

Good-afternoon Senator Lawrence, Representative Ziegler, and fellow members of the Joint Standing Committee on Energy, Utilities, and Technology. I am happy to be here to give testimony regarding L.D. 2205.

My name is Andrew Ballantyne. I am a licensed engineer and master electrician in the State of Maine, I am a Selectman in the town of Windsor, and I am a lifelong Maine resident. For over the past eight years I have worked in the field of Power Engineering. I have been involved with the design and construction of many substations within our state as well as across the country.

A feasibility study is something I recommend the State employ before any significant decisions are made regarding future transmission line projects. This is because feasibility studies are a scientific and stakeholder-driven process. When employed, a feasibility study analyzes the common and diverging interests of each party and aligns them to a common solution that is scientifically viable. What do I mean? While a transmission line contractor's interests likely prioritize lower costs, that can often be a divergent goal of Maine residents whose property is impacted by the construction. 2. The states clean energy goals may be a divergent interest from that of the State's utility companies, whose infrastructure will be impacted by the increased demand for generation. 3. While environmental groups support clean energy to fight climate change, this may be a divergent goal with IF&W who may have concerns about habitat disruption. You have many stakeholders, each of which has common and divergent interests from the others. The only way to properly resolve this is to perform a feasibility study that aligns them towards a balanced solution.

In contrast, if we forego paying for a feasibility study, we risk proceeding with a solution that fails to align with our state's needs and values. This is especially critical for a project which could exceed \$3 billion dollars. Isn't spending fifty thousand on a feasibility study, just 0.2% of this cost, worth the investment?

Regarding technical aspects, this feasibility study will look at the role underground High Voltage Direct Current (HVDC) can play in Maine's future model of power transmission. In the last decade, advancements in modern technology have allowed HVDC underground transmission to insert itself as a competitive alternative for moving electricity over long distances. From a technical perspective, the major reason for this is the fact that HVDC can be buried underground in a right-of-way (ROW) that is only 5ft wide x 5ft deep. This means that a HVDC underground corridor takes up only 3.3% of the same space that a 150ft wide overhead 345kV HVAC transmission line does. Even if someone doesn't understand the technical differences between HVAC and HVDC, they can understand how much deforestation and visual pollution is reduced.

Of course, the primary argument large developers use is that HVDC costs too much money to install. However, this is based on outdated technology and/or studies from other areas that are not applicable to what we are trying to accomplish in Maine. The numbers are also skewed because construction companies do not have the authority to dictate if a transmission line can be run along existing rights-of-way ROWs, such as along highways, railways, etc. The difference

in cost savings when you can construct along already established ROWs is significant compared to the cost of creating a new ROW through rural Maine. Furthermore, underground power has long term cost advantages when you consider maintenance. After all, freezing rain, snow, and high winds cannot damage lines that are underground. The fact is, we can argue about cost all day, but believe me - **nobody knows how much it will cost.** Why? Because we haven't done a feasibility study. Would you pay a price for something without knowing its true value?

On February 9<sup>th</sup>, Governor Mills announced \$4.4 million will go towards placing distribution lines underground. This is a clear sign that there's recognition of the importance of preparing for future challenges, even if they can be more costly. If weather patterns are predicted to worsen, with higher winds in the years to come, why would we employ new generation technology such as Wind, Solar, Nuclear, etc. while continuing to utilize an older model of power transmission? Climate change activists warn us of more severe storm patterns, rainfall, and wind in our area. Shouldn't we be proactive in our approach and invest in infrastructure that can withstand these challenges? The recent so called "Grinch Storm" in December 2023 left many without power for days, showcasing the vulnerability of our current system to extreme weather events. Underground transmission lines could significantly enhance the resilience of our electricity grid, ensuring reliable power for Maine's residents and businesses.

In my opinion, it's imperative that we take the necessary time to get this right before we start approving large-scale generation projects in Maine. The proposed King Pine Wind project, with a capacity of 1000MW in wind energy, will only scratch the surface of Maine and Massachusetts energy goals in the next twenty years. So, how many more transmission lines will we need? It could be at least ten more by my calculations. Are we comfortable with clearing a combined 1500+ foot ROW in our state over the next 20 years? If we are already having trouble being successful with projects like the NECEC and the ARG, how do we expect to accomplish several more? I suggest we step back over the next year and do a feasibility study to find a solution that more people can support.

In closing, a feasibility study isn't just about exploring technical possibilities; it's about ensuring that our choices reflect the best interests of Maine's people, environment, and future. Let's embrace this opportunity to make informed decisions that will shape our energy landscape for generations to come. Thank you.

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