County
- Wyandotte County has the lowest income earners in the state of Kansas and our county would be one of the most heavily impacted by the CPP regulation



Impact on Wyandotte County Rate Payers

- Median household income in Wyandotte County is \$39,326 with a per capita income of \$18,753
- Home ownership rate is 63%
- Persons living below poverty level in Wyandotte County is 24.4%, and in the state of Kansas it is 12.4% - nearly double in Wyandotte County
- 38% of children live in poverty in Wyandotte County
- 81% of children participate in the free or reduced lunch program for the poor, compared to 47% statewide
- 6% of BPU residential customers are on arranged electric bill payments, and 8% are in the queue for electric service disconnection due to nonpayment



Loss of Operation and Stranded Investments/Assets Under CPP

- Limited operation and rapid call-up of units to accommodate irregularities in renewables availabilities cause unit wear and tear and additional maintenance
- Depending on compliance options chosen under the CPP, our only coal unit could likely encounter a generation production reduction of 35%-70%
- Partially stranded investments include \$250 Million in air quality control upgrades invested prior to the proposed CPP rule in order to comply with the Cross State Air Pollution Control Rule and the Mercury and Air Toxics Rule



Stranded Investments/Assets Under CPP

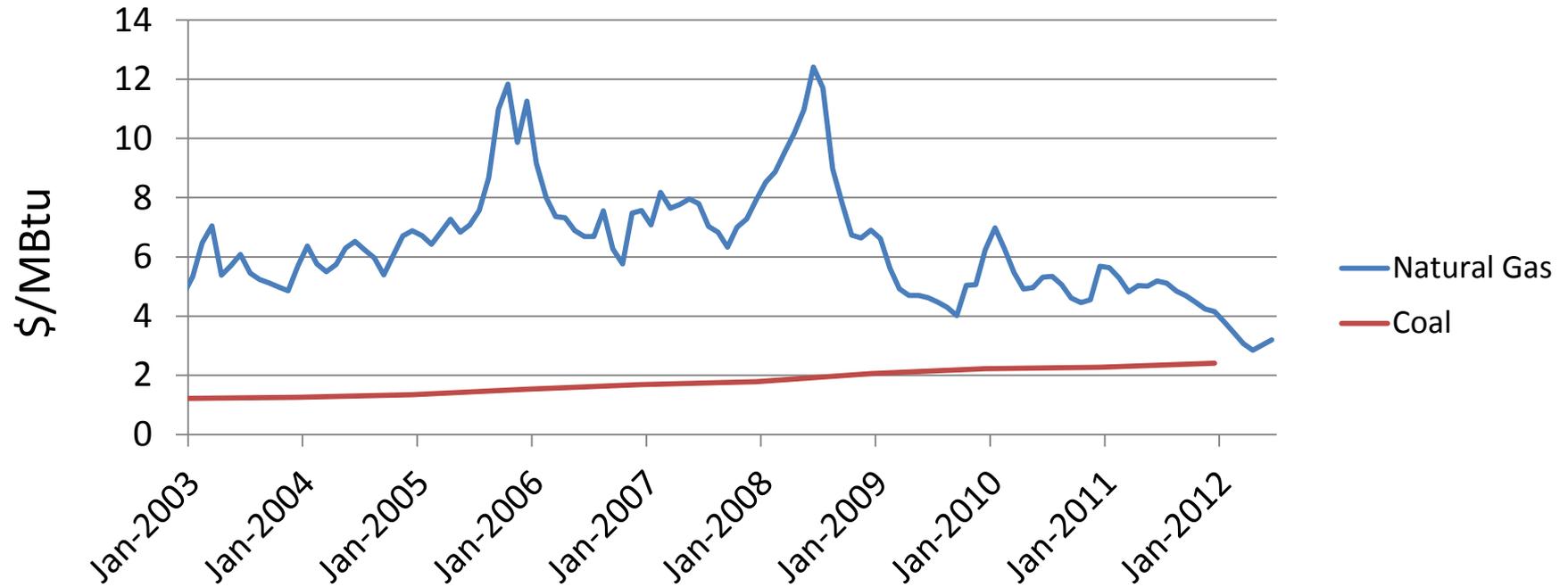
- BPU's \$250 million emission control installation at Nearman Creek Power Plant include: Selective Catalytic Reduction (SCR) to control NO_x, a Circulating Dry Scrubber (CDS) to control SO₂ and acid gases, Powdered Activated Carbon (PAC) system to reduce mercury emissions, and a Pulse Jet Fabric Filter (PJFF) to capture particulate matter, mercury, SO₂, and acid gases
- BPU evaluated cost to switch to natural gas and abandon our air quality control project (with the exception of the SCR). This would cost BPU close to \$200 Million
- Cost for installing natural gas at Nearman Power is approximately \$24 Million alone



Local Reliability Under CPP - Major Concern

- BPU is in a Frequently Constrained Area served by a 69kV system
- If our only coal producing unit, Nearman Creek, is unable to operate due to CPP standards, our service area may lack reliable local generation
- Lack of reliable local generation may be susceptible to load trimming or even potential blackouts
- Natural gas shortages are expected to become more prevalent as natural gas demand increases due to various EPA regulations

VOLATILITY OF NATURAL GAS



Source: EIA 2012



BPU Local Transmission Concerns & Cost

- To handle transmission coming and leaving our service area at a higher voltage, BPU will need to improve our internal system which will be expedited to meet the CPP
- Total cost for necessary upgrades to maintain reliable transmission is \$171 Million. Cost will increase due to timeline of the CPP
- Improvements to transmission lines into our service area also require upgrades to prevent reliability issues under the CPP



State Plan vs. Federal Plan

- States and utilities will have to accept a Federal Plan if State Plan is not developed
- EPA's proposed Federal Plan will end up in the form of either a Rate-based or Mass-based "Trading" rule
- EPA is currently pushing for a Mass-based plan
- EPA will promulgate the same approach for every state under a Federal Plan - whether it is Mass-based or Rate-based



State Plan vs. Federal Plan & Trading

- BPU strongly supports KDHE in developing a State Plan in lieu of a Federal Plan that may limit Kansas and its utilities, increase stranded investments and have an impact on rate payers and local reliability
- The ability to transfer credits is needed
- BPU believes submitting a state plan provides the most economic and viable path to meet the CPP



Key Dates for State Implementation of the Clean Power Plan

Date	Action
August 3, 2015	Final Clean Power Plan rule
September 6, 2016	States must submit a final plan or an initial submittal with extension request
September 6, 2017	States that received and extension request provide progress
September 6, 2018	States Final Plans due to EPA
January 1, 2022	First of three interim compliance periods begins
January 1, 2030	Final Compliance Date



Internal CPP Evaluations & Modeling Approaches

- BPU has been evaluating the CPP and developing multiple compliance scenarios for both mass and rate-based plans
- BPU has evaluated the impacts of a Federal Mass Plan
- Cost to rate payers are much higher, under a Federal Mass Plan as proposed
- BPU supports model runs for a rate-based plan, mass-based plan, and specifically, any alternative plan(s) that utilities designate



CPP Evaluations - State Level Efforts

- BPU is working closely with affected Kansas utilities (Westar, Sunflower, KCPL, and Empire), KCC, and KDHE
- Although not under KCC jurisdiction, BPU is participating in the KCC modeling
- BPU appreciates the KCC & KDHE's efforts and involvement in working with utilities through the tedious details of the CPP
- BPU and Sunflower Electric have engaged EPRI to perform independent modeling scenarios of the CPP



Continued Efforts - A Must

- Discussions/Meetings with KDHE, KCC & other KS Utilities
- Work with KDHE as they develop State Plan
- KCC Modeling (all utilities) - timeline is of utmost importance
- EPRI Modeling (BPU & Sunflower Electric)
- Continued involvement with the Legislature to ensure a state plan approach
- Participate in KDHE, KCC & EPA outreach activities
- Participate in conferences and legislative sessions

QUESTIONS?

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