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Senator Lawrence, Representative Berry, distinguished members of the Committee on Energy, Utilities, and Technology, I'm Steve Foster, Representative for House District 104, serving Charleston, Dexter, Exeter, Garland, and Stetson, here to support LD900, "An Act To Facilitate the Recycling of Clean Energy Equipment". I'm currently serving my second term on the Committee on Energy, Utilities, and Technology, was a member of the Maine Climate Council Energy Storage Subcommittee and am a member of its Energy Subcommittee.

I'm going to throw a few numbers at you today, starting with forty-five thousand (45,000). If you remember nothing else from my testimony, I hope this number sticks with you.

As an engineer, numbers, data, and facts are an important part of any detailed plan. A detailed plan is necessary when undertaking any project, especially one as big as meeting all our electrical generation needs with renewable energy by 2050. During the many hours of testimony I've heard over the last few years, I've learned the State's plan lacks a lot of detail. Earlier this session, I asked a representative of the Governor's Energy Office appearing before EUT to review their work, how much wind and solar would be needed to do the job. They weren't sure. I asked what the useful life of the equipment was and received a similar answer. I didn't bother to ask what we'd do with the equipment once it was no longer useful. That's one of the details LD900 hopes to address.

On Jan. 22, 2020, Dr. Richard Silkman presented to the EUT Committee his Nov. 2019 publication A New Energy Policy Direction for Maine which outlines a path forward for Maine to be carbon free by 2050. Dr. Silkman proposed meeting our electric generation needs using solar and wind facilities with battery storage. It's become apparent to me that although the Maine Won't Wait plan offers little detail, the Governor's Energy Office and State policy makers have adopted a similar path forward. Dr. Silkman's plan calls for an estimated generating capacity of 7500MW solar, 2500MW on shore wind, and 5000 MW off shore wind by 2050. When I asked him the question of how much would be required, he explained we'll need 400 to 500 on shore wind towers, 625 8MW offshore wind towers, and 40,000 to 45,000 acres of solar panels, with Maine hydro generation remaining at current levels.

The average weight of a residential solar panel is about 2.2 pounds per square foot, maybe a little more for commercial panels. This doesn't include mounting framework or other added equipment. One acre of panels equals 43,560 sq ft.. Forty-five thousand acres equals 1,960,200,000 square feet or 70.3 sq miles. The total weight of 45,000 acres of panels would be 4,312,440,000 pounds or 2,156,220 tons of material. What will we do with this material 20 to 30 years from now, when it's no longer producing electricity? From all the testimony, committee discussions, and legislation I've seen to date, this important detail has not been addressed.

Forty-five thousand acres. It's a big number to wrap your mind around. The recently installed solar farm off route 2 in Farmington uses just under 500 acres of former farmland. Even that amount can be hard to visualize unless you're standing in front of it. If you get the chance to drive by that site, I'd ask that you think about what we'll do with that equipment and who'll be responsible for its disposal when the time comes.

By the way, if it helps, Acadia National Park sits on Federal and private lands totaling about 47,000 acres. I hope you'll consider the magnitude of what the plan is for solar power in Maine and add a very important detail to that plan by supporting LD900.

I thank you for your consideration and would be happy to try to answer any questions you may have.

Respectfully submitted,

Steve Foster
State Representative