



WEST VIRGINIA

OFFICE OF

ENERGY

A DIVISION OF THE WV DEVELOPMENT OFFICE



# Mitchell Plant

- Max coal burn rate: 15,000 tons per day
- Coal storage capacity: 1,000,000 tons
- Capacity to store 67-day supply of coal



# Mountaineer Plant

- Max coal burn rate: 12,000 tons per day
- Coal storage capacity: 1,800,000 tons
- Capacity to store 150-day supply of coal



# John Amos Plant

- Max coal burn rate: 27,850 tons per day
- Coal storage capacity: 1,700,000 tons
- Capacity to store 61-day supply of coal



# All Three Plants

- Maintenance consistent with generally-accepted industry practices
- Able to operate above 70% capacity factor
- Able to operate at high capacity factor through 2040
- Coal procurement handled by AEP Service Company in Ohio
- Coal purchased on fleet-wide basis – not unit or plant specific

# EPA Regulations

- Effluent Limitation Guidelines (ELG)
- Coal Combustion Residuals (CCR)



# EPA Regulations

- Do not have to upgrade plants to meet more stringent requirements if agree to stop burning coal by 2028
- Companies sought approval to retrofit plants to meet ELG/CCR requirements to operate to 2040
- PSC approved request and gave rate increase



# PSC Case No. 21-0339-E-ENEC


“We expect the Companies to be *vigilant* and *prudent* when making self-generation decisions... We also expect them to maintain their *plants* and *coal inventories* to be able to *self-generate* and achieve at least a **sixty-nine percent capacity factor**, which will then allow them to make the self-generating decision necessary to reduce their reliance on higher cost purchased power.”

– Public Service Commission of West Virginia





# Companies Seek Rate Increase

- Amount: \$552.9 million in under-recovery
  - Period: March 1, 2021 through February 28, 2023
  - Reason: Had to purchase from PJM instead of self-generating
  - Cause: Increased cost of coal made self-generation too expensive
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# Recovery Period

- ★ PJM – *highest* energy prices in 20 years
- ★ Companies – *lowest* generation in 20 years




# Capacity Factor – September to December 2021

- Mitchell Plant: 49% to **6%**
- John Amos Plant: 59% to **3%**
- Mountaineer Plant: 29% to **0%**



# PJM – Self-Generation Increased Costs

- Self-generation increased from \$20 MWh to \$40 MWh
  - PJM prices increased from \$30 MWh to more than \$90 MWh
  - ★ PJM prices \$10 higher per MWh – *\$6.4 million per week*
  - ★ PJM prices \$60 higher per MWh – *\$38 million per week*
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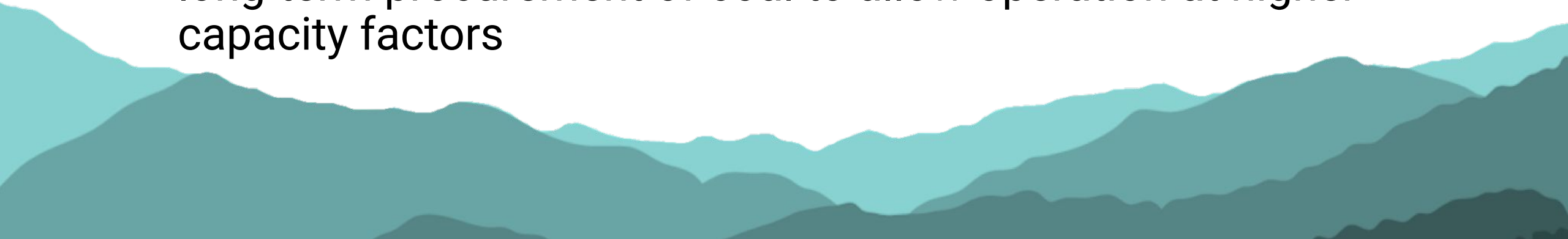
# If Self-Generation over PJM

- ★ \$552.9 million under-recovery avoided
- ★ \$231.7 million in cost savings obtained
- ***\$784.6 million in total avoided costs/savings***



# Coal Sourcing – Short-Term v. Long-Term Contracts

- Coal procurement is conducted fleet-wide and not tailored to the individual plants
- Coal contracts “roll off” at a rate of one-third per year = short-term contracts
- No specific programs, steps, nor actions were taken for the long-term procurement of coal to allow operation at higher capacity factors



# AEP Plants Ran Out of Coal

- Companies waited until the Fall of 2021, when coal supplies were almost unavailable, to negotiate for coal supplies
- “I was never told by anybody that we should be procuring to a 69-percent capacity factor.”
  - Jeffrey C. Dial, Director of Coal Procurement for AEPSC
- “As a result of the fuel purchasing process decision and non-decisions, insufficient fuel was available to run the plants.”
  - CTC

# Coal Shortage Easily Avoidable

CTC: Procuring long-term contracts “could have eliminated the event of ‘no coal available in the West Virginia market’ which has been used as the reason by the Companies to justify why they could not meet the 69% factor.”






# Coal Shortage Easily Avoidable

“It *defies common sense* that the Companies with coal power plants in West Virginia for *many years*, which have been in the business of coal procurement from West Virginia sources also for years and years, could *not* obtain the coal from West Virginia needed to be dispatched at higher capacity factors.”

– Critical Technologies Consulting, LLC

A decorative graphic at the bottom of the slide consisting of several overlapping, stylized mountain ranges in various shades of teal and green, creating a layered effect.

# Compliance with Commission Order

- APCo personnel advised CTC that the 69% capacity factor requirement was a “goal” and not a “requirement”
  - CTC did not see that any bidding processes were changed, enhanced, or modified to assist these plants during the time period to achieve higher dispatchability factors
  - No specific attempts to lower the variable costs of generation were seen by CTC
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# Compliance with Commission Order

“In fact, *adders* were placed on the bidding prices to assure that the plants available were *not* dispatched to avoid having them end up with no coal piles available to operate.”

– Critical Technologies Consulting, LLC



# AEP Favors PJM Over Self-Generation

- CTC: “Our conclusion is that it appears the Companies did not actively pursue *any* attempts to get the coal plants dispatched to achieve higher capacity factors.”
- CTC: The Companies rely on PJM as the “ultimate supplier of generation” for their systems and do not appear to favor the self-generation options of their coal power plants.



# AEP Favors PJM Over Self-Generation


CTC: “As regulated utilities, the Companies focus on meeting projected customer needs at the lowest cost via the economic dispatch of their plants. As a result of its independent evaluation, CTC did not find that these important goals were met, resulting in a *significant violation of the Companies’ responsibilities toward its customers.*”



# PSC Advises on Carbon Policy

- PSC concerned Companies purposely not self-generating in furtherance of decarbonization policy

“We do not know whether the Companies are influenced by a decarbonization policy or not. However, the Commission’s intent, when setting a utilization target for the Companies’ fossil-fuel fired plants, is to require the Companies to follow a power supply policy to *maximize* their use of *fossil-fuel generation* that is cheaper than purchased power *rather than* a policy geared to *decarbonization at any cost*.”



# AEP Climate Goals

- AEP has adopted the Paris Climate Agreement's goal of achieving *net-zero emissions by 2045*.
- Nicholas K. Akins, former Chairman, President & CEO of AEP: "AEP has retired or sold nearly 13,500 megawatts (MW) of coal-fueled generation during the past decade, and by 2030, we will have *reduced our coal-fueled generating capacity by 74%* from 2010 levels. *This is significant progress.*"



# Carbon-Free Incentive

- AEP adopted incentive plan for increasing percentage of carbon-free generation
- Amount payable to AEP management as “Carbon-Free” incentive in 2022 was –





CEO (Mr. Akins)	\$1,500,011
President (Mrs. Sloat)	\$270,004
CFO (Mrs. Kelly)	\$21,993
General Counsel (Mr. Feinberg)	\$225,006
EVP Portfolio Optimization (Mr. Zebula)	\$194,990
EVP Generation (Mr. Chodak)	\$194,990
COO (Mrs. Barton)	\$359,999



# Fast Transition

- AEP developed a “Fast Transition” scenario that contemplates *closing all of its coal plants five years earlier* than their book life, or by 2040
- By 2040, all of AEP’s regulated coal-fueled power plants would be retired under the Fast Transition scenario, with *all of West Virginia’s coal plants being closed by 2035*



# Fast Transition Scenario

- Overall load declines from “Business as Usual” scenario due to an assumed reduction in overall fossil fuel demand
- According to AEP, its service territory has a high concentration of coal mining operations and, as they reduce their output, electricity consumption also declines



# Fast Transition Scenario

- According to AEP's Climate Impact Analysis:

“The indirect impacts include reductions in labor force and associated wages, disposable income and other economic activity as these industries reduce operations or *shut down completely.*”




# Basis for Fast Transition

- While AEP recognizes that its strategy to close its coal-fired power plants may cause coal mining operations to “shut down completely,” the strategy also “represents a significant opportunity to reduce carbon emissions, provide stable energy costs, and *grow corporate earnings*...”



# CTC Conclusions

- A competitive coal supply to these plants is the critical ingredient for their dispatching by PJM
  - Without a competitive coal supply, these plants would not be dispatched by PJM and therefore would not run
  - The Companies should have considered longer-term coal supply contracts based on the knowledge that the coal plants were proposed to run until 2040
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# CTC Conclusions

- The Companies have placed an overreliance on the PJM Market and nearly got out of the habit of utilizing their own plants for their generation
- The ratepayers are paying rates for plants which are not being dispatched to their full abilities due to the poor sense or judgement of the Companies



# CTC Final Conclusion

“It is inconceivable to CTC to think that the units would be retrofitted to meet EPA requirements so that they can be dispatched by PJM through at least 2040, and then not have the competitive cost coal on-hand sufficiently to be successful at being PJM dispatched, while at the same time, the ratepayers incur higher rates for retrofitting the units...”





# CTC Final Conclusion

“...The Companies benefit from a return on their new investment as reflected in higher rates, while the *ratepayers do not benefit from the operations of the coal plants.*”

