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**SUBJECT: 14 conclusions on preserving a competitive electricity generation market**

1. **The utilities are attempting to re-monopolize the electricity generating industry in Ohio.**
  - Ohio's Investor Owned Utilities [IOUs] are attempting to balkanize and re-monopolize the electric generation industry.
  - The geography of the generating market consists of 12 states
  - The generating industry is regulated by the FERC.
2. **Re-monopolization of the electric generation assets in Ohio will result in the state's consumers purchasing the most expensive power first and the least expensive power last.**
  - Re-monopolizing the electricity generating market will result in regulatory-protected, highest priced, generation being purchased first, with the rest of the demand being satisfied from power from lower cost, competitive, suppliers at market rates. This is backwards.
  - The algebra of blended rates means that Ohio's consumers will be paying above-market rates for electricity if the generation market is re-monopolized.
3. **Competitive markets work** by having the lowest-cost supply purchased first and highest cost last. The last units purchased will earn the lowest profit from the sale. The last price offered sets the market price.
  - Markets work by having higher cost producers exit the market because of a lack of demand for their product while inducing lower cost producers to enter the market. Under re-monopolization this fundamental market mechanism will be thwarted. The result? Higher-cost, more inefficient generating assets remaining in the market at the expense of lower cost, more efficient, generating assets.
  - The risk of investment in new, more cost-effective capacity, will increase resulting in investments not being made because protected capacity will not exit the market.
  - Regulatory barriers to entry protect existing investors, harm consumers, and discriminate against potential investors.
  - Stockholders, bondholders, and senior management of the utilities with uncompetitive generating assets will be protected against losses while the wallets of electricity users will be forced open.
4. The **electricity generation system's reliability has improved** as PJM has gained experience with running competitive auction markets, and as investments in new, more efficient, generation has taken place to take advantage of new marketing opportunities.
  - After competitive markets became effective in 2011 the reserve margin in the PJM transmission grid has been near 20 percent. The latest reserve margin was 22.4%.
  - Preserving uncompetitive generating assets and having a *de facto* policy of purchase worst-first, or most expensive-first, generating capacity because it is owned and located in Ohio will result in diminished system reliability for two reasons:



- A balkanized generating market will lose the benefits of pooling across a large geographic region to offset localized spikes in demand or the unexpected shutdown of generating capacity.
  - Retaining less efficient generation capacity at the expense of new investment in more efficient generating capacity will result in diminished reliability.
5. **FERC is the body that is, and should be, regulating the multi-state electricity generating market.**
- The logic of deregulation that Ohio adopted rests on having a competitive market for electric generation across the multi-state PJM transmission grid.
  - Federal regulation of the generating market, coupled with a strong watchdog role played by the PUCO, protects Ohio's consumers from the political capture of the legislature or regulatory capture of the PUCO by the state's investor owner utilities.
6. **The benefits from deregulation that will be endangered by re-monopolization include:**
- **\$3 billion in Lost savings** compared to what prices would have been under monopolized generating markets: \$645 million from shopping and \$2.3 billion from SSO auctions.
  - The \$2.3 billion in SSO savings is 15% of what electricity prices would have been without competitive electric generating markets.
  - **Decreased** system reliability
  - **Lost** construction employment and associated positive economic spill-overs
  - **Decreased** employment among employers who use electricity and diminished competitive position for business locations due to increases in the relative cost of electricity.
  - **Lost** opportunity to lower carbon emissions
7. **Ohioans have paid twice for stranded assets. Why should they pay a third time?**
- From **2000 to 2016 Ohio's electricity users paid the state's IOUs \$14.7 billion** in stranded asset payments, regulatory transition charges, rate stabilization charges, and other above market payments.
  - The **PUCO recently approved riders for FirstEnergy worth an estimated \$204 million a year and \$31 million a year for AEP for the years 2017 to 2019.** DP&L has a rate case before the PUCO looking for its payout.
  - The legislative expectation was that these payments would be used to write down the value of "stranded," that is economically uncompetitive, generating assets.
  - FirstEnergy used the stranded assets payments to purchase out-of-state coal-fired generating plants. Both FirstEnergy and DP&L are highly leveraged and the recent funds are being used to offset the consequences of bad business bets, too much debt, and a need to pay dividends.
  - DP&L was purchased by Arlington, Virginia based AES Corp in June 2011 for \$3.5 billion and on March 4, 2014 was reported by the RTO Insider to have "buyer's remorse."<sup>1</sup>
  - Lessons from the steel, auto, and aluminum industries show that subsidizing companies with balance sheet problems and over-valued assets does not work. Assets must be written down and the company needs to be restructured financially before it can become competitive.

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<sup>1</sup> Rich Heidorn and Ted Caddell. "AES: Buyer's Remorse on DPL Acquisition: May sell utility's generation." *RTO Insider*, March 4, 2014. <https://www.rtoinsider.com/aes-dpl-remorse-1403/>



- Public policy can learn much from reading three of Laura Numeroff's children's books *If You Give a Mouse a Cookie*, *If You Give a Moose a Muffin*, and *If You Give a Pig a Pancake*. It may take all three to drive the lesson home.
8. **Placing the generating fleets of IOUs into clearly identified subsidiaries and assigning the debt associated with generating fleet** to that subsidiary is a crucial step in creating a viable operating entity and unlocking the value of assets that are in their transmission and distribution businesses. The IOUs and their customers have to be freed from the dead weight of overvalued generating assets or debt issued to pay for over-valued assets that were acquired. [Or, in the case of DP&L the value of debt issued by its purchaser when AES Corp. purchased DP&L.]. These assets need to be marked down to their market value.
  9. **Ohio's electricity supply has not become more vulnerable, or less reliable, due to deregulation and the closure of some existing power plants.** Arguments have been made that Ohio will in some way become economically vulnerable by a potential loss of current generating assets. This is just wrong:
    - Since the early 1990s Ohio has, with one exception, been a net importer of electricity. The exceptional year was in 2006.
    - It is true that as competition in the market for electricity generation has taken root imports from outside Ohio in the PJM transmission grid have increased. However, that has occurred with a decrease in retail prices and an increase in system reliability. Lower prices and improved reliability are the two outcomes that the legislature expected when it passed the deregulation bill in 1999. Whether a power plant is located on the north or south bank of the Ohio does not matter to Ohio electricity users. Electrons do not come dressed in OSU scarlet and grey, OU green and white, Pitt black and gold, WVU blue and gold, or UK blue and white.
    - Investments in new generating capacity are being made in Ohio to take advantage of the ability to compete to sell electricity into the PLM's multistate generating market and to take advantage of the regional natural gas market. At present, 11,000 megawatts, or 11 gigawatts, of new natural gas fired generating capacity is either operating, under construction, permitted, or publicly announced but not yet in the regulatory approval process.
  10. **Ohio's fuel diversity is improving.** Throughout the ongoing campaign being conducted by the IOUs to re-monopolize the electric generating industry it has been asserted that fuel diversity will be impaired with the loss of uncompetitive coal-fired electric generating capacity.
    - Before deregulation occurred, the fuel mix used in generating electricity in Ohio was undiversified. In 2010 [the year before deregulated markets took hold] 82 percent of power generated was from coal, 11 percent nuclear, and 5 percent natural gas. This was 98 percent of production.
    - In 2015 the portfolio is more balanced and diversified than it was five years earlier: 59 percent coal, 14 percent nuclear, 23 percent natural gas for a total of 96 percent of production. Gains have been made in wind and utility solar.
    - Because the production of electricity using nuclear fuel is now the most expensive form of generation that source of generation is in danger.



11. **Nuclear power is the most expensive power produced today and it does *not* deserve a subsidy from Ohio's electric customers.** Nuclear power plants have had difficulty clearing capacity auctions and are providing the most expensive power in the regional market. FirstEnergy is lobbying for Ohio to follow in the footsteps of New York and Illinois to provide subsidies in the form of Zero Emission Credits to underwrite the generating costs. The benefit that is being sold to electricity users is electricity produced without carbon emissions. The reality it is yet another lifeline to FirstEnergy to prevent the financial effects of owing a high cost power plant. The IOUs are attempting to associate these plants with carbon reduction to justify subsidies. Doing so is bad state public policy because the problem of what to do with economically obsolete nuclear **is a national problem.**
- The benefits from carbon-free electricity generation from a nuclear plant do not stop at the Ohio border. The benefits from carbon reduction are enjoyed across the entire airshed. There is no reason why the cost of subsidy should be borne just by Ohio ratepayers but by all who enjoy the benefits from carbon reduction.
  - Nuclear power plants, as is true for any power plant, are part of the regional electricity power market. In the case of Ohio, this is the multistate PJM transmission territory. Having states protect significant power sources will disrupt the operation of a competitive market for power.
  - The federal government never delivered on its promise to find a solution for the lifetime disposition of spent fuel rods and it has allowed nuclear power plants to operate without liability insurance protection, making surrounding property owners and state and local government *de facto* insurers of last resort in case of a disaster.
  - The ability of financially strapped IOUs to maintain and safely operate nuclear power plants is a genuine concern and subsidies designed to shore up their balance sheets are not a sustainable answer.
12. The IOUs are latching onto carbon reduction as a way to avoid writing down the costs of their dying nuclear assets. Their goal is to find a subsidy for the plants. They are offering carbon reduction as the rationale. This leads to the question: *Is this the most cost efficient and effective way to achieve carbon reductions?* The answer is **no**. A market should be established for carbon reduction so that goals are met in the least costly way to electricity users.
- PJM could establish a market for reducing carbon emissions. A market adjusted tax or permit will give price advantages and investment incentives to low-carbon and no-carbon generating technologies.
  - If that solution be nuclear, so be it, as long as the full costs of nuclear power production are covered.
  - If the solution is a combination of energy efficiency investments and wind, solar and natural gas production that is fine as well.
13. IOUs are offering to support carbon free electric generating technologies under three conditions.
- (1) Carbon-free generation that they invest in be subject to a regulatory guaranteed rate of return.
  - (2) Carbon-free generation that is not owned by the IOUs be placed under a regulatory regime.



And, (3) natural gas generation in the state of Ohio that is not owned by the IOUs be placed under a regulatory regime.

- Such actions will deter investment in carbon-reducing generation capacity because these actions will prevent existing high carbon output plants from leaving the market.
  - Placing carbon-free and reduced carbon generating plants under regulatory control will not allow markets work to reduce their costs, thereby lowering demand for green energy.
  - Regulation will effectively pull Ohio out of the competitive portion of the PJM auction markets resulting in (1) higher electricity prices for consumers, (2) reduce economic activity in the state, and (3) and reduced demand for carbon-free electricity generation and conservation.
14. Ohio's regulatory framework needs to allow for industry-scale proof of concept experiments in electricity generation, transmission, and distribution.
- These experiments should have a research and evaluation component associated with them and the technical results made public with both technical results and public benefits and costs enumerated.
  - If the public is paying for the proof of concept experiment and no, or a limited amount of, private capital is invested then all data should be publicly available.
  - Regulation should not be used to pre-monopolize new sources of generation.
  - Experiments with technologies that could disrupt existing transmission and distribution technologies should be encouraged, especially if they disrupt the natural monopoly characteristics of those markets.