

suzanne sayer
Kittery
LD 952

Hello Senator Lawrence, Representative Ziegler and esteemed members of the joint standing committee on Energy Utilities and Technology Committee.

Thank you for allowing me to address you in Support of LD 952 "An Act to Create a 21st-century Electric Grid". I think the funding for the study to set up the DSO entity should be doubled. I'm Dr. Suzanne Sayer, a retired nuclear engineer with degrees from MIT, VaTech, and Tufts. I have 15 years' experience in groundwater resources, 15 years' in geophysics and 15 years' in nuclear engineering. I am from away - Kittery and represent myself.

Recently baseball has changed its rules trying to speed up the game and it's drawn a lot of kudos from fans. Likewise, legislation and regulation need updating from time to time to keep up with changing technology. But not much in regulations in the utility domain has been updated in Maine since the mid 2000s.

(A really short history.) After the initial competition between Edison (DC) and Westinghouse (AC) in generating and wiring parts of towns, electric utilities consolidated and AC was chosen to use for local distribution: eventually utilities were more or less considered "Natural Monopolies". In response to an energy crisis in the 1970s, the Federal Government passed PURPA (Public Utilities Regulatory Policies Act) of 1978 restructuring electric utilities, supporting cogeneration, allowing small generators to compete, and opening the way to renewable energy. The end of vertically integrated public utilities under the Public Utility Holding Company Act of 1935 was over! The Energy Policy Act(EPA) of 2005 updated PURPA and reemphasized Renewable Portfolio Standards(RPS). Legislation and FERC regulation needed updating to meet national demands and modern technology (rising energy prices, more efficient thermal plants, renewable energy and the internet).

In 1997 the Maine legislature passed "An Act to Restructure the State's Electrical Industry" permanently separating generation from (transmission and distribution) wires. When I moved to Maine, Maine's legislature had just formed a compact with 6 other New England states working on among other things (Renewable Portfolio standards) RPS standards. The Internet was expanding. Oil and gasoline prices were rising and Efficiency Maine and the Maine Housing Authority were coming up to speed. The EUT passed a Net Energy billing regulation (which needs to be overhauled) that helped promote small renewables, mostly solar, wind, and tidal. Maine supported Efficiency Maine with money from renewable energy credits (REC)s and the \$1 green energy fee on CMPs bill. THE EUT was burdened with "the 3 ring binder". Governor Baldacci formed the Wind Power Task Force and the Ocean Energy Task Force. New ideas were coming forth and being debated. Governor LePage stopped an off-shore wind project that would have been paid for by Statoil and the Federal Government.

The EUT and MPUC were relevant at that point. However, in the past few years, the MPUC has ALLOWED CMP (I live in that part of the state) to raise rates due to inflation and maintenance work, but there has been no accountability to anyone but CMP's investors. Customers complain and CMP shrugs. Who is supposed to be watching over CMP? MPUC has not: its plate is full (they need more commissioners): the EUT has not. CMP wanted to increase its return to the investors and the MPUC entertained that idea? CMP billing errors have been rampant (I got \$25 back 3 times as a fine on CMP when I proved they were in error). The EUT has been busy with many, many new bills, and chose to ignore the increasing complaints of the people of Maine.

The MPUC regulates water, natural gas, pipeline and power line corridors, the Internet, television, cable?, generating utilities, enhanced cogen, and transmission. Their plate is full. MPUC does not have the manpower, the expertise, and maybe not the authority to PROPERLY regulate the transmission and generation owners. ISO-NE has three roles in New England 1) Manages the real-time dispatch of electricity 2) oversees the wholesale pricing and market for competing generators and

3) it uses consultants to provide planning for the electrical infrastructure in the New England area. From the 2021 Economic study FGRS* paid for by ISO-NE “system operator actions can help mitigate and localize . . . imbalances . . . It is ultimately long-range planning’s responsibility to create a transmission grid that is reliable.” I do not believe ISO-NE has any regulatory authority as to what can be built in the various states. It integrates what has been built, it suggests what way to go, but it cannot tell XYZ corporation it cannot build a Power plant in ABC County of IJK state. ISO-NE does not ensure Maine can incorporate distributed generation (DG) – that is up to the State. BUT WHO IN THE STATE? In the Navy we say if everyone is responsible Nobody is responsible.

What Maine needs is ITS OWN PLANNING authority. Right now at least two “Utilities” in Maine are in trouble. The PUBLIC IS UPSET. So upset that they have hatched this hare-brained scheme called Pine Tree Power (PTP). I DO NOT TRUST CMP. However, I THINK PTP has the potential to be even more catastrophic to Maine. The London Economic Group’s study, “Evaluation of the Ownership of Maine’s Power Delivery System” paid for by the MPUC, stated multiple times in multiple ways rate payers may see an INCREASE in rates for the short term and only after 10 years would the rates start to lower. Part 1 of the 2021 Economic Study “Future Grid Reliability” (FGRS) paid for by ISO-NE says that renewable energy resources are not dispatchable, and a shift to renewable sources requires strategic forward planning.

Maine is in trouble since we do not have the expertise in our State agencies to do forward planning. CMP does not have the expertise - repeatedly okaying new solar farms, then finding out that the cost to the Substation the solar company was going to tie into will cost 2 to 10 times what CMP originally estimated. This is not good for the renewable energy, rate payers or reliability of the grid. EUT does not have the expertise, MPUC does not have the expertise, and the new Pine Tree Power (OURPOWER) will not be up to speed for the foreseeable future. The groups that support PTP have varying agenda.

People have been generally upset over the last few years because they feel powerless. COVID-19 and avoiding crowds and other people have taken a toll on all of our nerves. People are supporting PTP as a knee jerk reaction to rising prices.

Maine’s electricity rates have greatly escalated for a number of reasons beyond most customer’s control. CMP and Versant are easy targets: They are a large part of the problem. But past members of the EUT and some groups or people that are “utilities wantabees” have capitalized on CMP’s and EUT’s poor decision making and responses to customer demands.

CMP is resistant to growing the renewables markets, and independent power generally. CMP and Versant are difficult to deal with when it comes to getting them to invest where it will help get us to a more robust, reliable, locally supplied and maintained system. Reading their bills and ensuring that they have correctly calculated them is not difficult but it is a pain. CMPs terrible effort at justifying and implementing the New England Clean Energy Connection(NECEC) and the earlier Maine Power Reliability Project(MPRP) have added to the mistrust of the people towards utilities. After the HVDC power line from Hydro Quebec to Massachusetts was rejected by the States of Vermont and NH, Maine’s CMP tried to run the HVDC transmission through Maine along the NECEC. I also support Senator Troy Jackson’s bill LD 924 to connect the crown of Maine to the ISO-NE region, what is its acronym? But reading the names of the legislation is confusing. NECEC also stands for Northeast Clean Energy Council which I support: the two similar acronyms have confused me and I pay attention which most Mainers do not. People are desperate. They want lower bills and will believe anything. What’s the adage? A lie will fly around the world before the truth puts on her coat.

PTP is not a viable solution. ISO-NE is not a regulatory agency. FERC is Federal. Where do we turn?? We have studies that suggest the way forward, but no one is in charge! In the past the EUT has ducked responsibility, only half heartedly supporting renewable energy, dismissing both climate change as a hoax and grudgingly admitting our fossil fuel resources are dirty and may one day run out. The people of Maine

need leadership from the Legislature - NOT from an unorganized group of entities with differing complaints about CMP and Versant. The disorganization and lawsuits and countersuits that will come from starting "Ourpower" or PTP will be dizzying and won't be settled for 20 years. In the short run because of the outlay of monies for suits and consultants the costs will only increase before they level out.

LD 952 can be made into a solution to unhappy ratepayers and generators who are not being serviced in a timely manner by CMP.

As far as the problems with the retail electrical market – and Standard Offer. I think the PUC has set this up for failure by being too fixed on today's price and not looking ahead. I don't think they should force people to give up their ability to choose a provider, but they need to police the providers better because the bad actors have caused significant damage to the retail market and trust in the Public Advocate. I know what I am doing in choosing a company to provide me electricity in the winter. I chose a hydro company to back up my solar in winter, but the company refused me because of what the woman agent said was "demand charges".

. The Commissioners on the MPUC are overburdened. Maine needs at least two more. There needs to be some institutional memory, while they also need to be protected from politics, and need to reflect the changing attitudes of the public. Commissioners are more like judges than they are like a governor or legislator and should be appointed and confirmed by the EUT.

Now to introduce myself, I am Dr. Suzanne Sayer. I have a PhD in Engineering and Environmental geophysics, and a BSME both from Virginia Polytechnic Institute and State University - VaTech- for short. I earned a Masters in Earth and Planetary Sciences (Geochemistry) from MIT as well as a BS in Geological Sciences from Tufts University. I took Electrical engineering courses both for my PhD and BSME: the most recent EE course I took from UMO in 2022. Until recently I worked as a Nuclear Engineer on Los Angeles class Attack submarines at Portsmouth Naval Shipyard, where I needed to understand some electrical engineering. I represent myself and am retired. I have earned the title "Director" from the American Contract Bridge league and direct certified duplicate games. I was on the Utilities Subcommittee of Governor Baldacci's Ocean Energy Task Force and an invited speaker to the Wind Power Task Force.

I support LD 952 because Maine finally has the opportunity to enter the 21st century in their Utility structure. I've been hearing horror stories of my neighbors in Eliot and South Berwick having Electricity bills of \$600 and \$900/month. More than any mortgage payment I ever made. My bill has been consistent for 9 months of the year at ~\$14 a month and for 3 winter months it is less than \$100/month and I charge my Electric Vehicle(EV) from the Standard Offer, since the competitive generator I choose does not want my business.

In the mid 2000s I used to attend the EUT regularly when Maine was discussing the build out of Terrestrial wind and Offshore wind. Net Energy billing was new and pretty innovative, but the handwriting was on the wall that renewable energy could overwhelm the State with generators that were not dispatchable. Net Energy billing was upsetting to CMP since they had to "eat" the transmission fees. After all the legislation the EUT seems to have sat on its hands after setting up the REC system and funding Efficiency Maine. The EUT was watching CMP and Versant mess up the system, and did nothing to stop it. Perhaps someone on the EUT was in cahoots with one of the groups that wanted to have such a citizens uproar, that they could blithely slip in, have the State of Maine condemn CMP and Versant and take over. Their estimates of the takeover and the time it will take are greatly underestimated. I'm not an economist by any means. But I know enough math and financing to realize that PTP/OurPower is a disaster waiting to happen.

I urge the EUT to vote that LD 952 Ought to pass, and to put some rules into the regulations that MPUC can quantitatively measure for CMP and Versant to deliver on. Maine needs to start a serious program for dispatching the output of renewable energy into storage, whether flywheel, batteries, Electric Vehicles(EVs), hydrogen generation or ? If the day is sunny, solar power production fortunately matches the high load usage during the middle of the afternoon in summer months for producing

indoor energy use and air conditioning. Wind blows most often in winter and should have some storage requirements accompanying the outbuilding of generation. Wind could decompose water and produce Hydrogen gas so that it can be stored in compressed form for later use in Vehicles and Fuel cells. Anhydrous ammonia can also be produced from decomposition of the Nitrogen in air and Hydrogen from water. Anhydrous ammonia can be stored and used in diesel engines (there are tractors running on ammonia) and fertilizer. I have a battery backup to my solar roof. The energy converted from the sun can be stored in the electric battery in my EV. However, currently I use time of use (TOU) billing so I use more electricity at night and charge my EV battery at night and put electrons into the grid in the daytime and use Net Energy billing.

Being an engineer I understood what was going to happen with our energy resources. I lived through the gasoline shortage of the 1970s. I worked on Geothermal energy in the 1980s in the Salton Sea and was at Los Alamos during Hot Dry Rock experiments. When I moved to Maine to work as a nuclear engineer, gasoline prices were rising and I invested in energy efficiency, tightening up my house with help from Efficiency Maine - installing a heat pump, a hot water heat pump, a Powerwall, an electric charger and buying an EV. I made choices that put me in a good place compared to my neighbors. They were not easy to make while other people took vacations to Europe, bought "camps," and took cruises. Now I am doing fine while my neighbors are hurting because of utility bills. Maine has been short sighted. My friends keep trying to get me to sign on to the Pine Tree Power plan. I won't. I know how poorly run CMP has been, I've received money from CMP for finding and proving at least 3 errors in their billing. They have been slowly getting better and informing people of outages and potential outages. Maine does not need the PTP takeover, it's a knee jerk reaction to a terrible situation. The PTP could be a worse disaster than CMP. We would need LD 924 even more urgently. Maine needs the EUT to put some regulations in place to make the utilities upgrade their performance and it needs to direct the MPUC to enforce the regulations. MPUC, the EUT and the legislature, are all complicit with CMP for providing one of the worst in the Nation electrical utilities. ISO-NE is not responsible for this. FERC is not responsible for this. MPUC and EUT and the Legislature are responsible because they did not set reasonable rates of return, enact rules and enforce regulations.

Citations:

"2021 Economic Study Future Grid Reliability Part I" paid for by ISO-NE and publically available on ISO-NE website.

"Evaluation of the Ownership of Maine's Power Delivery System," February 15, 2020, 93pp, Prepared by London Economics International, LLC in collaboration with Peter Brown, Esq.