Remarks of James Thalacker
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The Ohio Senate
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Thank you for inviting me to speak before you today. I am James Thalacker, Managing Director and head of U.S. Utilities & Power research at BMO Capital Markets. Bank of Montreal, founded in 1817, is a $50bn market cap, diversified financial services company with its operational focus primarily in North America. Its 12 million customers span across three business lines including investment services, personal and commercial banking and wealth management. With nearly $625bn in total assets and 45,000 employees, it is the 8th largest bank in North America.

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As a Managing Director at BMO, I am the lead research analyst in charge of providing BMO's clients with a detailed, bottoms-up and unbiased opinion on the securities within the utility and power industries.

Prior to joining BMO, I spent ten years as a portfolio manager at Millenium Management, where I co-managed a $1.5 billion investment portfolio focused on

the Utility, Power, and Energy sectors. Prior to that, I held a number of positions focused on investing in utility and power companies, including portfolio manager at Highbridge Capital Management, senior equity and credit analyst at Bass Brother/Silcap, LLC, and research analyst at Dean Witter Reynolds. I hold bachelor's degrees in economics and history as well as a master's degree in consumer resource and finance, all from the University of Wisconsin-Madison.

I have researched the utility and power industries in Ohio since 1996, well before deregulation of the industry. Through my 23 years of experience looking at both Ohio and the US utility sector I have witnessed first-hand the evolution of domestic power as it moved first from a regulated to deregulated market and then was further altered in Ohio with the passage of SB 221 in 2008 to its present configuration. In this testimony, I hope to provide insight from my experience as both an analyst and as an investor. Key observations I would like to share are as follows: (1) the deregulated power market has evolved into a patchwork of short-term "fixes" with no mechanisms for the application of a much-needed, long-term integrated resource plan (2) the premature, early retirement of nuclear power plants has laid bare market design flaws and (3) given the current fundamental state of the power markets it should come as no surprise that states are taking action to prevent the premature closure of nuclear plants.

At the onset of deregulation, I believe it was the sincere intent of stakeholders to develop a free market in electricity that would mirror the success of other transparent and liquid markets like the US capital markets. Unfortunately, the result has massively underperformed expectations. To most experienced investors in the sector, the notion we have a functioning free market in electricity is simply not true. The wholesale power markets are highly complex, administrative constructs with literally hundreds of ad hoc rules and regulations that are constantly being revised to create what has been often referred to as a Frankenstein administrative construct, not a free market. PJM and FERC determine what those rules look like and those rules number into the hundreds or thousands and are constantly changing in response to market dynamics. In addition, states and the federal government have provided substantial subsidies over the years that favor different fuel and technology types at different times, depending on the type of policy goal being pursued.

My education in portfolio theory and its application throughout my career has reinforced the benefits of having a diversified portfolio. This is applicable not only to just financial assets but also physical assets or a power supply portfolio. One of the unintended consequences of deregulation was that through the separation of

generation from the wires in an effort to foster a competitive market it stripped the state's utilities of their ability to methodically forecast and implement long-term plans for supply resource requirements. The utility is no longer in charge of balancing its own supply needs across dispatch requirements (baseload, intermediate, peaking), fuel supply (nuclear, coal, gas), and emission profiles. Instead of a purpose-specific integrated resource plan that looks to create a long-term, diversified supply portfolio, this process has evolved into a tug and pull of different stakeholder motivations and has contributed to the chaos of the current wholesale markets and their lack of efficacy.

Today we see the private development of new gas or renewable resources where the sponsors are often looking to merely deploy their investor's capital, often regardless of the plant's true economics. Or we see the built-it-and-they-will-come mentality towards wind and solar, given many states' RPS standards and again often without sound long-term economic foundations given the federal subsidization of such plants and the associated up-front recovery of cash flows for the developer. This has created a very short-term focus on resource management, which has been further compounded by the ad hoc policies of the ISOs, as the default reliability backstop, to react to this constantly shifting landscape. Most troubling is the lack of clarity on what will change this dynamic longer term. The

house doesn't need to be repainted; it needs to be renovated. The only way that Ohio can protect itself from this negative feedback loop is to do what it can to mitigate its power supply risk through retention of its assets that can help mitigate the risk to rising supply costs to its customers.

The substantial decline of the financial condition of many US nuclear plants, including Ohio's two primary clean air resources, its Davis Besse and Perry nuclear plants, is a function of the aforementioned "market" design flaws. I have analyzed the Davis Besse and Perry nuclear plants since they were regulated assets in the late 1990s. I have followed their financial decline, along with other nuclear plants, closely as well over the last several years. My recent analysis, confirmed by numerous other parties, shows that both Davis Besse and Perry are unprofitable and burn cash each year. These losses are a function of both the high fixed costs required to maintain safe and reliable operations combined with falling revenues.

The evidence of the revenue shortfall is unmistakable and impossible to ignore. Since 2014, seventeen nuclear units have requested deactivation well ahead of their license expiration dates. In Ohio the impact has been severe. Specifically, FirstEnergy Solutions filed for Chapter 11 bankruptcy last year and has filed deactivation notices for Davis-Besse and Perry. Without state support, which I

view as a natural bridge to an eventual national carbon policy, for struggling nuclear plants it is well understood by investors that the "market" shortfall in revenue that has led to premature nuclear plant deactivation requests will remain the status quo.

As Committee members are well aware energy prices have been on a persistent decline as a result of the shale gas revolution. It is less understood in my opinion that power and capacity prices have been further pressured by subsidized generation, including renewables that receive $30/MWh or greater than 3x the subsidies being discussed for Ohio nuclear. Without Ohio's intervention, PJM's current short term, least cost pricing mechanism will result in 90% of the Ohio's clean air generation being squeezed out. Within the current market construct there is no monetary attribution for the unique and special attributes of nuclear energy – the production of carbon free power all day and every day. And given the current refueling decision and deactivation timelines it is unlikely that federal carbon policy or similar regulatory changes could be enacted in time to change the economic realities of the plants.

As demonstrated in New York, Illinois, New Jersey and Connecticut, the reward for states to preserve nuclear energy is overwhelmingly positive relative to the risk

of losing these plants' valuable attributes. The returns, measured in terms of clean air, energy diversity, consumer savings, jobs and contribution to state and local economic activity, are enormous. In conclusion, based on my first-hand experience as a financial analyst following the industry, state action to preserve nuclear energy is the right investment decision to ensure an optimal energy portfolio. I would recommend that this committee ensure that nuclear energy continues remains a core holding in Ohio.

Thank you for your time and attention.