Maintaining Resource and Price Diversity in a Competitive Market

Bill Allen
Managing Director
Regulatory Case Management
American Electric Power

December 4, 2014



Plant Retirements

Markets in Flux

Extreme Weather

Capacity Shortfalls

Shrinking Fuel Diversity

Lower Reliability
Higher Prices
Increased Volatility
Job Losses
Shrinking Tax Base

Economic Losses

Unprecedented level of severe threats facing Ohio's electric generators and consumers



Why Does Diversity Matter?

Our job is producing energy and getting it wherever our customers use it – with efficiency and with respect for the environment. We're in this business because it is concerned with the supply of a fundamental requirement of modern living, because it's an honorable one, because we like it, and because we want to earn a living at it.

We aim to give one kind of service to everyone ... the best that's possible. That means supplying our customers with what they want when they want it. It means being courteous and easy to do business with at all times. It means doing everything we can to keep complaints from arising, and it means prompt and fair handling of those that do.

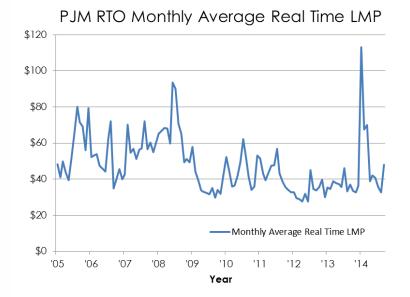
We are citizens of each community we serve and take an active part in its affairs. Like any other citizen, we want our neighbors to think well of us. Besides, it makes good business sense. We prosper only as the community prospers; so we help it thrive in every way we can.

AEP President George Tidd in 1934



Significant Price Volatility

- Energy price volatility is bad for customers and generators
 - Customers feel price shocks and can't make long-term decisions
 - Generators incur inconsistent cash flows to invest in maintenance programs
- January "Polar Vortex" event more than tripled energy prices month-to-month



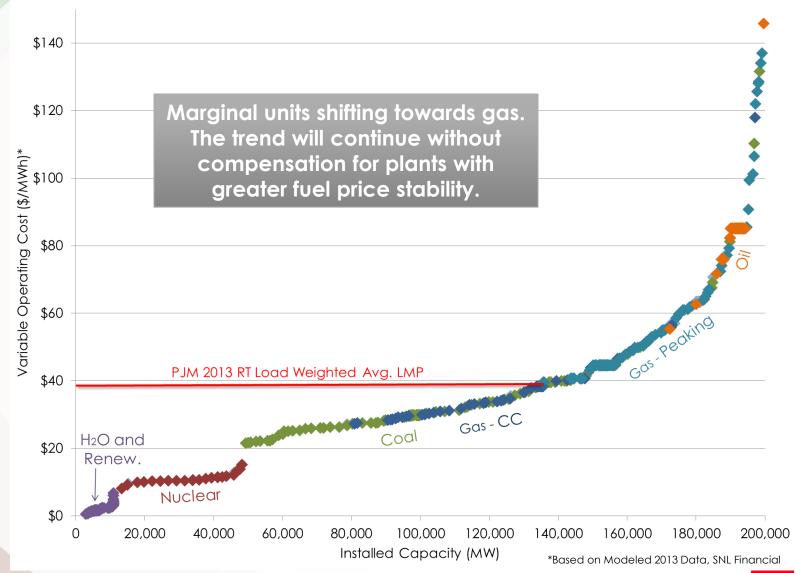
- Energy prices increased from an <u>average</u> of \$39/MWh to \$127/MWh
- Real time prices spiked to \$1,800/MWh in some hours
- Prices for CRES offerings increasing dramatically

The PJM energy markets have historically been volatile.

Volatility is harmful to customers <u>and</u> generators



Market Price Often Set By Gas





Ohio's Decreasing Generation Supply

- Wholesale markets are not supporting existing generation
 - Markets place focus on short-term
 - Volatile prices and EPA regulations are driving the decisions to retire long-lived existing generation
 - Roughly 5,500 MW of Ohio generation scheduled to retire by mid-2015
 - Only 291 MW of new Ohio generation is expected to be placed in service through 2015



SNL Financial

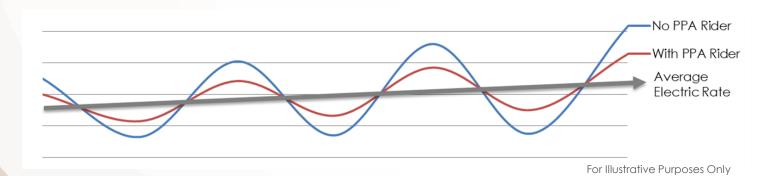
- Announced plant retirements will eliminate hundreds of Ohio jobs and millions in state and local community tax revenues
- Combined with cost recovery issues, future EPA regulations could increase retirement risk to surviving plants
- Additional retirements are likely to increase market price volatility, ultimately at the expense of customers.

Without stable, fixed-cost recovery, economic baseload generation will continue to be at risk of early retirement



How to Mitigate Price Volatility?

- PPA between AEP Ohio and AEP Generation Resources
 - Cost-based contract for ~2,700 MW baseload generation
 - Annual state economic impact of plants over \$550 million and 4,600 jobs
- Provides a "Win-Win-Win"
 - Customers gain a physical hedge against market volatility
 - Generating assets gain revenue stability
 - Distribution utility retains and enhances economic development
 - Markets are indifferent energy liquidated in the same manner as it is today
- PPA rider will true up costs/benefits
 - Initially forecasted as a charge to customers of ~\$2/MWh
 - Forecasted customer benefit of ~\$200 million through 2024



PPA provides protection against price volatility that markets cannot



How Does the PPA Rider Work?

- AEP Ohio purchases the output of AEP Generation Resources ownership share of four Ohio based plants through a long-term PPA
- AEP Ohio will bid the capacity, energy and ancillaries associated with the PPA into the PJM market
- Market based revenues will be netted against costs incurred under the PPA
 - The net will be a non-bypassable charge or credit on customer bills
 - The PPA Rider should rise or fall in a manner that is counter to changes in the market



Long-term Cost-based Revenues are Commonplace in PJM

- Bi-lateral contracts are often used in PJM markets to provide stability for generators
 - Most new renewable capacity is built using this model
- Vertically integrated utilities regulated by IN, KY, MI, NC, VA and WV participate in PJM markets
 - Regulated cost recovery provides stable cash flows to generation owners
 - Generation owned by utilities in regulated states provides their customers with a physical hedge against market volatility
- Co-ops operating in PJM have dedicated customers which provide stable cost-based revenues to support their owned generation

