APPENDIX F

Model Draft Language for Legislation

Appendix F
Model Draft Language for Legislation based on Commission Recommendations

1. Establish Targets for Energy Storage Development

- In the short-term, the commission recommends establishing a State goal of reaching 100 megawatts (MW) of energy storage capacity located in the State by the end of 2025.

35-A MRSA section 3145 is enacted to read:

§3145. State energy storage policy goals

The state goal for energy storage system development is that there be 100 megawatts of installed capacity located within the state by December 31, 2025. For the purposes of this section, "energy storage system" has the same meaning as in section 3481, subsection 6.

2. Encourage Energy Storage in Renewable Energy Procurement

- Providing an adder for energy storage in procurements of new renewable generation resources under 35-A MRSA §3210-G and of distributed generation resources under 35-A MRSA §3484 in the contract price when: (a) the generation resource is paired with energy storage and (b) the bidder demonstrates that the paired storage alleviates congestion on the transmission or distribution system or provides some other demonstrated benefit to grid reliability, grid resiliency or electricity ratepayers.
- Requiring the PUC to determine the specific value (or formula) along with eligibility criteria for this "adder" through a rulemaking or other appropriate PUC proceeding conducted for this purpose.

Renewable Portfolio Standard Procurement

Amend Title 35-A §3210-G sub-§1 paragraph D, subparagraph (6) to read:

D. The commission shall, in accordance with this paragraph, allow energy storage systems to participate in solicitations or be awarded contracts under this section.

(1) The commission shall permit an energy storage system to bid on solicitations or to be contracted under this section only if the energy storage system is connected to the State's electricity grid, paired as a complementary resource with a Class IA resource and either:

(a) Colocated with the Class IA resource, whether metered jointly with or separately from the Class IA resource; or

(b) Located at a different location from the Class IA resource and the commission finds that inclusion of the energy storage system would result in a reduction in greenhouse gas emissions.

(2) A bid under this section that includes an energy storage system must include 2 separate bid proposals, one with the energy storage system and one without. The

commission shall assess the bid proposals based on the benefits to ratepayers, which may include, but are not limited to:

(a) Reduction in costs;
(b) Decrease in peak electricity demand;
(c) Deferral of investments in the transmission and distribution system;
(d) Deferral of capital investments in new generating capacity;
(e) Increase in the electricity grid's overall flexibility, reliability and resiliency; ~~and~~
(f) Reduction in greenhouse gas emissions~~.~~; and
(g) Meeting state goals for energy storage pursuant to section 3145.

(3) An energy storage system that is not colocated with a Class IA resource may receive renewable energy credits only for stored energy generated from a Class IA resource.

(4) If chosen for a contract under this section, an energy storage system must remain stationary and under the same ownership throughout the contract term.

(5) The commission may permit an energy storage system to be paired with and added to a Class IA resource after that resource has been awarded a contract.

(6) An energy storage system contracted under this section is eligible for an adder in the contract compensation rate provided that the bidder demonstrates that the paired storage alleviates congestion on the transmission or distribution system or provides some other demonstrated benefit to grid reliability, grid resiliency or electricity ratepayers. The commission shall by rule establish a methodology for determining the value of the energy storage adder and specific eligibility criteria which may include, but are not limited to: power rating, capacity rating, and minimum efficiency, data reporting and operational requirements.

For the purposes of this paragraph, "energy storage system" means a commercially available technology that uses mechanical, chemical or thermal processes for absorbing energy and storing it for a period of time for use at a later time.

Distributed Generation Procurements

Amend Title 35-A §3484, sub-§2 paragraphs E, F and G:

E. Each contract awarded pursuant to this subsection reduces the available capacity in the current procurement block. If an awarded contract exceeds the remaining capacity of its procurement block, then that block is closed and the next block opened and the contract rate is set at the block contract rate for the block filled by this award and any overprocurement in one block is subtracted from the quantity available in the next block. If a contract award exceeds the capacity of procurement block 5, the entire quantity of the offer is awarded at the block

contract rate for procurement block 5 and no further contracts may be awarded except under subsection 7; ~~and~~

F. The commission may by rule establish incentives in the procurement of distributed generation resources including, but not limited to, incentives to support resources that pair with energy storage systems, development of dual-use projects, siting of resources that provide locational benefits to the distribution system and other siting criteria developed in consultation with the Department of Environmental Protection and the Department of Agriculture, Conservation and Forestry~~.~~; and

G. The commission shall by rule establish an adder in the contract compensation rate for resources that pair with energy storage systems, when the paired storage alleviates congestion on the transmission or distribution system or provides some other demonstrated benefit to grid reliability, grid resiliency or electricity ratepayers. The commission by rule shall establish a methodology for determining the value of the energy storage adder and specific eligibility criteria which may include, but are not limited to: power rating, capacity rating, and minimum efficiency, data reporting and operational requirements

3. Advance Energy Storage as an Energy Efficiency Resource

- Amending the laws governing the Efficiency Maine Trust (Title 35-A chapter 97) to ensure that the Trust's authority explicitly and affirmatively includes energy storage, by adding direct references to energy storage in relevant sections of statute, including definitions;
- Directing the Efficiency Maine Trust to consider expanding existing opportunities or developing new opportunities through its programs and initiatives to use energy storage to reduce peak electricity demand.
- Directing the Efficiency Maine Trust to explore alternative methods to demonstrate cost-effectiveness for energy storage projects or programs.

Amend 35-A section 10102 to add subsection 5-A as follows:

5-A. Energy storage system. "Energy storage system" has the same meaning as in section 3481, subsection 6.

Amend 35-A section 10109 (Regional Greenhouse Gas Initiative Trust Fund), subsection 4, paragraph A to read:

A. Trust funds must be allocated for measures, investments, loans, technical assistance and arrangements that reduce electricity consumption, increase energy efficiency or reduce greenhouse gas emissions and lower energy costs at commercial or industrial

facilities and for investment in measures that lower residential heating energy demand and reduce greenhouse gas emissions. The measures that lower residential heating demand must be fuel-neutral and may include, but are not limited to, energy efficiency improvements to residential buildings, energy storage systems and upgrades to efficient heating systems that will reduce residential energy costs and greenhouse gas emissions, as determined by the board. The trust shall ensure that measures to reduce the cost of residential heating are available for low-income households as defined by the trust. When promoting electricity cost and consumption reduction, the trust may consider measures at commercial and industrial facilities that also lower peak capacity demand, including energy storage systems. Subject to the apportionment pursuant to this subsection, the trust shall fund conservation programs that give priority to measures with the highest benefit-to-cost ratio, as long as cost-effective collateral efficiency opportunities are not lost, and that:

(1) Reliably reduce greenhouse gas production and heating energy costs by fossil fuel combustion in the State at the lowest cost in funds from the trust fund per unit of emissions; or

(2) Reliably increase the efficiency with which energy in the State is consumed at the lowest cost in funds from the trust fund per unit of energy saved.

Amend 35-A section 10109(Regional Greenhouse Gas Initiative Trust Fund), subsection 4, paragraph A to read:

§10110. Electric efficiency and conservation programs

2. Programs. The trust shall develop and implement conservation programs to help reduce energy costs for electricity consumers in the State by the maximum amount possible. The trust shall establish and, on a schedule determined by the trust, revise objectives and an overall energy strategy for conservation programs. Conservation programs implemented by the trust must be consistent with the objectives and an overall energy strategy developed by the trust and approved by the commission and be cost-effective, as defined by the board by rule. In defining "cost-effective," the board may consider the extent to which a program promotes sustainable economic development or reduces environmental damage to the extent the board can quantify or otherwise reasonably identify such effects. Consistent with the other requirements of this section, the trust, in adopting and implementing conservation programs, shall seek to encourage efficiency in electricity use, provide incentives for the development of new, energy-efficient business activity in the State and take into account the costs and benefits of energy efficiency and conservation to existing business activity in the State.

A. The trust shall consider, without limitation, conservation programs that:

(1) Increase consumer awareness of cost-effective options for conserving energy;

(2) Create more favorable market conditions for the increased use of energy-efficient products and services;

(3) Promote sustainable economic development and reduce environmental damage;

(4) Reduce the price of electricity over time for all consumers by achieving reductions in demand for electricity during peak use periods, including by the implementation of beneficial electrification and energy storage systems; and
(5) Reduce total energy costs for electricity consumers in the State by increasing the efficiency with which electricity is consumed.

Unallocated Language

Section X. Energy storage measures. The Efficiency Maine Trust shall explore and evaluate options to support energy storage measures that reduce peak demand through its electric efficiency and conservation programs and its programs funded by the Regional Greenhouse Gas Initiative Fund established pursuant to Maine Revised Statutes, Title 35-A, section 10109. The Trust shall consider expanding existing opportunities under the Innovation Pilot Program and developing new opportunities through other Trust programs and initiatives. In evaluating the cost-effectiveness of energy storage measures, the Trust shall explore various cost-effectiveness methodologies and tests. In fulfilling the duties of this section, the Trust shall consider:

1. Expanding energy storage pilot projects within the Trust's existing Innovation Pilot Program, and implementing any cost-effective pilots as statewide programs;
2. Bring-your-own-device programs in which customer-owned and customer-sited battery storage is aggregated and performance incentives are provided for reducing load at times of system peak;
3. Rebate or funding programs for all customer class storage paired with renewable energy; and
4. Customer education initiatives regarding demand management and energy storage, including education targeted to low-income and rural areas

4. Address Rate Design and Energy Storage

- Direct PUC to open a docket to investigate opportunities to modernize electricity rate design through time-of-use, or other time-differentiated rates, that send appropriate price signals and incentives to consumers to reduce demand during peak periods.
- Direct PUC to develop and implement a pilot program to test and evaluate time-of-use rates in conjunction with energy storage
- Direct PUC to develop and implement a schedule for regular review and update of electricity rate designs and ensure that the review include consideration of time differentiated rates.

Unallocated language

Section X. Rate design. The Public Utilities Commission shall investigate and, where appropriate, implement rate designs that account for variation in the cost components of electricity as the load or demand on the electricity system fluctuates. The commission shall take the following specific steps to address rate design:

1. Open a docket to investigate opportunities to modernize electricity rate design through time-of-use, or other time-differentiated, rates that send appropriate price signals and incentives to consumers to reduce demand during peak periods and to develop and implement a pilot program to test and evaluate time-of-use rates in conjunction with energy storage;

2. Develop and implement a schedule for regular review and update of electricity rate designs, including consideration of fixed charges, and ensure that the review include consideration of time differentiated rates.

5. Clarify Utility Ownership of Energy Storage

- Direct PUC to open a docket to examine issues related to the ownership and operation of energy storage by transmission and distribution utilities.

Unallocated language

Section. X. Utility ownership of energy storage. The Public Utilities Commission shall open a docket to examine and evaluate whether and how transmission and distribution utilities could participate in energy storage ownership and operation activities with appropriate safeguards to ensure that private developers as well as electricity consumers are not disadvantaged. The docket must include, but is not limited to, consideration of:

1. Whether an investor-owned transmission and distribution utility, if allowed to own or operate energy storage, beyond what is allowed under current law can add the costs to own or operate energy storage to its rate base;
2. Cost implications for electricity ratepayers;
3. Implications for the private market for storage development, construction and operation;
4. Potential benefits of utilities installing energy storage at or near utility substations to address transmission congestion issues;

6. Advocate for Energy Storage in the Regional Energy Markets

- Direct PUC, Governor's Energy Office (GEO) and other state agencies as appropriate to seek opportunities to advocate for consideration of energy storage opportunities by ISO-New England in regional market planning and design.

No Legislation recommended. However, the commission suggests the EUT committee send a letter to the Public Utilities Commission and Governor's Energy Office requesting that each entity

> Take all available and reasonable steps to advocate for consideration of energy storage opportunities by ISO-New England in regional market planning and design, including the wholesale electricity, capacity and ancillary service markets.

7. Conduct In-depth Analysis of Energy Storage Costs, Benefits and Opportunities

- Direct the State, under the direction of the GEO to conduct a comprehensive analysis to evaluate and quantify the costs, benefits and opportunities for energy storage in the State and develop specific recommendations for future policy and program development; provide necessary resources to carry out this work.
- Require the GEO to address energy storage in all future updates to the comprehensive State Energy Plan, which GEO is required to provide the Governor and the Legislature every 2 years in January (2 MRSA section 9, subsection 3, paragraph C). To provide clarity and specificity, the commission recommends amending the State Energy Plan statute to require the plan, and biennial updates to the plan, specifically address energy storage development.

Study – Unallocated

Sec. 1 Energy planning. Resolved: That the Governor's Energy Office shall, in coordination with development of the state energy plan prepared pursuant to Title 2, section 9, subsection 3, paragraph C, conduct a comprehensive analysis to evaluate the costs, benefits and opportunities for energy storage in the State and develop specific recommendations for future policy and program development. The study must include, but is not limited to:

1. A review of existing state-specific energy storage studies, including but not limited to the Massachusetts State of Charge report (2016) and the Vermont Act 53 Report (2017), and consultation with relevant staff and organizations in those States.
2. Input from and involvement of the relevant state agencies including the Public Utilities Commission, the Efficiency Maine Trust, and the Climate Council created pursuant to Maine Revised Statutes, Title 38, section 577-A and relevant subcommittees of that Council.
3. Quantitative data analysis modeling of energy storage needs, opportunities and cost-benefit analysis based on Maine-specific data, using existing energy storage modeling software available from reputable sources when possible and appropriate.
4. Comprehensive consideration of relevant issues including, but not limited to:
    a. Emerging storage technologies and technological developments;
    b. Access to energy storage for low-income households and communities;
    c. Impacts of energy storage on carbon emissions;
    d. Energy storage permitting and interconnection requirements;

e. Safety and performance codes and standards; and
f. Decommissioning and end-of-life remediation of storage technology

5. Recommendations for future energy storage targets beyond the 100 MW by 2025 target identified in the report made pursuant to Resolve 2019, chapter 83. . The office shall carefully consider how to set targets optimally to support achievement of the state's renewable energy goals pursuant to Maine Revised Statutes, Title 35-A, section 3210, subsection 1-A.
6. Comprehensive recommendations that include a prioritized list and timeline of Maine-specific goals and needs for energy storage and associated policy and statutory changes necessary to achieve those goals.

Sec. 2 Report. Resolved: That the Governor's Energy Office shall provide a report on the study along with any recommended policy initiatives, to the Joint Standing Committee on Energy, Utilities and Technology by [ADD date / to be determined]. The committee may report out legislation related to the report.

State Energy Plan

Amend 2 MRSA section 9, subsection 3, paragraph C to read:

C. In consultation with the Efficiency Maine Trust Board, established in Title 5, section 12004-G, subsection 10-C, prepare and submit a comprehensive state energy plan to the Governor and the Legislature by January 15, 2009 and submit an updated plan every 2 years thereafter. Within the comprehensive state energy plan, the director shall identify opportunities to lower the total cost of energy to consumers in this State and transmission capacity and infrastructure needs and recommend appropriate actions to lower the total cost of energy to consumers in this State and facilitate the development and integration of new renewable energy generation within the State and support the State's renewable resource portfolio requirements specified in Title 35-A, section 3210 ~~and~~, wind energy development goals specified in Title 35-A, section 3404 and energy storage development goals specified in [ADD cross-reference]. The comprehensive state energy plan must include a section that specifies the State's progress in meeting the oil dependence reduction targets in subsection 5. The office shall make recommendations, if needed, for additional legislative and administrative actions to ensure that the State can meet the reduction targets in subsection 5. The recommendations must include a cost and resource estimate for technology development needed to meet the reduction targets.

(1) Beginning in 2015, the update to the plan must:

(a) Be submitted to the joint standing committee of the Legislature having jurisdiction over utilities and energy matters and the joint standing committee of the Legislature having jurisdiction over natural resources matters;

(b) Address the association between energy planning and meeting the greenhouse gas reduction goals in the state climate action plan pursuant to

Title 38, section 577. The director shall consult with the Department of Environmental Protection in developing this portion of the plan;

(c) Include a section devoted to wind energy development, including:

(i) The State's progress toward meeting the wind energy development goals established in Title 35-A, section 3404, subsection 2, including an assessment of the likelihood of achieving the goals and any recommended changes to the goals;

(ii) Examination of the permitting process and any recommended changes to the permitting process;

(iii) Identified successes in implementing the recommendations contained in the February 2008 final report of the Governor's Task Force on Wind Power Development created by executive order issued May 8, 2007;

(iv) A summary of tangible benefits provided by expedited wind energy developments, including, but not limited to, documentation of community benefits packages and community benefit agreement payments provided;

(v) A review of the community benefits package requirement under Title 35-A, section 3454, subsection 2, the actual amount of negotiated community benefits packages relative to the statutorily required minimum amount and any recommended changes to community benefits package policies;

(vi) Projections of wind energy developers' plans, as well as technology trends and their state policy implications;

(vii) Recommendations, including, but not limited to, identification of places within the State's unorganized and deorganized areas for inclusion in the expedited permitting area established pursuant to Title 35-A, chapter 34-A and the creation of an independent siting authority to consider wind energy development applications;

(d) Include a description of activities undertaken pursuant to paragraph H; ~~and~~

(e) Include a description of the State's activities relating to the expansion of natural gas service, any actions taken by the office to expand access to natural gas in the State and any recommendations for actions by the Legislature to expand access to natural gas in the State~~.~~; and

(f) Include a section devoted to energy storage development, including:

(i) The State's progress toward meeting the energy storage development goals established in [ADD cross reference], including an assessment of the likelihood of achieving the goals. (ii) Projections of energy storage developers' plans, as well as technology trends and their state policy implications;

(ii) Recommendations for any changes to the energy storage development goals or addition of future goals; and

(iii) Recommendations for policy and statutory changes necessary to achieve the energy storage development goals.

The joint standing committee of the Legislature having jurisdiction over utilities and energy matters may report out legislation by February 1st of each odd-numbered year relating to the content of the plan. The joint standing committee of the Legislature having jurisdiction over natural resources matters may make recommendations regarding that legislation to the joint standing committee of the Legislature having jurisdiction over energy matters.