The Commonwealth of Massachusetts
MASSACHUSETTS SENATE

SENATOR JOANNE M. COMERFORD
Hampshire, Franklin and Worcester District

STATE HOUSE
BOSTON, MA 02133-1053
TEL. (617) 722-1532
FAX (617) 722-1062
WWW.MASENATE.GOV

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Commissioner Judith Judson
Massachusetts Department of Energy Resources
100 Cambridge St., Suite 1020
Boston, MA 02114

Re: Senator Jo Comerford Comment on 400 MW SMART Review Proposed Regulations

Dear Commissioner Judson:

Thank you for considering public input, and for implementing the feedback you receive, as the DOER promulgates new SMART program regulations. I am contacted frequently by constituents, municipalities, local solar companies, farmers, and land conservation non-profits with suggestions on how the SMART program could be improved or frustrations about their inability to access the program. Below please find concerns and suggestions that we hope will be reviewed during this process. It is my hope that by addressing the concerns in the new regulations, we can encourage a stable and growing solar industry that will provide permanent jobs and help transition our economy to being powered by solar panels that are cited in smart locations.

Problem: An 800 MW expansion is insufficient.

Proposed Solution: The SMART program expansion should be based off of how much solar can be integrated into the grid on an annual basis, as well as how much solar is needed to meet the state's greenhouse gas emission reduction goals under the Global Warming Solutions Act.

Problem: Municipalities struggle to get their projects into the application pool because they generally take longer to vote on, procure and implement the necessary contracts than is possible under the accelerated SMART program timelines. Additionally, municipalities

benefitting from a project are not prioritized in any way.

Proposed Solution: Provide longer lead times to municipalities entering the pool of applicants and benchmarks along the way to completed projects. Also consider a set aside for the conversion of former landfill sites, particularly if they include the capping of the landfill. Additionally, allow the developer to list a municipality as a partner so as to identify and prioritize projects with community benefits. Identify a way to verify a municipality's participation to avoid fraudulent claims.

Problem: The proposed changes to adders and subtractors are inadequate to address the land use impact of continued solar development in the state. Deforestation to cite solar arrays demonstrates inadequate planning and an insufficient greenfield subtractor.

Additionally, DOER has not provided data to measure the impact of solar development on undeveloped or forested land or to measure the effects of solar development on ecological and agricultural resources

Proposed Solution: DOER should adopt the land siting criteria from the initial SMART straw proposal as recommended by environmental conservation organizations. Developers should be required to include vegetated corridors between arrays or array sections to ensure large developments do not further exacerbate habitat fragmentation. DOER should also provide 30 days for public comment following the release of land-use analysis as well as share information publicly about the citing of all large solar.

Additionally, incentives for siting solar arrays on the built environment (i.e. solar canopies, rooftops, landfills, etc.) should be strengthened further, as should disincentives for cutting of trees to cite solar.

Problem: Regulations do not make accommodations for farmers who hope to use solar to reduce their energy usage and diversify their income stream. Farmers are losing farmland to development, whereas installing solar panels on farmland enables farmers to benefit from solar when they need to and remove the solar panels years later if the farming operation becomes financially viable once again.

Proposed Solution: Enable farmers to diversify their income stream by creating a carve-out in the greenfield subtractor for citing solar on farmland, as well as providing an additional carve-out for farms by waiving the storage requirement in the proposed regulations for solar cited on farmland.

Problem: Municipal boards, solar developers, environmental, conservation and agricultural groups do not feel that DOER is accepting enough feedback nor incorporating the feedback that is received. There has been no explanation of how stakeholder input has been

incorporated into the regulations, and state agencies like Mass Wildlife and DCR have not been fully engaged in the rulemaking process by DOER.

Proposed Solution: Create an advisory committee made up of the above mentioned groups, as well as regional planning agencies, that provides feedback to DOER regarding solar siting, solar incentive structures, the solar energy market, and any additional related topics. The committee should propose new regulations and ideas to DOER regularly, in order to ensure stakeholder groups are engaged and heard in the decision-making process.

Problem: The initial response to the SMART program has resulted in rapid declines in block capacity concentrated in central and western Massachusetts more-so than in eastern Massachusetts.

Proposed Solution: Develop a working group to review project distribution data and develop potential solutions to encourage more capacity in the Western part of the state.

Problem: Only 34 out of 1600 megawatts accepted into the SMART program have been installed. This gives developers of large projects a financial incentive to file applications before the new regulations take effect. There is no measure to prevent a full 1600 MW of solar from being developed under the original regulation and incentive values.

Proposed Solution: All applications received from the release of the first 400 MW straw proposal (September 5, 2019) should be required to comply with the new regulation.

Problem: SMART program applications fees are regressive for smaller systems.

Proposed Solution: Make application fees a fixed $/kW amount that scales up with larger projects.

Problem: Electric distribution company (EDC) requirements for interconnection and SMART meter placement are causing significant delays and unanticipated costs. The EDCs do not provide a specific timeline for interconnection, and often take many months or even a year to evaluate the equipment and the overall cost of a project's interconnection to the grid. Additionally, EDCs do not disclose the cost of interconnection up front, and are not constrained in what they can include in the cost of interconnection.

Proposed Solution: Establish a third party interconnection review board to review interconnection applications and improve the process.

Constituents and towns within the Hampshire, Franklin, Worcester district are eager to install solar and contribute to our clean energy revolution. Jobs in the solar industry, which was the

fastest growing industry in the state during the SREC II program, can also provide a much needed boost to the Western Mass region which is losing population. It is my sincere hope that DOER will incorporate the suggestions from the comments it receives into its proposed regulations, to enable the solar industry to add jobs once again, and to enable my constituents to participate in the long-overdue transition to a green energy economy.

Sincerely

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Jo Comerford
State Senator
Hampshire, Franklin, Worcester district

Karen Ribeiro email:

Hello Kaitlin, et. al.

I attended the SMART presentation at UMass Amherst and have the following commentary for you:

Given the fact that the 400 MW Review by the DOER is tasked with addressing oversights of the program, one glaring issue is the massive land grab for large scale solar that the program stimulated. Many municipalities are rewriting their solar bylaws in order to protect forests and agricultural lands. As such, increasing the incentive "subtractor" for large ground mounts (making them 5x less lucrative) is a move in the right direction with the proposed SMART extension. Thank you.

The problem is that this 5x increase does not affect the many projects that are queuing up. Proposing that these would be "grandfathered" will do nothing to address this issue and will most certainly result in additional clear cutting and loss of agricultural land.

What I recommend is that:

(1) **All** 800 MW of the additional solar incentive allocation be dedicated exclusively to the built environment - rooftop and carports

(2) The 5x subtractor increase NOT be delayed until the start of the program but instead be levied against **all** new >1MW projects in queue - this is crucial

(3) There be an increase in the location based adders for the built environment - rooftop and carports, and

(4) Additional carve outs by logical, small business oriented scales (such as 26 - 100 kW, 101 - 250 kW and 251 - 500 kW) be created to truly incentivize the more challenging projects that keep more people employed in the industry and significantly more money in the local economy

I appreciate the challenge of pulling this new extension regulation together and thank you for your work. And I want to encourage the DOER to be courageous and bold. Our health, environment, ecosystems, and futures depend on it.

Other ancillary questions include:

- How does the addition of energy storage help with utility interconnection? The DOER presentation suggests storage "may help" with utility interconnection, but there is no

examples for how this would actually work.

- For BTM AOBC projects not interconnecting as Net-Metering facilities (given existing caps that haven't been lifted), will the Qualifying Facility metering regulations still apply? For example, will a BTM AOBC >60kWac still receive a Dual Register 5 Minute Interval meter (per MA QF Regulation)? (And is the DPU working on increasing access to this data so that installers can properly model storage?)
- Can a <25kWac project qualify as an BTM AOBC facility? For example, if a residential project chooses to exceed 10kWac and therefore lose access to the net metering rate, can they choose to qualify into SMART as a BTM AOBC facility?
- What happens to the value of exported power after the 20 year SMART term is over for an AOBC facility (BTM or standalone)? Does it revert the wholesale rate per QF regulations?

Thank you very much for your consideration. I greatly welcome any feedback you may have.

Karen Ribeiro

413-265-3892

Linda Tocci email:

Land Use Proposed Changes to the SMART Program should apply to the Expansion, not the existing 1600 MW Program

· Avoid market disruption by ensuring prospective changes do not unduly impact mature solar projects. DOER's land use proposals should only apply to the program expansion, not retroactively to the existing 1600 MW already approved in the SMART Program.

· In addition to avoiding retroactive policies that harm developers who have already made investments, there is a geographic consideration: There is significant remaining capacity in Eversource East within the initial 1600MW SMART program, for which developers have been working for over a year to line up projects. Given that one of DOER's goals for the 400MW review was to identify ways to encourage more solar in the eastern part of the state, it would be counterproductive to apply new land use penalties to those projects that could render them unviable.

Greenfield Subtractor

· Reduce or eliminate the "greenfield subtractor" penalties so that community solar projects remain economically viable and CSS customers can realize the same benefit as other customers.

- In place of a greenfield subtractor, one idea is to have the funds go to EEA with a percentage of the funding from a particular project going back to the host community for specific conservation purposes (i.e. expansion of public access, land acquisition, tree planting). The amount that goes back to the community could be based on a conservation plan put together by the community demonstrating what they plan to do with the funding.
- Regardless of the mechanism (i.e. greenfield subtractor or a conservation fund), the magnitude of the subtractor/fee matters. As proposed by DOER, the new greenfield subtractor levels are much too high and will make most projects unviable.

· Create a permanent Land Use and Siting Working Group comprised of land conservationists, solar providers, farmers and other stakeholders to provide a forum for information-sharing and collaboration.

· Support Cities and Towns. Allocate new resources for solar zoning and siting assistance through the Green Communities Act.

Green Communities Information

· In terms of providing more support to cities and towns as it relates to renewable energy siting, particularly in communities with limited or no siting resources, the Department of Energy Resources can empower its Green Communities Division to (a) update the existing model bylaw – through a stakeholder process, (b) provide planning assistance grants to cities and towns that demonstrate the need to hire siting consultants or utilize their regional planning agency to evaluate and provide recommendations on solar opportunities (or support the community as they are going through a review), (c) convene workshops in conjunction with regional planning agencies, the DOER/DEP Clean Energy Results program (https://www.mass.gov/clean-energy-results-program), solar industry representatives, land use experts to provide guidance on how solar projects are permitted and sited, (d) convene a working group with the MMA, other agencies, land use and solar stakeholders to develop a toolkit on how to develop bylaws, permit project and also consider other ways the Green Communities Division can be of assistance, (e) double the number of regional coordinators (currently at 4) within the Green Communities Division.

Metrics

· The SMART program can be strengthened by establishing (and tracking) metrics to understand how many customers are participating, including the total number of low- and moderate-income customers served. Without this information, it is not possible to objectively understand progress towards meeting these policy goals included in the 2016 enabling legislation.

· Unlike larger scale clean energy projects like offshore wind or hydro, the solar projects supported by SMART directly engage families and businesses across the Commonwealth, involving them in the clean energy transition and directly saving them money on their electric bills. Ensuring that as many customers as possible are participating in the SMART program (which all customers pay for) should be a priority for DOER.

The Proposed Expansion of 800 MW is Too Small

• SMART program capacity should be expanded by no less than **3,200 MWac**

• MA needs at least 3,500 MWac more solar by 2030 to stay on track to meet its **35% RPS target**; and almost 6,700 MWac under a **25% by 2030** solar requirement

• Additional analysis indicates that ~14 GW is needed to get on track with the state's decarbonization targets of 80% GHG Reduction by 2050 in a scenario with significantly increased load, and an "all-in" strategy that includes significant amounts of offshore wind and

hydro

Harvard Pioneer Valley Land-Use Study

This study assesses existing solar development in this particular region, but does not put it into context with larger development trends and climate goals. As discussed above, the Commonwealth needs much more solar to meet its climate goals, and that can be accomplished with minimal impact to forested lands and open space. Here are some additional technical thoughts on the study.

· They went through the effort to trace both the fenceline and outermost extent of the clearing, from a methodology perspective, much better than a separately referenced study (Clark).

· They make the conclusion that 2% of solar was built on buildings. This is misleading. 1) Their study area has a small share of the built solar in MA (think Woburn vs. Pioneer Valley); 2) They only count projects >0.25ac; and 3) Small rooftop projects – that do add up – are so hard to find that their scanning approach undoubtedly missed a large portion of the built environment.

· They claim one third forest development was from solar. But, if there hasn't been any economic or real estate development in a western MA mill town (for example) since the textile exodus of the late 90's, and a solar project was developed, then the numbers are skewable on a local level.

· They mention the Clark study's reference to solar being built in proximity to various land use types. However, there are multiple deficiencies to the Clark study, including:

o Clark's methodology did not trace the outline every project, rather they made a 1150ft (350m) buffer around an address point. That encompasses 96 acres, far more area than a 2MW/10acre or 6MW/30acre project would ever encompass.

o Clark's study used a 1150ft buffer. The commonwealth and municipalities protect a 50 to 100ft buffer around wetlands.

o In the Landcover section of Clark's results, Clark itself notes that their buffer method is skewed by the large amount of residential development in the buffer area of solar fields between 2005 and 2017.

o The dataset Clark used for the addresses, while the best publicly available, is still inaccurate (~5-15% off) for the type of geospatial analysis they performed.

· They comment on NJ's Solar Act of 2012. It must be noted that New Jersey has much

less open space, far more brownfield area per sq mi, and they were supporting solar stronger back then as compared to MA.

o They also mention the NJDEP Solar Siting tool, but this is simply just a landcover dataset showing openspace and brownfields and has many inaccuracies; for example, the NJ Siting Tool opening web page shows an area of "open space" in 2012 that has since been developed as a subdivision.

· On page 9, the study mentions that there was an EEA data set created for internal use that they became aware of and which corresponded to data compiled for their study. It would be good for that EEA data to be public; we do not have that data, for example.

They reference CT's concern of solar on agricultural and forestland. We encourage you to read the report. MA took care of many of these issues with the soil protection standards.

Claire Chang email:
topics to consider.

800MW is too little. need 3200MW to get MA anywhere near 20% solar by 2030. need 3200MW for longer runway for solar projects. short runway means a new program which takes 1-2 years to establish. we have enough solar coaster already.

800MW carve out for 25kW -500kW to secure space for small commercial installs

need to stop under 25kW at block 4 rates. just cap with no declining % after block 4 to remain viable financial paybacks for residential systems, which do cost more than 1-5MW size.

need to add dual axis trackers adder to < 25kW system size. they are very efficient use of space to generate electricity. have adder for tracker > 25kW.

Like the interconnection adder/subtracter, though will need more info on how calculated.
How soon with heat maps be available? How will heat maps info be accessed? online? input address and get location status?
How will adder/ subtractor be determined? use colors red, yellow, green? but what parameters determine each color?
How often will heat maps be updated?
Is the date of the interconnection application determine eligibility for adder?

Agree with BTM being able to use the AOBC.
Like 2% BTM and 4% stand alone. but really we need to stay at block 4 for <25kW or extend to 20 yrs full block rate.
agree with land use proposal - thought this is still under discussion.

still looking at the new calculation for BTM exported energy. need better than stand alone energy values.

not sure that low income changes are enough.

agree with adding demand response to storage adder

not sure if public adder is enough. such a long development cycle.

interesting pollinator adder. do not know how it will actually work.

agree with removing 12 month restriction on existing system replacement.

I think this is most of it.

thanks, claire