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June 30, 2016

Mark D. Marini, Secretary
Department of Public Utilities
One South Station
Boston, MA 02110

Re: NSTAR Electric Company and Western Massachusetts Electric Company, each d/b/a Eversource Energy, D.P.U. 16-XXX

Dear Secretary Marini:

Enclosed for filing on behalf of NSTAR Electric Company ("NSTAR Electric") and Western Massachusetts Electric Company ("WMECO"), each d/b/a Eversource Energy ("Eversource"), please find the Petition of Eversource for Approval of a request to own, construct and operate solar facilities, pursuant to G.L. c. 164, § 1A(f), as most recently amended by Chapter 75 of the Acts of 2016. In support of the Petition, Eversource is also providing the Direct Testimony of Camilo Serna, and the Joint Direct Testimony of Mrrs. Douglas P. Horton and Brian J. Rice, along with supporting exhibits.

Along with this Petition, Eversource is seeking approval of two Solar Expansion Cost Recovery Mechanism tariffs, M.D.P.U. No. 502 (NSTAR Electric) and M.D.P.U. No. 1060 (WMECO), provided as Exhibit DPH-BJR-4 and Exhibit DPH-BJR-5, respectively. A check for $200 is also enclosed for the associated filing fees.

Thank you for your attention to this matter. Please contact me or Jessica Buno at the above number if you have any questions regarding the filing.

Sincerely,

John K. Habib

John K. Habib

Enclosures

cc: Rebecca Tepper, Chief, Energy Division, Office of the Attorney General

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES

Petition of NSTAR Electric Company and Western Massachusetts Electric Company, each d/b/a Eversource Energy for Certain Approvals and Findings in Connection with the Construction, Ownership, and Operation of Generating Facilities that Produce Solar Energy	)	D.P.U. 16 -___

PETITION

NSTAR Electric Company ("NSTAR Electric") and Western Massachusetts Electric Company ("WMECO"), each d/b/a Eversource Energy ("Eversource" or the "Companies") hereby seek certain approvals and findings from the Department of Public Utilities ("Department") pursuant to G.L. c. 164, § 1A(f), as amended by Chapter 75 of the Acts of 2016, for Eversource to construct, own and operate up to 62 megawatts ("MW") of solar generation facilities in Massachusetts (the "Solar Program"). Specifically, the Companies are requesting approval by the Department for pre-approval of cost recovery associated with the range of estimates for upfront capital installation and future capital replacement costs, as well as ongoing annual operational costs, including annual system operations and maintenance ("O&M") for site maintenance, oversight, reporting and analysis, property taxes and other costs associated with the solar arrays it may develop, purchase, own and operate over the lifetime of its operation. Although the Companies may incur expenses for real estate associated with constructing and operating certain solar facilities, the Companies are not seeking pre-approval for real estate costs. To the extent that the Companies incur such costs to implement the Solar Program, the Companies will submit them to the Department for recovery in future Solar Program cost recovery filings.

In addition, Eversource is seeking approval of M.D.P.U. No. 502 and M.D.P.U. No. 1060 for NSTAR Electric and WMECO, respectively, which are the proposed tariffs associated with the Solar Expansion Cost Recovery Mechanism ("SECRM") designed to recover the incremental revenue requirement associated with the solar Program. Finally, Eversource is seeking approval by the Department for NSTAR Electric and WMECO to first apply any Renewable Energy Credits ("RECs") produced by the solar facilities toward the Renewable Portfolio Standard ("RPS") compliance obligations associated with its Basic Service load. Any RECs produced by the solar facilities in excess of the Basic Service RPS obligation will be sold through competitive solicitations and the proceeds recorded as a credit in the annual SECRM filing. .

The Companies state the following in support of this petition:

1. Eversource distribution operations in Massachusetts consist of two Massachusetts electric distribution companies subject to the regulatory jurisdiction of the Department pursuant to G.L. c. 164, with a principal place of business at 247 Station Drive, Westwood, MA 02090.

2. The Companies provide electric distribution service to customers in 140 cities and towns in Massachusetts.

3. G.L. c. 164, § 1A(f) authorizes an electric company or a distribution company to construct, own and operate generating facilities producing solar energy and to recover the costs associated with the planned facilities through rates so long as pre-approval from the Department to recover the costs associated with construction, ownership and operation of such facilities is obtained.

4. The Solar Program is consistent with the requirements for rate recovery, as set forth in G.L. c. 164, § 1A(f).

5. The direct testimony of Camilo Serna, Vice President Strategic Planning and Policy for Eversource Energy Service Company, describes the Solar Program, including pertinent details on program size, site potential, procurement and contracting approaches, project management and execution, forecast program cost ranges, offsetting credits, benefits to customers and project implementation considerations.

6. The joint direct testimony of Mr. Douglas P. Horton, Director, Revenue Requirements, and Brian J. Rice, Senior Analyst, Regulatory Projects, each for Eversource Energy Service Company describe the Companies proposed approach for cost recovery related to solar facility ownership of the solar facilities described in the testimony of Mr. Serna (the "Solar Facilities"). Specifically, the Companies are proposing a cost recovery mechanism to recover the revenue requirements associated with the Solar Facilities. Second, the Companies provide an estimate of the expected revenue requirement of the Companies' investment in the Solar Facilities. Lastly, the Companies present a proposed tariff for implementation of the Solar Expansion Cost Recovery Mechanism ("SECRM").

7. To date, Eversource has successfully deployed 8 MW of solar photovoltaic in Western Massachusetts. WMECO began implementing the WMECO Solar Program during the fourth quarter of 2009 and completed its last project in 2014.

8. In 2010, WMECO constructed and commissioned a 1.8 MW solar facility located on a brownfield property in Pittsfield (the "Silver Lake Facility"). In 2011, WMECO constructed and commissioned a 2.3 MW solar facility on 12 acres of brownfield property in Springfield (the "Indian Orchard Facility"). In 2014, WMECO constructed and commissioned a 3.9 MW solar facility located on a landfill property in Springfield (the "Cottage Street Facility").

9. These facilities were developed pursuant to the terms of the WMECO Solar Program initially approved by the Department on August 12, 2009 to include up to 6 MW of solar capacity (D.P.U. 09-05) and subsequently expanded to 8 MW with Department approval on September 4, 2013 (D.P.U. 13-50).

10. Through this Petition, Eversource proposes to maximize the amount of solar generation that it is permitted to develop, construct, own and operate under Section 1A(f), which authorizes each electric distribution company to build up to 35 MW of solar facilities with Department approval. Given WMECO has already constructed 8 MW of solar generation, Eversource is proposing as part of this Solar Program to deploy 62 MW to reach the maximum allowed for its two combined companies of 70 MW.

11. As described in the testimony of Mr. Serna, Eversource's Solar Program supports the Commonwealth's energy policy goals by providing a highly transparent, regulated contribution toward the objectives of the Green Communities Act and the Global Warming Solutions Act and is a valuable, competitive complement to the Commonwealth's other solar policies that support solar development.

WHEREFORE, for all of the reasons set forth in the testimony and exhibits of the Companies' witnesses, Eversource respectfully requests that the Department make the following findings and approvals:

(a) That the Companies' proposal to own and operate generating facilities producing solar energy is consistent with the Commonwealth's energy policy, and in the public interest, in accordance with G.L. c. 164, § 1A(f);

(b) That the Companies' cost-recovery proposal associated with the costs of owning and operating solar generating facilities pursuant to G.L. c. 164, § 1A(f) will result in just and reasonable rates under G.L. c. 164, § 94;

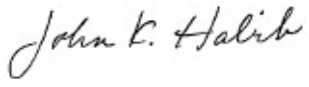
(c) That the Companies' proposed SECRM tariffs: (1) are properly structured to allow for the recovery of the revenue requirement arising from the construction, ownership and operation of the solar facilities through distribution rates, (2) properly credit distribution customers with the proceeds available from the in-service operation of the solar units, and (3) are in accordance with G.L. c. 164, § 94, and are approved;

(d) That, if needed, the environmental attributes, including SRECs, created from the solar generation facilities could be used to satisfy the Companies' renewable energy portfolio standard requirements contained in G.L. c. 25A, § 11F.

Respectfully submitted,

NSTAR ELECTRIC COMPANY AND WESTERN MASSACHUSETTS ELECTRIC COMPANY, d/b/a EVERSOURCE ENERGY

By its attorneys,



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Dated: June 30, 2016

COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 16-XXX

TESTIMONY OF

CAMILO SERNA

ON BEHALF OF
NSTAR ELECTRIC COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
d/b/a EVERSOURCE ENERGY

EXHIBIT EVERSOURCE-CS

JUNE 30, 2016

TESTIMONY OF
CAMILO SERNA
EXHIBIT EVERSOURCE-CS

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EXHIBITS

DIRECT TESTIMONY OF

CAMILO SERNA

I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Camilo Serna. My business address is 56 Prospect St., Hartford, Connecticut 06103. I am Vice President Strategic Planning and Policy for Eversource Energy Service Company.

Q. Please describe your education and professional background.

A. I graduated from Universidad de los Andes (Bogotá, Colombia) with a degree in Industrial Engineering. I also earned a Masters of Business Administration ("MBA") from Northwestern University's Kellogg School of Management. I then worked for nine years as a management consultant with Oliver Wyman's Energy & Utilities practice helping utility and energy companies in Europe, Latin America and North America with a wide array of strategic and operational challenges. In 2008, I joined Eversource (formerly Northeast Utilities) as Director of Strategic Planning. I have been Vice President of Strategic Planning and Policy since early 2013.

Q. Have you previously testified in regulatory proceedings before the Department?

A. Yes. I testified in the recent NSTAR Gas Company base distribution rate case proceeding (D.P.U. 14-150) to support its decision to sell the Home Heating Protection Plan service offering. I also represented Eversource Energy in technical sessions

regarding the Department's Investigation on its own Motion into Modernization of the Electric Grid (D.P.U. 12-76).

Q. Please explain the purpose of your testimony in this proceeding.

A. The purpose of my testimony is to provide an overview of the rationale, design and key features of Eversource's proposed solar expansion program ("Solar Program") submitted on behalf of NSTAR Electric Company ("NSTAR Electric") and Western Massachusetts Electric Company ("WMECO) (together "Eversource" or the "Companies"), including pertinent details on program size, site potential, procurement and contracting approaches, project management and execution, forecast program cost ranges, offsetting credits, benefits to customers and project implementation considerations.

Q. Please describe the components of this filing.

A. In addition to my testimony, this filing includes the joint testimony of Mr. Douglas P. Horton and Mr. Brian J. Rice that summarize the cost recovery approach and tariff proposed by the Companies. The filing also includes a petition setting forth the specific regulatory approvals that the Companies are requesting from the Department.

II. PROPOSAL DESCRIPTION

Q. Please explain the purpose of this filing.

A. The Companies are seeking pre-approval from the Department of the anticipated costs to develop, construct, own and operate 62 MW of additional solar photovoltaic capacity on Eversource-owned sites located throughout the Commonwealth within the Companies'

service territories. Eversource has successfully developed 3 solar facilities in the WMECO service territory with a total combined capacity of 8 MW. As I will explain later in my testimony, expansion of Eversource-owned solar generation resources at this time will provide benefits to customers and advance the Commonwealth's renewable and environmental goals on a competitive basis through economies of scale and utilization of existing utility sites and properties.

Q. Please be specific as to the elements that you are seeking regulatory approval.

A. The Companies are requesting approval by the Department of the following three items:

1) In accordance with Section 1-2 of St. 2016, c. 75, "An Act Relative to Solar Energy," as codified in G.L. c. 164 § 1A(f) ("Section 1A(f)"), the Companies are requesting pre-approval of cost recovery associated with the range of estimates for upfront capital installation and future capital replacement costs, as well as ongoing annual operational costs, including annual system operations and maintenance ("O&M") for site maintenance, oversight, reporting and analysis, property taxes and other costs associated with the solar arrays it may develop, purchase, own and operate over the lifetime of its operation. Although the Companies may incur expenses for real estate associated with constructing and operating certain solar facilities, the Companies are not seeking pre-approval for real estate costs. To the extent that the Companies incur such costs to implement the Solar Program, the Companies will submit them to the Department for recovery in future Solar Program cost recovery filings.

2) Approval of M.D.P.U. No. 502 and M.D.P.U. No. 1060 for NSTAR Electric and

WMECO, respectively, which are the proposed tariffs associated with the Solar Expansion Cost Recovery Mechanism ("SECRM") designed to recover the incremental revenue requirement associated with the solar Program. The proposed cost recovery method and tariffs are presented by Mr. Horton and Mr. Rice in their testimony.

3) Approval by the Department for NSTAR Electric and WMECO to first apply any Renewable Energy Credits ("RECs") produced by the solar facilities toward the Renewable Portfolio Standard ("RPS") compliance obligations associated with its Basic Service load. Any RECs produced by the solar facilities in excess of the Basic Service RPS obligation will be sold through competitive solicitations and the proceeds recorded as a credit in the annual SECRM filing. This treatment of RECs is presented by Mr. Horton and Mr. Rice in their testimony.

Q. Why are solar energy programs important for Massachusetts?

A. Solar generation is an important part of a strategy that addresses current and emerging environmental and energy policies. Reduction of greenhouse gas emissions have been prominent on Massachusetts energy agendas as critical issues that must be addressed and have been enshrined into law in the Green Communities Act and Global Warming Solutions Act ("GWSA"). Electricity production is an important driver of carbon emissions, and solar generation has been identified by Massachusetts as a critical tool to help reduce electric production carbon emissions.

Q. Why is utility-owned solar an important element of the solar portfolio in Massachusetts?

A. In the United States, utility-owned solar has been generating reliable, clean energy for more than two decades. Utility-owned solar represents a natural complement to the robust unregulated solar industry that has been developed in Massachusetts. Utility-owned solar is one of the fastest ways to deploy solar due to the ability of utilities to readily finance and construct large-scale facilities. In addition, large-scale utility-owned solar can gain economies of scale by focusing deployment on a lower number of sites reducing some of the site-specific costs like siting, permitting and land clearing. Finally, utility-owned solar provides for transparency in terms of development and construction costs, while allowing customers to receive the benefits of the recently extended Federal Investment Tax Credit ("ITC"). For all these reasons, utility-owned solar can speed up the growth trajectory of solar in Massachusetts providing an important avenue to reduce carbon emissions which will enable Massachusetts to comply with its GWSA 2020 targets.

Q. Please describe Eversource's experience in developing, constructing and operating utility-owned solar in Massachusetts.

A. Eversource has to date successfully deployed 8 MW of solar photovoltaic in Western Massachusetts. WMECO began implementing the WMECO Solar Program during the fourth quarter of 2009 and completed its last project in 2014.

In 2010, WMECO constructed and commissioned a 1.8 MW solar facility located on a brownfield property in Pittsfield (the "Silver Lake Facility"). In 2011, WMECO constructed and commissioned a 2.3 MW solar facility on 12 acres of brownfield

property in Springfield (the "Indian Orchard Facility"). In 2014, WMECO constructed and commissioned a 3.9 MW solar facility located on a landfill property in Springfield (the "Cottage Street Facility").

These facilities were developed pursuant to the terms of the WMECO Solar Program initially approved by the Department on August 12, 2009 to include up to 6 MW of solar capacity (D.P.U. 09-05) and subsequently expanded to 8 MW with Department approval on September 4, 2013 (D.P.U. 13-50).

Q. Please describe Eversource's track record in constructing and operation utility-owned solar facilities.

A. As mentioned above, using a standardized approach to the three projects which emphasized repeatability and control resulted in the very successful construction of the facilities from a cost and scheduling perspective. The three facilities were constructed in a timely and consistent manner with no major issues. The actual installation costs per MW were below the Installed Cost Target ("ICT") referenced in D.P.U. 09-05 Stipulation Agreement. WMECO developed and used at that time a standardized approach that focused on four key elements: a) site evaluation, b) contractor evaluation and agreement, c) project evaluation and d) project agreements.

The facilities deployed in the WMECO service territory have been operating as designed with no major equipment failures or operational issues. Since the three facilities went into operation, on aggregate, they have produced 24% more energy than expected. The facilities energy production is reviewed every morning. On a weekly basis, or more

frequently if needed, the energy production is monitored at the inverter level of each facility. On a monthly basis the facility's operations are reviewed to the sub-array level. Anomalies are identified and corrective measures are expeditiously addressed. The distribution interconnected circuit availability is also monitored. Thus far, since the start of operations, the diminished energy production from the distribution circuit availability has been minor.

Q. Please describe how the current WMECO program compares to other solar programs in Massachusetts?

A. To date, most other solar facilities in the Commonwealth have been developed on an unregulated basis and have been supported by a combination of net metering credits and Solar Renewable Energy Credits ("SRECs"). Net metering policies compensate most solar facilities built over the past several years at a combined rate for electric supply, transmission and distribution[1] service. The value of net metering credits provided to Eversource distributed generation customers' averaged 18 cents/kWh in 2015. Solar facilities receive additional compensation through the sale of SRECs. The average market price for SRECs produced by facilities qualified under the SREC I program averaged 47 cents/kWh in 2015. Net metering and SREC policies consequently led customers to pay, on average, an estimated combined rate of 65 cents/kWh to support generation from SREC I facilities in 2015.

[1] Distribution rates are not included in the credit value for Class III net facilities except for municipal customers.

All three existing WMECO solar facilities also qualified for the SREC I program. However, with the addition of the Cottage Street Facility, WMECO facilities generated 9,791,300 kWh of electricity in 2015 at cost of $4.1 million including expenses, return on rate base and ITC value credited to customers. This represents an average gross cost of 41.9 cents/kWh, which is highly favorable to the cost of net metering and SREC I policies in 2015. However, WMECO also includes proceeds from energy, capacity and SRECs in determining its net revenue requirement. WMECO returned approximately $0.4 million to customers for the sale of energy and capacity in 2015, and has received $4.5 million from the sale of SRECs produced in 2015 that will be credited to customers. WMECO customers will consequently realize a net credit of $0.8 million resulting from 2015 operations of its solar facilities.

Q. Why is it appropriate for Eversource to expand its utility-owned solar generation program?

A. Eversource has several core competencies that make it an effective partner for the Commonwealth to achieve the stated objectives of reducing carbon emissions and increasing the level of deployment of in-state solar. These include:

- A demonstrated track record of bringing utility-owned solar to our customers.
- Relationships with, and trust of, customers that will be an integral part of the process of siting the required installations.
- An ability to build and maintain complex infrastructure in many locations

simultaneously and the commitment to respond 24/7/365.

- Ability to integrate and leverage renewable technology, electrical design and interconnection, complex metering and wholesale power solutions that will facilitate and maximize the value of solar installations.

- Ability to finance large capital investments over a long period of time. Eversource can facilitate the development of a market for larger scale solar energy installations that will benefit manufacturers, local installers, communities and customers.

Q. Please describe Eversource's proposal for additional utility-owned solar development.

A. Eversource proposes to maximize the amount of solar generation that it is permitted to develop, construct, own and operate under Section 1A(f), which authorizes electric distribution companies ("EDCs") to build 35 MW with Department approval. Given WMECO has already constructed 8 MW of solar generation, Eversource is proposing as part of this Solar Program to deploy 62 MW to reach the maximum allowed for its two combined companies of 70 MW.

Q. Please explain why the Companies are seeking to expand their solar generation at this time.

A. Eversource has observed continued declines in solar installation costs which have enhanced the competitiveness of utility-owned solar and warrant taking full advantage of the opportunity provided by Section 1A(f) for the benefit of its customers. Section 1A(f) requires that EDCs receive pre-approval of the costs from the Department by

December 31, 2016 and complete construction prior to December 31, 2017. Eversource is petitioning the Department for pre-approval for 62 MW at this time so that each of its Massachusetts operating companies may develop the full 35 MW allowance within the deadlines stipulated by Section 1A(f), including the 8 MW WMECO has already deployed. In addition, the proposed Solar Program represents a new attractive avenue for customers for additional solar generation facilities to be built which complement the existing robust solar market in Massachusetts. As I will explain later in my testimony, the proposed Solar Program provides for solar at competitive prices, with the required transparency and the ability to achieve economies of scale

Q. Please explain how the Companies' proposal supports the Commonwealth's energy policy goals.

A. EDC ownership of solar generation provides a highly transparent, regulated contribution toward the objectives of the Green Communities Act and the GWSA and is a valuable, competitive complement to the Commonwealth's other solar policies that support solar development.

Massachusetts has supported substantial growth in solar generation in recent years adding over 1,000 MW of new solar photovoltaic nameplate capacity since 2010. The majority of this new capacity is associated with unregulated generation supported by net metering policies and solar RPS requirements. As explained in my testimony, the revenue requirements of utility-owned solar have compared very favorably to customer costs incurred to support existing net metering and solar RPS programs. Further development

of competitively priced, zero emission solar generation also advances the Commonwealth's progress toward meeting the carbon reduction requirements of the GWSA.

Furthermore, the recent May 2016 decision by the Massachusetts Supreme Judicial Court in Kain vs. the Department of Environmental Protection indicates that the Commonwealth of Massachusetts will likely be re-doubling its efforts to identify successful initiatives that can meaningfully contribute to the goal of reducing overall carbon emissions to meet the interim goals set for 2020.

Q. Please summarize an evaluation of Eversource's proposed Solar Program and how it compares to other solar programs in Massachusetts.

A. As it will be explained further in the Program Evaluation section of my testimony, Eversource's proposed expansion of its utility-owned solar generation has at least five key attractive features to its customers. Specifically, the Solar Program:

(1) provides customers the opportunity to benefit from reduced solar installation costs;

(2) focuses on larger solar installations which allows for the achievement of economies of scale;

(3) focuses on developing projects exclusively on existing utility owned properties represents an efficient use of land resources;

(4) allows Eversource the ability to monetize the Investment Tax Credit and Forward Capacity Market revenue on behalf of customers.

(5) forecasts average energy prices to be highly competitive with solar programs that rely on net metering and SRECs.

Q. Are there any additional elements that Eversource may consider in the design of the proposed Solar Program?

A. Yes. Eversource is and will continue to evaluate three additional potential elements that could be added to its proposed Solar Program.

First, the Companies will evaluate the selected sites to determine if one or two of them might be appropriate candidates to deploy energy storage to firm-up the solar generation and minimize impact on the distribution feeder. If Eversource considers it appropriate to pursue this approach, it will bring forth a proposal with information about cost and benefits to the Department.

Second, Eversource will also explore creative approaches to involve the communities where the solar facilities will be hosted to increase their level of engagement.

And third, Eversource will evaluate each of the solar sites to assess if different array configurations can provide greater benefits to the distribution system without significantly sacrificing production output. For example, the Companies will explore if facing the panels to the West can help reduce peak demand impact on the feeder.

III. SITE SELECTION APPROACH

Q. What sites is Eversource targeting with its Solar Program?

A. The Companies will focus this Solar Program on Eversource-owned sites that can host

multi-MW ground-mounted solar facilities. Eversource is targeting larger multi MW installations that yield the economies of scale necessary to make solar power more cost effective.

Q. Please describe the screening process Eversource has conducted so far.

A. Eversource has conducted two major initial screens to develop an inventory of potential sites for ground-mounted solar photovoltaic facilities. In the first screen, Eversource performed a table-top review of 464 parcels of land that are owned by Eversource in Massachusetts. In this initial screen Eversource identified close to 100 parcels that seemed to have the basic favorable attributes for installing multi-MW ground-mounted solar. These parcels either were single sections of land or several sections that when combined, produced a usable location to install solar PV. These parcels also had one or more distribution circuits either passing through it or were directly adjacent to it. In this screen, Eversource also eliminated from consideration parcels that had narrow rights-of-way.

In the second screen, Eversource reviewed the roughly 100 parcels identified above and conducted an initial topography and environmental impact assessment leveraging professional subject matter experts in this space. This second assessment screened sites for topography characteristics (i.e., is it too hilly), wetlands, endangered flora and fauna, and PV capacity. This screen yielded 60 remaining eligible sites. A list of the remaining eligible sites can be found on Exhibit Eversource-CS-1.

The list presented in the exhibit also shows the sites categorized in several tiers. A Tier 1A site represents the best location based on favorable interconnection, topography, and environmental permitting. A Tier 1B site may seem favorable from a topography and environmental permitting point of view but might require certain amount of pole line extensions for the interconnection. Tier 2 and 3 sites represent less favorable sites on a number of the evaluation dimensions.

Eversource will continue to conduct further assessments to further refine and identify the target sites for deployment. Currently Eversource is conducting a third screen which will likely identify a narrower list of sites that will be the focus for deployment. The third screen involves site visits and a more detailed review of the site conditions and potential interconnection requirements.

Q. What criteria will Eversource use to select the final sites?

A. Eversource will use a robust set of criteria to select the final sites. The sites will continue to be evaluated and ranked by internal and external subject matter experts according to buildable criteria such as:

- Ability to site multi-MW solar facilities greater than 2 MW
- Topography characteristics
- Proximity of delineated wetlands
- Impact to endangered flora and fauna
- Distribution circuit interconnectability

- Off-site boundary shading encumbrances
- Local and state zoning by-laws.

Q. What process does Eversource expect to follow to permit each of the sites?

A. Based on Eversource's previous experience building solar facilities in Massachusetts the Companies anticipate that the proposed sites may require the following types of permits at the federal, state and local levels:

Name of Permit	**Issuing Governmental Authority**
Federal	
General Stormwater Permit for Construction Activities	Environmental Protection Agency (EPA)
State	
Massachusetts Environmental Policy Act (MEPA) Review	Massachusetts Environmental Policy Act (MEPA) Program
Massachusetts Endangered Species Act (MESA) Approval	Massachusetts Natural Heritage and Endangered Species Program (NHESP)
Massachusetts Historical Commission (MHC) Review	Massachusetts Historical Commission (MHC)
Notice of Intent/Order Of Conditions	At the discretion of Local Conservation Commissions
Local	
Site Plan Review	Issued by Local Planning and Zoning
Site Plan and Drainage Review	Local Department of Public Works/Engineering Department
Conservation Commission – Request for Determination of Applicability (RDA)	Issued by Local Conservation Commissions
Notice of Intent/Order Of Conditions	Issued by Local Conservation Commissions

Eversource intends to conduct a competitive process to hire several environmental consulting firms with experience permitting solar facilities and award the projects selected based on geography. The intent is to ensure the project workload is focused and uniformly distributed across the state to ensure the required permits can be obtained in a

timely manner. This experienced team of environmental consultants will work with our qualified staff to review proposed sites and determine permitting requirements. The combined team will conduct a very thorough due diligence evaluation of each site to determine the municipal and environmental permitting requirements.

All of the required applications will be completed and followed through to their approval point. The process will include meetings with the town or city leaders, site field visits, a determination of any site specific conditions, delineate the mitigation measures, and any additional necessary prerequisites to construction.

IV. PROGRAM CONSTRUCTION APPROACH

Q. What is Eversource's overall approach to construction?

A. Eversource plans to rely on construction companies with proven experience in deploying utility-owned solar projects in Massachusetts and the United States. Eversource will use a robust, open, fair and transparent competitive process to select the construction firms. Eversource intends to select several vendors and sign an Engineering, Procurement and Construction ("EPC") contract with each selected vendor.

Eversource has used the EPC approach on our previous solar construction projects in Massachusetts to great success. This approach eliminated seams, allowed for one point of contact, and provided for a very competitive bid. EPC is also beneficial for this Solar Program because it is efficient, keeps a detailed focus on schedule (vs. issuing several RFPs for inverters, panels, construction, etc.), and leverages bidder experience which is

primarily focused on EPC contracts.

After the competitive bidding process has been completed, the EPC vendor contracts have been executed and all environmental and municipal permitting requirements are approved the site clearing and road building will commence. This will be followed by array construction. Current estimates are that site clearing and road construction will be completed in the first quarter of 2017 and the array construction will be completed throughout the rest of 2017.

A formal detailed construction schedule will be established as a requirement of the EPC contract for each site. During the construction process, weekly progress meetings will be held to discuss work completed and address any concerns that could delay the targeted construction completion date.

Q. Please describe in more detail the procurement approach that Eversource will follow to select the EPC contractors.

A. Eversource will use its existing procurement team and approach to conduct a competitive solicitation process in two stages. Eversource has already issued a Request for Information ("RFI") to a targeted group of approximately 50 construction firms. The ultimate purpose of the RFI is to pre-screen potential vendors to allow the Companies to select a smaller group of up to 10 vendors to move to the Request for Proposal ("RFP") stage. In the RFP stage, each EPC vendor will be asked to submit one complete response to develop a package of sites. The responses to the RFP will be independently evaluated by the project team participants and subject matter experts. The evaluations will be

performed on major criteria such as pricing, technical abilities, and contractual exceptions.

Q. What progress has Eversource made in its procurement approach to date?

A. As indicated above, Eversource has recently issued an RFI to approximately 50 solar construction companies. Eversource expects to more than 20 top quality responses. Once responses are received, Eversource will review and evaluate each of the responses. Each company is being evaluated and ranked on a quantitative and qualitative basis by such major criteria such as:

- Signature of a Non-Disclosure Agreement
- Ability to meet financial requirements set by Eversource's Treasury Department
- Ability to meet requirements set by Eversource's Safety Department
- Bidder's overall company background, history and key characteristics
- Bidder's ability to contract Massachusetts licensed electricians
- Experience and history with their successful building of large scale solar facilities
- Number, size and timing of solar facilities built
- Operation, engineering, project management, craft, and administrative staffing abilities
- Ability to demonstrate strong project execution capabilities.

Q. How will Eversource ensure it has received the best price for its EPC contract?

A. One RFP will be issued that will contain information on all sites grouped in appropriate categories. At this stage, Eversource envisions signing contract agreements with up to 3 contractors. Eversource plans to execute one EPC contract agreement per site, so a contractor might have several EPC contract agreements.

Eversource will evaluate all replies to the RFPs and the bid evaluation will be heavily weighted on price. Eversource will review not only the aggregate price but also the price of the major components such as land clearing, panels, inverters and balance of plant. The project team is aware of the current market pricing for this scale of work and will use this knowledge in its EPC contractor evaluations.

However an important portion of the evaluation will also focus on the bidder's ability to execute the work as evidenced by the proposed project execution plan, schedule, organizational chart and range of equipment suppliers among other important technical categories.

Q. How is Eversource leveraging its experience from the prior solar deployment at WMECO?

A. As mentioned above, WMECO utilized a standardized approach to installing its three solar projects which resulted in a successful implementation, on time and under budget. The Companies intend to utilize this process in installing the facilities under the Solar Program. In addition, the competitive bidding process and the detailed EPC contract (with liquidated damages) serves to further mitigate risk. Finally, the Companies intend

to improve the invoice review and approval process, as informed by WMECO's prior experience. For instance, the Companies intend to segment the actual costs when invoices are received so that they are appropriately characterized by project phase. Doing so allows for an expedited invoice review and corrective process, if needed. As with all of Eversource's major projects, sound and proven project management practices will be utilized.

Q. What process will Eversource follow to interconnect the facilities?

A. Eversource plans to follow established interconnection process guidelines and steps. All of the sites will have a distribution circuit interconnection impact study performed by a qualified engineering company. The impact study will detail the circuit and substation loading capabilities, load flow and protective logic systems. The recommendations of the impact study will be strictly enforced.

The design of the interconnection of the array system to the Point of Interconnection ("POI") to the distribution circuit will be standard for all of the facilities. This segment will be the delineated in the contract and part of the scope of work issued to the EPC contractor. If there is public way circuit improvements needed, the work will be detailed and will be issued to a contractor via a competitive bid process.

V. SOLAR PROGRAM COST ESTIMATES

Q. Please describe the overall cost elements of the Solar Program proposed by Eversource.

A. The overall costs of the Solar Program are comprised of both the installation costs for the solar facilities as well as the ongoing operating costs. These two cost categories produce the Solar Program's gross revenue requirement. In addition, there are several offsetting credits that will reduce the gross revenue requirement to produce the net revenue requirement which will be recovered through the SECRM.

As explained in detail later in my testimony, Eversource is using baseline cost estimates that draw upon a variety of assumptions including the direct experience of the installation of its facilities in WMECO's service territory, as well as those from other developers in Massachusetts. Eversource also conducted preliminary discussions with construction companies to gather input into cost trends in the industry since WMECO last constructed a solar facility in 2014.

Q. Please describe Solar Program installation costs.

A. The initial installation costs are comprised of two major categories. First are the unit costs that are driven by the amount of watts to be deployed. These costs estimates are presented on a dollars per watt basis. The second category represents costs that are driven by the number and the type of sites to be deployed. These costs estimates are presented on a millions of dollars per site.

Q. What are the key elements of the first major category – the per unit costs?

A. The installed unit costs include four major categories:

- Modules or photovoltaic ("PV") panels;
- Inverters or the DC to AC conversion equipment;
- Racking systems that also include the ground mount system hardware and assembly;
- Balance of plant ("BOP") which includes primarily the electrical equipment such as the conduit, wiring, combiner and electrical boxes. This category of costs includes the acceptance testing necessary to render the facility operational.

Q. What are the cost estimates for the unit costs and the total costs for this category?

A. The unit costs estimates for each of the four categories and the total estimate for the 62 MW deployments are in the table below. In addition, Eversource is providing the likely cost estimate plus a 15% for potential contingencies that can be encountered when deploying the Solar Program.

Solar Program Unit Cost Estimates						
Likely Cost Estimate				Likely Cost Estimate Plus 15%		
Cost Element	**Unit Cost ($/Watt)**	**Total ($M) for 62 MW**		**Cost Element**	**Unit Cost**	**Total ($M) for 62 MW**
Modules	$0.65	$40.3		Modules	$0.75	$46.3
Inverters	$0.16	$9.9		Inverters	$0.18	$11.4
Racking	$0.35	$21.7		Racking	$0.40	$25.0
Balance of Plant	$1.39	$86.2		Balance of Plant	$1.60	$99.1
Total per watt	**$2.55**	**$158.1**		**Total per watt**	**$2.93**	**$181.8**

Q. Please describe how you derived the estimates for each of the unit cost categories.

A. The estimates for each category were derived as follows:

- For the modules Eversource took as the starting basis the module costs for the Cottage Street Facility. For that project, Eversource paid the contractor $2,764,710 for a 3.9 MW deployment, representing a cost of $0.71 per watt (see Exhibit Eversource-CS-2, line 2c). Given discussions with contractors and review of recent installation costs for other projects in Massachusetts, Eversource believes module costs have reduced in price and the Company is assuming per watt costs of $0.65.
- For the inverters, Eversource again relied on the costs for the 3.9MW Cottage Street Facility where WMECO paid $635,210, which represents a $0.16 per watt cost (see Exhibit Eversource-CS-2, line 2a). Typically, Eversource will deploy 500 kW inverters or 2 inverters per MW. Based on discussions with construction companies, Eversource has confirmed the per watt cost as experienced for the Cottage Street Facility is an appropriate cost estimate.
- For the racking systems the Cottage Street Facility costs were $1,381,591 or $0.35 per watt (see Exhibit Eversource-CS-2, line 2b). Again through discussions with installers and review of industry data, WMECO confirmed the per watt cost as experienced for the Cottage Street facility is an appropriate cost estimate. The detailed information from Cottage Street used by Eversource to estimate the cost for the three categories above can be found on Exhibit EVERSOURCE-CS-2.
- For the Balance of Plant ("BOP"), Eversource first reviewed the total BOP for the Cottage Street Facility which was $6,924,392 or $1.78 per watt (see Exhibit

Eversource-CS-2, line 3 and line 5). To refine that estimate, Eversource then conducted a detailed review of each of the cost elements to determine which of the costs were applicable to the type of program contemplated in this Solar Program expansion. For example, certain BOP costs were driven by the Cottage Street Facility being constructed on top of capped landfill, which will not be the case for the proposed Solar Program. After this careful review and removal of costs, Eversource determined a BOP unit cost estimate of $1.39 per watt.

Q. What could drive variability in these per unit installation costs?

A. The potential cost variability for PV installations can be driven by market conditions including overall demand and pricing for panels, inverters, racking and BOP, as well as by fabrication and delivery schedules. The relative size of certain components can also impact the costs. The site characteristics of an installation can also have an impact on the BOP costs.

Q. What are the key elements of the second major category – the per site costs?

A. The per site costs include four major categories:

- Site land preparation & fencing costs which include the civil engineering required to prepare the site to accommodate the PV equipment. These costs can include tree, stump, rock removal, finish grading, fencing and roadway access. This category includes the fencing required to protect the solar facility and keep it from public access.

- Site design, sitting and permitting costs which include facility design, environmental engineering, siting and permitting required to design the PV array and ensure it meets all the permit and environmental requirements.
- Interconnection costs which include the connection of the PV array to the Eversource electrical system.
- Legal, general and administrative costs which includes general project costs such as contingencies, legal expenses, administrative and general and project/site management.

Q. What are the cost estimates for the site costs and the total costs for this category?

A. The site costs estimates for each of the four categories and the total estimate for the Solar Program is presented in the table below. For the total costs, Eversource is assuming that it will deploy the 62 MW in 15 sites across its service territory. In addition, Eversource is providing the likely cost estimate plus a 15% for potential contingencies that can be encountered when deploying the Solar Program.

Solar Program Per Site Cost Estimates					
Likely Cost Estimate			Likely Cost Estimate Plus 15%		
Cost Element	**Unit Cost ($M/Site)**	**Total ($M) for 15 sites**	**Cost Element**	**Unit Cost ($M/Site)**	**Total ($M) for 15 sites**
Site Land Preparations & Fencing	$0.51	$7.7	Site Land Preparations & Fencing	$0.59	$8.8
Site Design, Sitting and Permitting	$0.20	$3.0	Site Design, Sitting and Permitting	$0.23	$3.5
Interconnection	$0.50	$7.5	Interconnection	$0.58	$8.6
Legal, General & Administrative	$0.18	$2.6	Legal, General & Administrative	$0.20	$3.0
Total per site	**$1.39**	**$20.8**	**Total per watt**	**$1.59**	**$23.9**

Q. Please describe how you derived the estimates for each of the per site cost categories.

A. The estimates for each category were derived as follows:

- For site land preparation and fencing costs, Eversource contacted land clearing companies to determine an initial cost estimate. The quotes received indicate a cost of $20,000 to clear each acre for tree, stump, rock removal, and finish grading and access roadway. With an assumption of 4 acres per MW, an average 5 MW deployment represents a total cost of $400,000 per site assumption. In this case, it was not appropriate to rely on WMECO's prior experience with the Cottage Street Facility, since that location was a capped landfill and the sites currently targeted for the expanded Solar Program represent greenfield deployments. In addition, the Companies assumed a cost of $110,000 per site for fencing, which is based on market prevailing quotes for the type of fencing typically used in solar installations.
- For site design, siting and permitting Eversource reviewed the Cottage Street Facility's actual costs as a starting point to establish a baseline of $180,000. Based on initial feedback from professional subject matter experts, Eversource determined that it was appropriate to increase the estimate to $200,000 per site.
- For interconnection, Eversource reviewed the Cottage Street Facility's actual costs as a starting point to establish a baseline of $300,000. At the same time, Eversource has reviewed the data for interconnection costs for similar sized

facilities in Massachusetts over the past few years and discussed interconnection cost trends with internal subject matter experts. Based on those discussions, Eversource determined that it was appropriate to increase the estimate to $500,000 per site on average.

- For legal, general and administrative costs, Eversource has reviewed the cost estimates of the Cottage Street Facility and discussed with its legal experts the extent to which work will be required to develop the EPC contracts for the Solar Expansion program. Given there is already a template established, Eversource was able to develop an estimate of $175,000 per site for legal, general and administrative costs.

Q. What could drive variability in these per site installation costs?

A. Variability in per site installation costs includes site clearance uncertainties such as hazardous waste removal, and unique environmental permitting stipulations for example. Most of these risks will be identified, negotiated and mitigated in the EPC contract to the extent possible.

Q. Please provide an estimate of the total Solar Program installation costs.

A. As shown above, Eversource has conducted a bottom-up analysis to determine a range of cost estimates for the proposed Solar Program. The estimate of the installation costs for 62 MW in 15 sites is $178.9 million and $205.7 million if you add a 15% range. The summary estimates are presented in the table below.

Eversource Solar Program Installation Cost Estimates

MW 62
Sites 15

Likely Cost Estimate

	Unit Cost		Total ($M)
Equipment & Installation Cost			
Modules	$0.65	per Watt	$40.3
Inverters	$0.16	per Watt	$9.9
Racking	$0.35	per Watt	$21.7
Balance of Plant	$1.39	per Watt	$86.2
Sub-total per watt costs	$2.55	per Watt	$158.1
Site Land Preparations & Fencing	$0.51	M per site	$7.7
Site Design, Sitting and Permitting	$0.20	M per site	$3.0
Interconnection	$0.50	M per site	$7.5
Legal, General & Administrative	$0.18	M per site	$2.6
Sub-total per site costs	$1.39	M per site	$20.8
Total	**$2.89**	**per Watt**	**$178.9**

MW 62
Sites 15

Likely Cost Estimate Plus 15%

	Unit Cost		Total ($M)
Equipment & Installation Cost			
Modules	$0.75	per Watt	$46.3
Inverters	$0.18	per Watt	$11.4
Racking	$0.40	per Watt	$25.0
Balance of Plant	$1.60	per Watt	$99.1
Sub-total per watt costs	$2.93	per Watt	$181.8
Site Land Preparations & Fencing	$0.59	M per site	$8.8
Site Design, Sitting and Permitting	$0.23	M per site	$3.5
Interconnection	$0.58	M per site	$8.6
Legal, General & Administrative	$0.20	M per site	$3.0
Sub-total per site costs	$1.39		$23.9
Total	**$3.32**	**per Watt**	**$205.7**

Q. Please provide a range of cost estimates assuming different number of sites?

A. The total program costs will be heavily influenced by total number of sites ultimately selected. At this stage the Company is targeting 15 sites. The table below shows the variance of total costs assuming 12, 15, 17 and 20 sites.

	Likely Cost Estimate ($ millions)	**Likely Cost Estimate + 15% ($ millions)**
12 sites	$174.7	$200.9
15 sites (target)	$178.9	$205.7
17 sites	$181.6	$208.9
20 sites	$185.8	$213.7

Q. Please describe the Solar Program operational costs

A. Operational costs include the expenses associated with maintaining and operating the solar facilities. The main operational costs include the following:

- Landscaping

- Parasitic load
- Vegetation management
- Inspections
- Communications
- Panel replacements
- Internal Eversource labor and associated employee expenses
- Lease expense, or other land acquisition costs.

Q. Please provide an estimate of the Solar Program operational costs and the method in which the estimate was derived.

A. Eversource has reviewed the operational costs associated with the existing three facilities. Using this data, the Company has developed an estimate of $781,855 for the ongoing operational costs as presented in the table below.

	O&M Annual Estimate	**Assumption**
Internal Labor	$216,000	Two full time employees
Employee Expenses	$151,855	Employee-related expenses for benefits, and other charges such as cell phone and mileage
Landscaping	$90,000	$1,000 per month per facility (during summer months)
Parasitic Load	$90,000	$500 per month per facility
Vegetation Management	$45,000	$3,000 per year per facility
Inspections	$45,000	Three yearly inspections at $1,000 per inspection per facility
Communications	$24,000	Assumed $2,000 per month
Panel replacement	$60,000	Annual panel replacement expenses based on prior experience
Other	$60,000	Expenses related to monitoring of the panels and to deal with unforeseen eventualities during the course of the year
Total	**$781,855**	

Q. What is the justification for the incremental labor included in the table above?

A. One FTE will be designated as the project manager and that person will take care of the program commercial needs, performance reporting, compliance filings, annual budgets, vendor commercial arrangements, among other activities. The second FTE, a technical specialist, will be dedicated to the daily, weekly and monthly operational monitoring of the facilities. They will be responsible to expeditiously address any emergent condition

that may arise. This will include working with the equipment manufacturers, repair labor staffing, site inspections, among other activities.

Q. Does Eversource foresee the need of any land use agreements?

A. Eversource is proposing to construct the Solar Facilities on existing Company-owned parcels. However, certain of the potential parcels are not currently held by either WMECO or NSTAR Electric in distribution plant in service, and, therefore, land use agreements might be necessary in some cases. After its careful review of sites, if Eversource determines that it is appropriate to develop one or more of those sites for a solar facility, appropriate land use agreements will be entered for the use of the site(s). This would constitute an inter-company transaction and Eversource will follow the rules consistent with affiliate transaction regulations. At this stage, Eversource does not have an estimate of what this annual amount might be. As noted previously, although the Companies may incur expenses for real estate associated with constructing and operating certain solar facilities, the Companies are not seeking pre-approval for real estate lease costs. To the extent that the Companies incur such costs to implement the Solar Program, the Companies will submit them to the Department for recovery in future Solar Program cost recovery filings.

Q. Are there other ongoing cost categories?

A. Yes. There are real estate and personal property tax expenses, which are described in more detail in the testimony of Mr. Horton and Mr. Rice.

Q. Please describe the Solar Program offsetting credits.

A. The revenue requirement associated with the installation and operations costs will be offset by a series of credits as described in the testimony of Mr. Horton and Mr. Rice. Eversource contemplates at least four different sources of credits:

(1) Energy: Eversource will monetize the energy output by selling each facility's output directly into the ISO-NE energy markets and will credit all proceeds to customers.

(2) Renewable Energy Credits: Eversource will credit customers all proceeds from RECs that are either applied toward the RPS compliance obligations associated with its Basic Service load or sold into the market. All proposed facilities will qualify as Massachusetts Class I RPS resources. Existing utility owned solar facilities have also been qualified under the SREC I and SREC II programs. At this stage is unclear whether the facilities will qualify for a future program to be developed by the DOER, but the Companies will maximize the value of the facilities renewable energy attributes based on the programs they ultimately qualify under.

(3) Forward Capacity Market ("FCM"): The Companies are planning to bid all new solar facilities into the Forward Capacity Auction and credit all capacity proceeds to customers.

(4) Investment Tax Credits: Given the extension of the ITC for solar projects that was provided by the US Congress in 2016, Eversource will again be able to take advantage of

the ITC for the Solar Program. Eversource plans to credit the ITC back to customers on a ratable basis over the projected life of the assets as it has been doing for its existing 8 MW WMECO program. This approach is consistent with Generally Accepted Accounting Principles and prevailing tax laws.

VI. PROGRAM EVALUATION

Q. Why does the proposed Solar Program benefit Massachusetts' customers?

A. As I indicated earlier in my testimony, Eversource's proposed expansion of its utility-owned solar generation program has at least five attributes that make it an attractive program for Massachusetts customers. Specifically, the Solar Program:

(1) provides customers the opportunity to benefit from reduced solar installation costs.

(2) focuses on larger solar installations which allows for the achievement of economies of scale.

(3) focuses on developing projects exclusively on existing utility owned properties represents an efficient use of land resources.

(4) Allows Eversource the ability to monetize the Investment Tax Credit and Forward Capacity Market revenue on behalf of customers.

(5) forecasts average energy price to be highly competitive with existing solar programs that rely on net metering and SRECs.

The rest of the section will explain each of these elements in more detail.

Q. Please explain why the proposed Solar Program provides customers an opportunity to benefit from reduced solar installation costs?

A. Eversource's proposal provides a highly transparent contribution toward the Commonwealth's solar goals and also provides customers the opportunity to benefit from reduced solar installation costs. Regulated cost recovery has ensured that customers received the full benefit of substantial cost declines that occurred over the years that the WMECO facilities were placed in-service. The costs of solar installation have fallen considerably since 2010 when WMECO's first solar facility began operation and the SREC I program commenced. For example, the Cottage Street Facility was completed in 2014 at a substantially lower installed cost per watt than the facilities completed in 2010 and 2011 and the savings were passed on to customers through reduced investment recovered from customers. A table that shows the installed cost for each of the WMECO facilities is presented in the table below:

Solar Facility and Year Completed	Installed Cost ($ millions)	Size of Facility (MW)	Cost per Watt
Silver Lake (2010)	$9.3	1.8	$5.2
Indian Orchard (2011)	$11.7	2.3	$5.1
Cottage Street (2014)	$12.2	3.9	$3.1

The benefits of lower costs are most apparent with the completion of the Cottage Street Facility in 2014. The Cottage Street Facility was completed at a total cost of $3.10/watt, which was approximately 40% less than the unit cost of facilities completed in 2010 and

2011. Upon completion of the Cottage Street Facility, WMECO roughly doubled the annual generation from its solar facilities while only increasing the gross investment base by approximately 60%[2]. Providing the full benefit of declining costs to customers has contributed to costs that compare very favorably to those of supporting solar facilities through other existing policies. Furthermore, the proposed Solar Program forecasted all-in installed cost per watt of $2.86 represents a further decline from the installed costs experienced with the Cottage Street Facility.

Q. Why do larger solar installations provide economies of scale, and how does that benefit customers?

A. Eversource's proposed Solar Program will seek to develop large solar installations in its own property. By targeting larger facilities, Eversource will be able to save on the per site costs that were described earlier in my testimony. For example by targeting fewer sites, Eversource can avoid some fixed costs per site such sitting, permitting, legal and administrative. As I described earlier a targeted deployment of 12 sites compared to 20 sites could save customers up to $10 million in installation costs.

Q. Please explain why the use of utility owned properties is beneficial to customers?

A. The Companies' proposal to develop projects exclusively on existing utility owned properties represents an efficient use of land resources. The current growth of solar generation in Massachusetts has created land-use concerns in some communities,

[2] Per D.P.U. 14-123, gross plant increased from $20.9 million in January 2014 to $33.1 million in December 2014 following addition of the Cottage Street facility.

particularly with regard to the use of agricultural lands and open space for solar generation. The DOER introduced a Managed Growth segment into the SREC II program design, in part, to address these land concerns. The Companies propose to achieve economies of scale through the development of large solar installations, several MW in size. Development of solar on utility properties will advance the Commonwealth's clean energy goals and provide customers the cost benefits of scale without depriving communities of the benefits of land that's presently designated for non-utility purposes.

Q. Why is the monetization of the FCM and ITC an attractive feature of the proposed Solar Program to customers?

A. Eversource's ownership and control of the proposed solar facilities positions it to bid projects into the FCM market and credit all capacity proceeds to customers. The capacity value from many existing net metering facilities does not provide a similar benefit to customers. The lack of ownership or control of net metered facilities is an impediment to EDCs bidding them into the FCM, and revenues for capacity bid by project sponsors is provided to the sponsor rather than credited to customers. As shown in Exhibit Eversource-CS-3, customers are projected to be credited over $36 million in capacity market proceeds over the life of the proposed facilities.

As indicated before the ability of Eversource to monetize the ITC and transparently flow that back to customers provides an alternative to the model used by unregulated developers that keep that ITC.

Q. How do you expect the projected revenue requirement for Eversource's proposed Solar Program will compare to the cost of solar generation under new policies?

A. The competitiveness of the Companies' proposal relative to other policies will ultimately depend on the design and policy objectives of future solar programs. DOER is in the process of designing a new solar incentive program pursuant to Chapter 75 of the Acts of 2016. Eversource is currently unaware of what the design and projected costs of that program will be. However, based on recommendations of the Solar and Net Metering Task Force and recent public comments received by DOER, the Company expects that future programs will likely support a diversity of solar installation types characterized by a range of costs.

As show in Exhibit Eversource-CS-3, the net cost of solar energy is projected to average 18 c/kWh under the Company's proposal. The Company expects this value will be competitive with the cost of supporting solar through other programs for several reasons. First, Massachusetts has continued to expand full retail net metering policies. Chapter 75 of the Acts of 2016 raised limits on aggregate net metering capacity for the 4th time since the current net metering framework was established in the Green Communities Act and continues to credit many solar facilities at the combined rate for electric supply, transmission and distribution service – including large scale solar facilities serving municipal or other governmental entities. As of July 1, 2016 the estimated price of these credits is 15 cents/kWh for distributed generation customers of NSTAR Electric that receive service under the Commonwealth G-1 rate class, which a substantial portion of

stand-alone solar facilities are served on.

Second, support of unregulated solar generation continues to require targeted premium incentives. Solar photovoltaic generation has been one of many eligible resources under the Commonwealth's RPS program since it was established by the Massachusetts Electric Utility Restructuring Act of 1997 and implemented by DOER beginning in 2003. All solar photovoltaic generation, along with wind and other renewable resources, continues to be eligible Class I renewable resources and produce Class I RECs that have a current market value of approximately $40/MWh or 4 cents/kWh. However, the Green Communities Act further specified retail electric suppliers meet a portion of their RPS obligations with generation from a specific technology, which was subsequently determined by DOER to be solar photovoltaic generation. Both the SREC I and SREC II programs were implemented pursuant to the Green Communities Act and provide solar generating resources compensation for selling SRECs at market prices that are substantially greater than those available to other renewable generation resources. Chapter 75 of the Acts of 2016 has also directed DOER to develop another statewide solar incentive program to encourage the continued development of solar renewable energy generating sources by residential, commercial, governmental and industrial electricity customers throughout the Commonwealth. The design and estimated costs of that program are not yet known, but it appears likely that compensation for many solar renewable energy attributes will be in excess of the 4 c/kWh that such facilities are already eligible to receive without a new solar incentive program. The recent extension of

full retail net metering policies coupled with the direction to DOER to implement another solar incentive program suggests that Eversource's proposal is likely to be competitive with the cost of other policies that advance solar generation in the Commonwealth.

VII. PROGRAM IMPLEMENTATION CONSIDERATIONS

Q. What steps is Eversource taking to mobilize to begin implementation of the Solar Program?

A. Eversource will be conducting a variety of mobilization activities in parallel with this proceeding. These activities include the conclusion of the RFI, selection of construction companies to move to the RFP process, development and solicitation of RFPs for engineering, procurement and construction services, detailed site assessment evaluation, early state site permitting and refinement of cost estimates among many other activities. Eversource will not engage in any significant commitments to procure materials, services or any other resources until the Department acts on this application.

Q. What key deliverables would follow after Department's approval?

A. Eversource will proceed with executing the required EPC contracts and begin to make specific resource commitments. At the same time, Eversource will move to finalize the required permitting for the targeted sites, as well as begin the interconnection process.

Q. When do the Companies plan to start installation?

A. Eversource plans to be ready to start installation of the first sites by the end of March 2017 or earlier if possible.

Q. What is the overall schedule for the Solar Program?

A. A high-level schedule for the Solar Program up until the start of construction is presented in Exhibit Eversource-CS-4.

Q. Does that conclude your testimony?

A. Yes, it does.

Eversource Solar Program
List of Target Sites

Row	Street	Town	Region	Parcel Area (acres)	Total Site Area (acres)	Priority Tier
1	1109 Route 6a	Bourne	EM	37	37	1A
2	0 R FISHER ST	Medway/Holliston	EM	84	211	1A
3	52 Wilson St	Hopkinton	EM	25	134	1A
4	385 Sandwich St	Plymouth	EM	23	23	1A
5	41 KEMPTON RD	Millville	EM	14	47	1B
6	127 BATES ST	Mendon/Blackstone	EM	2	173	1B
7	157 CORDAVILLE RD	Southborough	EM	28	28	1C
8	1 Nstar Way	Westwood	EM	27	27	1C
9	0 Rear Purchase St	Milford	EM	13	53	2
10	0 QUAKER HWY	Uxbridge	EM	37	37	2
11	0 OLD WINCHESTER RD OF	Warwick	EM	38	38	2
12	0 Hartford St	Dover	EM	8	27	2
13	350 CHESTNUT HILL RD	Millville/Blackstone	EM	25	35	3
14	0 Wilmington Rd	Burlington	EM	20	20	3
15	0 Marilyn St	Holliston	EM	54	54	3
16	0 Allan Street End	Marshfield	EM	33	33	3
17	299 South St	Walpole	EM	22	72	3
18	0 AUBURN ST	Whitman	EM	1	72	3
19	0 WILLOW ST	Yarmouth	EM	6	39	3
20	625 OAK ST	Barnstable	EM	5	20	3
21	629 Mary Dunn Rd	Barnstable	EM	8	24	3
22	0 Hartford Ave	Bellingham	EM	6	27	3
23	0 COURT ST	Brockton	EM	15	21	3
24	0 CHESTNUT ST	Wilmington	EM	2	28	3
25	794 PLYMOUTH ST	Holbrook	EM	1	82	3
26	180 South West St	Agawam	WM	82	82	1A
27	0 So Maple St	Hadley	WM	31	31	1A
28	0 North Main St	Lanesborough	WM	18	83	1A
29	0 South Westfield St	Agawam	WM	37	37	1B
30	0 COUNTY RD	Huntington	WM	3	89	1B
31	0 WENDELL RD	Montague	WM	70	75	1B
32	0 Partridge Rd	Pittsfield	WM	37	37	1B
33	0 NORTH ST	Belchertown	WM	37	37	1C
34	0 MILL RD	Hampden	WM	1	129	1C
35	1185 New Windsor Rd	Hinsdale	WM	80	80	1C
36	301 Off Water St	Lee	WM	26	28	1C
37	0 TURNERS FALLS RD	Montague	WM	30	71	1C
38	REAR E CHESTNUT HILL RD	Montague	WM	24	24	1C
39	0 SO MOUNTAIN RD	Northfield	WM	48	100	1C
40	0 SO MOUNTAIN RD	Northfield	WM	43	172	1C
41	300 Cadwell Dr	Springfield	WM	24	24	1C
42	0 Chapin St	Ludlow	WM	18	26	1C
43	0 S CATAMOUNT HILL RD	Colrain/Claremont	WM	105	149	2
44	0 PROSPECT ST	Chicopee	WM	11	40	2
45	0 EAST STATE ST	Granby	WM	15	31	2
46	993 Center St	Ludlow	WM	30	30	2
47	0 STRATTON MTN	Northfield	WM	4	155	2
48	0 Tamarack Rd	Pittsfield	WM	23	23	2
49	Rear Suffield St	Agawam	WM	45	45	3
50	198 Springfield St	Agawam	WM	21	21	3
51	0 BUG HILL RD	Ashfield	WM	21	31	3
52	0 NORTH BLANDFORD RD	Blandford	WM	59	59	3
53	0 BROUGH RD	Cheshire	WM	2	41	3
54	0 OFF ALLEN HILL RD	Conway	WM	53	53	3
55	Rear Millers Falls Rd	Northfield	WM	13	56	3
56	0 Paradise Parkway	Montague	WM	4	41	3
57	0 JAMES STREET	Ludlow	WM	24	24	3
58	0 ARNOLD RD	Pelham	WM	23	23	3
59	225 Doreen St	Pittsfield	WM	19	64	3
60	0 THOMPSON RD	Wendell	WM	51	51	3

COTTAGE STREET FACILITY
Installed Cost
per D.P.U. 14-123, Exhibit WMECO-WTB-3

			Installed Cost $ Amount	Unitized Cost $/kWdc
1	Land Option Agreement		$716,000	184
2a	Major Equipment - Inverters	$635,210		163
2b	Major Equipment - Ground Mount Assembly	1,381,591		354
2c	Major Equipment - Solar Modules	2,764,710		709
2	Major Equipment		4,782,000	
3	Installation & Balance of Plant		5,644,000	1,447
4	Design, Management, QA/QC		128,000	33
5	Landfill Modifications & Permitting		1,280,000	328
6	Interconnection		348,000	89
7	Commissioning, Oversight & Other		40,000	10
8	**Total Project**		**$12,938,000**	**$3,317**

Summary of Solar Program Costs
25 Year Total ($000)

Line			Source
1	Estimated total revenue requirement	377,455	Exhibit Eversource DPH/BJR - 2 & 3, page 2, line 7 Total
2	Estimated total capacity credit	(36,239)	Page 5, line 4 Total
3	Net cost of energy & renewable attributes	341,217	line 1 + line 2
4	Estimated total generation (kWh)	1,919,056,249	Page 5, line 1 Total
5	**Average cost of energy & renewable attributes (c/kWh)**	**18**	line 3 / line 4

Projected Generation and Qualified Capacity

Line	Year / Applicable FCA	2018 FCA9	2019 FCA10	2020 FCA11	2021 FCA12	2022 FCA13	2023 FCA14
1	Annual Generation[1]	81,468,000	81,060,660	80,655,357	80,252,080	79,850,820	79,451,565
2	Est. FCA Qualified Capacity (MW)[2]	25.14	25.14	25.14	25.14	25.14	25.14
3	Capacity Price ($/kW-month)[3]	4.78	3.52	2.75	7.00	11.03	11.31
4	Annual Capacity Revenue ($000)	480	354	277	704	1,109	1,138

1 Based on 62 MW, Cottage Street 2015 capacity factor of 15% and annual degradation of 0.5%

2 Based on Eversource analysis of generation during ISO-NE reliability hours

3 Internal Eversource forecast based on current capacity market design

Projected Generation and Qualified Capacity

Line	Year / Applicable FCA	2024 FCA15	2025 FCA16	2026 FCA17	2027 FCA18	2028 FCA19	2029 FCA20
1	Annual Generation[1]	79,054,308	78,659,036	78,265,741	77,874,412	77,485,040	77,097,615
2	Est. FCA Qualified Capacity (MW)[2]	25.14	25.14	25.14	25.14	25.14	25.14
3	Capacity Price ($/kW-month)[3]	13.23	13.58	13.93	14.29	14.66	15.05
4	Annual Capacity Revenue ($000)	1,331	1,366	1,401	1,438	1,475	1,513

1 Based on 62 MW, Cottage Street 2015 capacity factor of 15% and annual degradation of 0.5%

2 Based on Eversource analysis of generation during ISO-NE reliability hours

3 Internal Eversource forecast based on current capacity market design

Projected Generation and Qualified Capacity

Line	Year / Applicable FCA	2030 FCA21	2031 FCA22	2032 FCA23	2033 FCA24	2034 FCA25	2035 FCA26	2036 FCA27
1	Annual Generation[1]	76,712,127	76,328,566	75,946,923	75,567,189	75,189,353	74,813,406	74,439,339
2	Est. FCA Qualified Capacity (MW)[2]	25.14	25.14	25.14	25.14	25.14	25.14	25.14
3	Capacity Price ($/kW-month)[3]	15.44	15.84	16.25	16.67	17.11	17.55	18.01
4	Annual Capacity Revenue ($000)	1,553	1,593	1,634	1,677	1,721	1,765	1,811

1 Based on 62 MW, Cottage Street 2015 capacity factor of 15% and annual degradation of 0.5%

2 Based on Eversource analysis of generation during ISO-NE reliability hours

3 Internal Eversource forecast based on current capacity market design

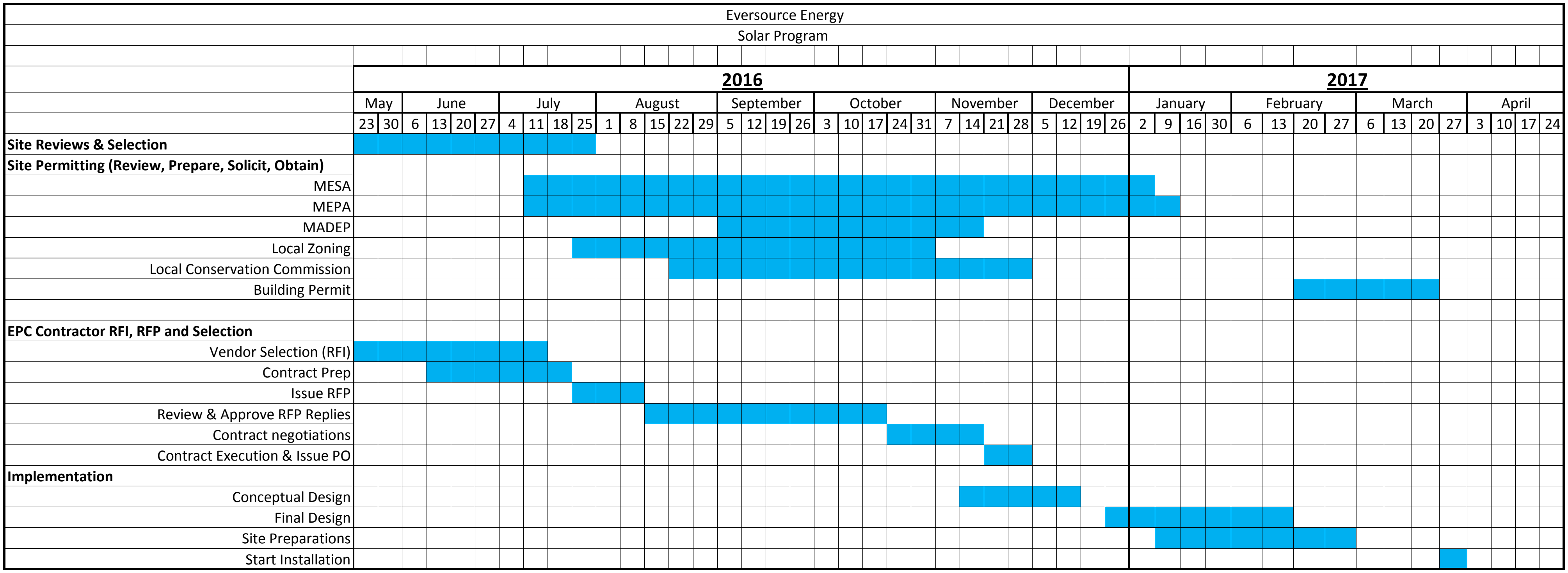
Projected Generation and Qualified Capacity

Line	Year / Applicable FCA	2037 FCA28	2038 FCA29	2039 FCA30	2040 FCA31	2041 FCA32	2042 FCA33	Total
1	Annual Generation[1]	74,067,142	73,696,807	73,328,323	72,961,681	72,596,873	72,233,888	1,919,056,249
2	Est. FCA Qualified Capacity (MW)[2]	25.14	25.14	25.14	25.14	25.14	25.14	
3	Capacity Price ($/kW-month)[3]	18.48	18.96	19.45	19.95	20.47	21.01	
4	Annual Capacity Revenue ($000)	1,858	1,907	1,956	2,007	2,059	2,113	36,239

1 Based on 62 MW, Cottage Street 2015 capacity factor of 15% and annual degradation of 0.5%

2 Based on Eversource analysis of generation during ISO-NE reliability hours

3 Internal Eversource forecast based on current capacity market design


Eversource Energy
Solar Program
2016
2017
May
June
July
August
September
October
November
December
January
February
March
April
23 30 6 13 20 27 4 11 18 25 1 8 15 22 29 5 12 19 26 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9 16 30 6 13 20 27 6 13 20 27 3 10 17 24
Site Reviews & Selection
Site Permitting (Review, Prepare, Solicit, Obtain)
MESA
MEPA
MADEP
Local Zoning
Local Conservation Commission
Building Permit
EPC Contractor RFI, RFP and Selection
Vendor Selection (RFI)
Contract Prep
Issue RFP
Review & Approve RFP Replies
Contract negotiations
Contract Execution & Issue PO
Implementation
Conceptual Design
Final Design
Site Preparations
Start Installation

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 16-XXX

TESTIMONY OF

DOUGLAS P. HORTON
BRIAN J. RICE

ON BEHALF OF
NSTAR ELECTRIC COMPANY
WESTERN MASSACHUSETTS ELECTRIC COMPANY
d/b/a EVERSOURCE ENERGY

EXHIBIT EVERSOURCE-DPH/BJR-1

JUNE 30, 2016

DIRECT TESTIMONY OF
DOUGLAS P. HORTON
BRIAN J. RICE

I. INTRODUCTION

Q. Mr. Horton, please state your name, position, and business address.

A. My name is Douglas P. Horton. My address is 247 Station Drive, Westwood, Massachusetts 02090. I am Director, Revenue Requirements - Massachusetts for Eversource Energy Service Company.

Q. Please summarize your education and professional experience.

A. I graduated from Bentley College (now Bentley University) in Waltham, Massachusetts in 2003 with a Bachelor of Science degree. In 2007, I graduated from Bentley's McCallum Graduate School of Business with a Master of Business Administration. I am responsible for all regulatory filings relating to the financial requirements of NSTAR Electric Company ("NSTAR Electric"), NSTAR Gas Company ("NSTAR Gas"), and Western Massachusetts Electric Company ("WMECO").

Q. Have you previously testified before the Department of Public Utilities ("Department")?

A. Yes. I have previously testified in support of several reconciliation filings associated with WMECO's existing solar facilities, in particular in dockets D.P.U. 13-174, D.P.U.14-123, and D.P.U. 15-151, among other filings.

Q. Mr. Rice, please state your name, position, and business address.

A. My name is Brian J. Rice. My address is 247 Station Drive, Westwood, Massachusetts 02090. I am Senior Analyst, Regulatory Projects for Eversource Energy Service Company.

Q. Please summarize your education and professional experience.

A. I graduated from Union College in Schenectady, New York in 2004 with a Bachelor of Science degree in Industrial Economics and received a Master of Business Administration degree with a concentration in corporate finance in 2011 from the Boston College Carroll Graduate School of Business in Chestnut Hill, Massachusetts. I've held multiple Senior Analyst positions in different functions at Eversource since 2011. My present responsibilities include preparing analysis and providing project management support for key enterprise-wide regulatory initiatives across Eversource's operating businesses. Previously I supported wholesale energy and renewable energy certificate procurement activities for Eversource. Prior to joining Eversource I held consulting positions covering various segments of the energy and utility industries.

Q. Have you previously testified before the Department?

A. No. I have not previously testified before the Department.

Q. What is the purpose of your testimony?

A. The purpose of our testimony is threefold. First, we describe NSTAR Electric and WMECO's (together, the "Companies") proposed approach for cost recovery related to

solar facility ownership of the solar facilities described in the testimony of Mr. Serna (the "Solar Facilities"). Specifically, the Companies are proposing a cost recovery mechanism to recover the revenue requirements associated with the Solar Facilities. Second, we provide an estimate of the expected revenue requirement of the Companies' investment in the Solar Facilities. Lastly, we present a proposed tariff for implementation of the Solar Expansion Cost Recovery Mechanism ("SECRM").

Q. Are you sponsoring any exhibits with your testimony?

A. Yes. In addition to our testimony (Exhibit Eversource-DPH/BJR-1) we are sponsoring Exhibit Eversource-DPH/BJR-2 and Exhibit Eversource-DPH/BJR-3, which present the estimated annual revenue requirement for NSTAR Electric and WMECO, respectively, over the depreciable life of the assets, or twenty five years, and Exhibit Eversource-DPH/BJR-4 and Exhibit Eversource-DPH/BJR-5, which present the SECRM tariff for NSTAR Electric and WMECO, respectively,.

III. COST RECOVERY PROPOSAL

Q. What are the Companies proposing for recovering the costs relating to the Solar Facilities?

A. The Companies are proposing a Solar Expansion Cost Recovery Mechanism designed to recover the incremental revenue requirement associated with the Solar Facilities. The Companies are proposing to submit annual filings on or around November 1 for rates effective January 1, designed to recover actual and estimated costs subject to reconciliation, until such time as the costs associated with the Solar Facilities are

incorporated into base distribution rates in the context of a future base distribution rate proceeding.

Q. Please describe the anticipated timing of SECRM filings.

A. The Companies anticipate the first annual filing to be submitted on or around November 1, 2017 for effect January 1, 2018. In accordance with the proposed tariffs M.D.P.U. No. 1060 M.D.P.U. No. 502 for WMECO and NSTAR Electric, respectively, the rate will be designed to recover the actual and estimated revenue requirement, subject to future reconciliation. Also in accordance with the proposed tariffs, if additional Solar Facilities are placed into service prior to December 31, 2017 the Companies would submit a filing by May 1, 2018, for rates effective July 1, 2018 for an updated, partial year revenue requirement. The annual rate filings will present actual and estimated revenue requirement through the end of the rate year, plus a reconciliation of the prior period revenue requirement and revenues billed for the Solar Facilities. The Companies anticipate SECRM filings to continually annually on or around November 1 going forward until such time as the Solar Facilities are incorporated into base distribution rates established in a base distribution rate case.

Q. What would be the purpose of the Department's review after the compliance filing?

A. In addition to confirming the accuracy of the calculation of the revenue requirement and the rate, the Department would review the filing to determine whether the proposal has been implemented consistent with the Department's order issued in this docket that pre-

approves the costs associated with the Companies' solar investments.

Q. **What if the actual costs exceed the estimates included in this application?**

A. The Companies fully expect to construct the solar projects within the cost ranges estimated. The Companies propose to manage costs through competitively bid engineering, procurement and construction ("EPC") contracts as explained in the testimony of Mr. Serna. It is possible that costs may be incurred that exceed the high end of the range of estimated costs pre-approved by the Department in this proceeding. In such a case, the Companies would be required to demonstrate to the Department that any such costs were prudently incurred prior to the Department allowing recovery of those costs in rates.

Q. Is there any Department precedent for rate treatment of this kind?

A. Yes. The Companies proposal is very similar to the Solar Cost Adjustment Provision approved by the Department for National Grid in D.P.U 09-38 and D.P.U 14-01. In addition, it is similar to the Solar Program Cost Adjustment mechanism approved by the Department for WMECO in D.P.U. 09-05 and D.P.U. 13-50. However, the proposed Solar Expansion Cost Recovery Mechanism is separate and distinct from the WMECO Solar Program Cost Adjustment.

Q. Why is the Companies' cost recovery proposal separate and distinct from WMECO's Solar Program Cost Adjustment?

A. For several reasons. First, the Companies are proposing to develop a substantial volume

of solar capacity in the NSTAR Electric service territory as well as the WMECO territory. The existing WMECO program was approved by the Department in D.P.U. 09-05 pursuant to the terms of a stipulation agreement reached between WMECO and the Office of the Attorney General of Massachusetts in 2009. The original agreement stipulated that WMECO would deploy no more than 6 MW under the approved program. This amount was subsequently increased to 8 MW with Department approval in D.P.U. 13-50. The existing WMECO solar program was approved prior to the implementation of other policies that have supported substantial development of solar generation in the Commonwealth and the stipulation agreement was reached, in part, to allow time for development of other solar policies that would be likely to "yield a broader range of options, synergies and opportunities to lower costs" and "provide a clearer, more integrated coordination of solar development across the Commonwealth" (Stipulation Agreement Article 1, Section 1.5).

Massachusetts has implemented and expanded several programs to support solar generation since 2009 and the solar industry within the state has substantially grown and matured over that time. The costs of solar installation have also declined considerably since the Department approved the initial WMECO solar program. The market and policy conditions that were addressed by the terms of the stipulation agreement are no longer applicable and a cost-recovery approach that is consistent with that of other distribution investments is appropriate at this time. Lastly, WMECO agreed to recover

its limited investments in the WMECO solar program based on a weighted average cost of capital based upon a reduced return on equity ("ROE") of 9.00 percent and cost of debt different from that used to finance WMECO's overall distribution business. The Companies are proposing a substantially greater investment in solar generation in this filing and it is appropriate to finance the proposed investment at a cost of capital that is consistent with the cost of capital used to finance its other distribution investments.

Q. After the proposed solar units are all in service and the costs are being recovered through the SECRM, what are the Companies proposing for future recovery?

A. The Companies propose to continue to annually establish a rate associated with its Solar Expansion Cost Recovery Mechanism until such time that solar costs are included in base distribution rates which would be accomplished base distribution rate proceeding.

Q. How do the Companies propose to allocate costs between NSTAR Electric and WMECO?

A. The Companies propose to assign costs to NSTAR Electric and WMECO in a manner consistent with the Companies' cost charging and allocation practices, which call for costs to be direct assigned to the appropriate entity whenever possible. If costs are not able to be directly assigned (e.g., administrative and general expenses, such as project management or other general oversight or support costs), those costs are allocated to the appropriate entities based on the most appropriate allocation method.

II. REVENUE REQUIREMENT

Q. Have you performed a revenue requirement analysis for the Companies' proposal?

A. Yes. We have estimated the total revenue requirement for 35 MW installed by NSTAR Electric and 27 MW of solar generation capacity installed by WMECO, which is provided in Exhibit Eversource-DPH/BJR-2 and Exhibit Eversource-DPH/BJR-3 for NSTAR Electric and WMECO, respectively. As shown in those exhibits, we have calculated an estimated revenue requirement for each year of the expected 25-year life of the proposed projects. As shown in Exhibits Eversource-DPH/BJR-2 and Eversource-DPH/BJR-3 we estimate the combined revenue requirement for the full calendar year 2018 to be $24.5 million based on the estimated capital and operating costs provided in the testimony of Mr. Serna. For illustrative purposes, the Companies have presented a revenue requirement based on an in service date of November 31, 2017.[1] As explained in the testimony of Mr. Serna, the revenue requirement of the Companies proposal is expected to be competitive with other mechanisms for supporting further solar development in the Commonwealth.

Q. How did you calculate the revenue requirement?

A The revenue requirement reflects a return and income taxes on rate base (including

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[1] Actual in-service dates for facilities constructed by December 31, 2017 may be beyond that date, to the extent that construction is not completed until late in 2017. To the extent plant is placed in service earlier in 2017 in advance of the Companies' November 1 filing as proposed in the SECRM tariffs, the Companies would submit a filing seeking to recover costs associated with such plant in service by November 1, 2017 for rates effective January 1, 2018.

investment, accumulated depreciation and accumulated deferred taxes), depreciation expense, operation and maintenance expense, property taxes and amortization of investment tax credits. This analysis does not include the proceeds from the sale of energy, capacity and Renewable Energy Certificates ("RECs"). These proceeds will be credited to customers, in the manner we will describe in our testimony, but we have not included it in the revenue requirement analysis.

Q. What did you use for the weighted average cost of capital in computing the estimate?

A. The Companies propose to calculate the weighted average cost of capital for NSTAR Electric and WMECO based upon (1) the respective ROE approved in each company's most recent rate proceeding, (2) the average long-term debt rate calculated from each company's previous year Form 1 Annual Report, (3) applicable weighted average return on preferred stock calculated from each company's previous year Form 1 Annual Report and (4) the capital structure approved in each company's most recent rate proceeding. For the purposes of estimating the revenue requirement in this filing we have calculated the weighted average cost of capital for NSTAR Electric based upon the ROE and capital structure reflected in its 2015 Form 1 Annual Report, and calculated the weighted average cost of capital for WMECO based upon the ROE and capital structure approved in D.P.U. 10-170. The Companies currently anticipates it will make base-rate case filings to the Department in 2017 for both NSTAR Electric and WMECO. The Companies anticipate that the first annual compliance filing will reflect the ROE and capital structure

approved by the Department in that base-rate case proceeding. However, in the event the Department has not approved a new ROE and capital structure prior to the first compliance filing, the Companies propose it would calculate the weighted average cost of capital for NSTAR Electric based upon the ROE from its previous year Form 1 Annual Report and a capital structure calculated from the end of year common equity, preferred equity and long-term debt balances reflected in its previous year Form 1 Annual Report.

Q. How will the Companies account for capital additions prior to them being placed into service?

A. Prior to assets being placed into service, the cost of constructing facilities will be capitalized in accordance with the FERC's Uniform System of Accounts and recorded in FERC Account No. 107. Allowance for Funds Used during Construction (AFUDC) will accrue in accordance with FERC Order No. 561.

Q. What depreciation period did you assume for the investment in solar assets?

A. We assumed a 12-year depreciable life for the inverters and a 25-year depreciable life for all other equipment. The Companies' projection is based on the expected life of this equipment.

Q. Did you include an annual O&M projection in the revenue requirement?

A. Yes. Based on the testimony of Mr. Serna, we have assumed annual O&M costs in the revenue requirement calculation as shown in Exhibits Eversource-DPH/BJR-2 and Eversource-DPH/BJR-3. We have escalated the estimated O&M costs beginning in the

second year and beyond according to a forecast of the Gross Domestic Product Price Index. These projections are included for illustrative purposes, as the Companies proposed SECRM will ultimately recover actual, prudently incurred O&M costs as reflected on the Companies books of record.

Q. Did you include an annual property tax projection in the revenue requirement?

A. Yes. We projected annual property tax expenses based upon the project net plant balances in each year and a projected annual property tax rate. The property tax rate in 2017 is equal to the average property tax rate as calculated from the respective 2015 FERC Form 1 Annual Report for each company. For purposes of calculating the projected revenue requirement, we have increased the applicable property tax rate in subsequent years 2 percent per year. The Companies cost recovery mechanism will ultimately recover actual, incremental property tax expense associated with the Solar Facilities.

Q. How are the Companies proposing to account for the value of Investment Tax Credits from these installations?

A. The Companies propose to reduce its after-tax cost of service by the amount of the Investment Tax Credits on a ratable basis over the projected life of the assets as shown in Exhibits Eversource-DPH/BJR-2 and Eversource-DPH/BJR-3. This approach is consistent with the methodology for returning the ITC to customers as approved in WMECO's existing Solar Program Cost Adjustment, Generally Accepted Accounting Principles and prevailing tax laws.

Q. How are the Companies proposing to account for the value of the generation from these installations in the annual revenue requirement?

A. The Companies propose to include credits associated with all proceeds from the sale of energy and capacity to customers as part of its annual Solar Expansion Cost Recovery Mechanism filings.

Q. **How are the Companies proposing to account for the value of the RECs from these installations in the annual revenue requirement?**

A. The Companies propose to first apply any RECs produced by the Solar Facilities toward the Renewable Portfolio Standard ("RPS") compliance obligations associated with its Basic Service load. The value of any RECs applied toward the Basic Service RPS obligation will be recorded as a credit in the Companies' annual SECRM and be based upon a transfer price equal to the weighted average price paid by the Companies to third-party suppliers for RECs procured through competitive solicitations. Any RECs produced by the Solar Facilities in excess of the Basic Service RPS obligation will be sold through competitive solicitations and the proceeds recorded as a credit in the annual SECRM filing. This treatment of RECs is consistent with the approach approved by the Department for long-term renewable contracts in D.P.U. 11-05, 11-06 and 11-07.

V. PROPOSED TARIFF

Q. Are the Companies including a proposed tariff provision?

A. Yes. The proposed tariff for NSTAR Electric (M.P.D.U. No. 502) is provided as Attachment Exhibit Eversource-DPH/BJR-4. The proposed tariff for WMECO

(M.D.P.U. No. 1060) is provided as Exhibit Eversource-DPH/BJR-5. The mechanism described in this proposed tariff would apply to solar investments proposed in this docket.

VI. CONCLUSION

Q. Does that conclude your testimony?

A. Yes, it does.

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Summary
For The Years 2017 through 2042

Line No.			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Revenue Requirement Calculation:															
2	Return and Taxes	Return and Taxes, Line 44	$766,686	$8,724,232	$7,894,474	$7,262,262	$6,705,584	$6,205,652	$5,818,718	$5,488,471	$5,158,453	$4,828,469	$4,498,489	$4,168,513	$4,212,825	$4,208,161
3	Book Depreciation	Depreciation Expense, Line 29	359,844	4,318,133	4,318,133	4,318,133	4,318,133	4,318,133	4,318,133	4,318,133	4,318,133	4,318,133	4,318,133	4,318,133	4,314,394	4,273,262
4	Net ITC Amortization	Investment Tax Credit Amortization, Lines 15 & 18, ITC tax Effect, Line 16	(138,894)	(1,666,730)	(1,666,730)	(1,666,730)	(1,666,730)	(1,666,730)	(1,666,730)	(1,666,730)	(1,666,730)	(1,666,730)	(1,666,730)	(1,666,730)	(1,647,245)	(1,432,909)
5	Property Taxes	Property Tax Expense, Line 6	0	2,361,503	2,300,039	2,235,171	2,166,788	2,094,776	2,019,016	1,939,389	1,855,769	1,768,028	1,676,035	1,579,655	1,693,654	1,593,783
6	O&M Expense	O&M and Lease Expense, Lines 4 & 5	0	443,499	454,586	464,587	473,879	483,357	493,507	503,871	514,452	525,256	536,286	547,548	559,046	570,786
7	Total Revenue Requirement		$987,637	$14,180,638	$13,300,502	$12,613,423	$11,997,654	$11,435,187	$10,982,645	$10,583,134	$10,180,077	$9,773,156	$9,362,213	$8,947,119	$9,132,675	$9,213,083
8	Revenue Credits															
9	Capacity		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	Energy		0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Solar Renewable Energy Credits		0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Total Revenue Credits		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Net Revenue Requirement		$987,637	$14,180,638	$13,300,502	$12,613,423	$11,997,654	$11,435,187	$10,982,645	$10,583,134	$10,180,077	$9,773,156	$9,362,213	$8,947,119	$9,132,675	$9,213,083

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Rec
Summary
For The Years 2017 through 2042

Line No.			2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total
1	Revenue Requirement Calculation:														
2	Return and Taxes	Return and Taxes, Line 44	$3,801,161	$3,427,649	$3,066,697	$2,715,166	$2,382,474	$2,059,202	$1,737,112	$1,417,380	$1,098,828	$780,281	$461,738	$156,480	$99,045,156
3	Book Depreciation	Depreciation Expense, Line 29	4,273,262	4,273,262	4,273,262	4,273,262	4,273,262	4,273,262	4,273,262	4,273,262	4,273,262	4,273,262	4,273,262	3,917,156	107,370,000
4	Net ITC Amortization	Investment Tax Credit Amortization, Lines 15 & 18, ITC tax Effect, Line 16	(1,432,909)	(1,432,909)	(1,432,909)	(1,432,909)	(1,432,909)	(1,432,909)	(1,432,909)	(1,432,909)	(1,432,909)	(1,432,909)	(1,432,909)	(1,313,500)	(38,628,577)
5	Property Taxes	Property Tax Expense, Line 6	1,489,240	1,379,877	1,265,545	1,146,087	1,021,344	891,154	755,347	613,751	466,190	312,480	152,436	0	34,777,055
6	O&M Expense	O&M and Lease Expense, Lines 4 & 5	582,773	595,011	607,506	620,264	633,290	646,589	660,167	674,030	688,185	702,637	717,392	732,458	14,430,962
7	Total Revenue Requirement		$8,713,526	$8,242,890	$7,780,100	$7,321,869	$6,877,460	$6,437,297	$5,992,979	$5,545,514	$5,093,555	$4,635,751	$4,171,919	$3,492,594	$216,994,596
8	Revenue Credits														
9	Capacity		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	Energy		0	0	0	0	0	0	0	0	0	0	0	0	0
11	Solar Renewable Energy Credits		0	0	0	0	0	0	0	0	0	0	0	0	0
12	Total Revenue Credits		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Net Revenue Requirement		$8,713,526	$8,242,890	$7,780,100	$7,321,869	$6,877,460	$6,437,297	$5,992,979	$5,545,514	$5,093,555	$4,635,751	$4,171,919	$3,492,594	$216,994,596

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Return and Taxes
For The Years 2017 through 2042

Line No.			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029 Note 1	2030
	Depreciable Net Plant Additions															
1	SECRM Program - Solar Panels		$89,370,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	SECRM Program - Land		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	SECRM Program - Interconnection		4,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0
4	SECRM Program - Inverters		7,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Annual SECRM Gross Plant	Sum of Line 1 thru Line 4	$100,370,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	Cumulative SECRM Gross Plant	CM Line 5 + PM Line 6	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000
7																
8	Deferred Tax Calculation:															
9	Annual Federal Tax Depreciation	Deferred Taxes & ITC Tax Effect	$57,057,877	$11,561,540	$7,233,324	$4,632,898	$4,623,618	$2,672,239	$721,480	$714,160	$712,960	$712,940	$712,960	$712,940	$2,105,668	$2,865,440
10	Cumulative Federal Tax Depreciation	CY Line 9 + PY Line 10	$57,057,877	$68,619,417	$75,852,741	$80,485,639	$85,109,257	$87,781,497	$88,502,977	$89,217,137	$89,930,097	$90,643,037	$91,355,997	$92,068,937	$94,174,605	$97,040,045
11																
12	Annual State Tax Depreciation	Deferred Taxes	$19,424,000	$31,127,160	$18,770,120	$11,348,904	$11,330,344	$5,762,312	$195,520	$180,880	$178,480	$178,440	$178,480	$178,440	$1,578,480	$2,418,440
13	Cumulative State Tax Depreciation	CY Line 12 + PY Line 13	$19,424,000	$50,551,160	$69,321,280	$80,670,184	$92,000,528	$97,762,840	$97,958,360	$98,139,240	$98,317,720	$98,496,160	$98,674,640	$98,853,080	$100,431,560	$102,850,000
14																
15	Book Deprec - Solar Panels	Depreciation Expense, Line 4	$297,900	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800
16	Book Deprec - Interconnection	Depreciation Expense, Line 11	13,333	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000
17	Book Deprec - Inverter 1	Depreciation Expense, Line 18	48,611	583,333	583,333	583,333	583,333	583,333	583,333	583,333	583,333	583,333	583,333	583,333	534,722	0
18	Book Deprec - Inverter 2	Depreciation Expense, Line 25	0	0	0	0	0	0	0	0	0	0	0	0	44,872	538,462
19	Total Book Depreciation	Sum of Line 15 thru Line 18	$359,844	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,314,394	$4,273,262
20	Cumulative Book Depreciation	CY Line 19 + PY Line 20	$359,844	$4,677,978	$8,996,111	$13,314,244	$17,632,378	$21,950,511	$26,268,644	$30,586,778	$34,904,911	$39,223,044	$43,541,178	$47,859,311	$52,173,705	$56,446,966
21																
22	Cumulative Book / Tax Timer	Line 10 - Line 20	$56,698,032	$63,941,439	$66,856,630	$67,171,395	$67,476,880	$65,830,986	$62,234,332	$58,630,359	$55,025,186	$51,419,992	$47,814,819	$44,209,626	$42,000,900	$40,593,079
23	Effective Federal Tax Rate	Tax Dept	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.000%	35.000%	35.000%	35.000%	35.000%
24	Deferred Federal Tax Reserve	Line 22 x Line 23	$19,844,311	$22,379,504	$23,399,820	$23,509,988	$23,616,908	$23,040,845	$21,782,016	$20,520,626	$19,258,815	$17,996,997	$16,735,187	$15,473,369	$14,700,315	$14,207,577
25	Less: Federal Deduction for Deferred State Taxes	Line 30 x -35.00%	($533,796)	($1,284,449)	($1,689,105)	($1,885,966)	($2,082,308)	($2,122,745)	($2,007,312)	($1,891,469)	($1,775,559)	($1,659,647)	($1,543,737)	($1,427,826)	($1,351,220)	($1,299,285)
26	Net Deferred Federal Tax Reserve	Line 24 + Line 25	$19,310,515	$21,095,055	$21,710,716	$21,624,022	$21,534,600	$20,918,100	$19,774,704	$18,629,157	$17,483,256	$16,337,350	$15,191,450	$14,045,543	$13,349,095	$12,908,293
27																
28	Cumulative Book / Tax Timer	Line 13 - Line 20	$19,064,156	$45,873,182	$60,325,169	$67,355,940	$74,368,150	$75,812,329	$71,689,716	$67,552,462	$63,412,809	$59,273,116	$55,133,462	$50,993,769	$48,257,855	$46,403,034
29	Effective State Tax Rate	Tax Dept	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.000%	8.000%	8.000%	8.000%	8.000%
30	Deferred State Tax Reserve	Line 28 x Line 29	$1,525,132	$3,669,855	$4,826,014	$5,388,475	$5,949,452	$6,064,986	$5,735,177	$5,404,197	$5,073,025	$4,741,849	$4,410,677	$4,079,502	$3,860,628	$3,712,243
31																
32	Total Deferred Taxes	Line 26 + Line 30	$20,835,647	$24,764,909	$26,536,729	$27,012,497	$27,484,052	$26,983,086	$25,509,882	$24,033,354	$22,556,281	$21,079,199	$19,602,127	$18,125,045	$17,209,724	$16,620,535
33																
34	Rate Base Calculation:															
35	Cumulative Incremental Spend	Line 6	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000
36	Accumulated Depreciation	- Line 20	(359,844)	(4,677,978)	(8,996,111)	(13,314,244)	(17,632,378)	(21,950,511)	(26,268,644)	(30,586,778)	(34,904,911)	(39,223,044)	(43,541,178)	(47,859,311)	(45,173,705)	(49,446,966)
37	Deferred Tax Reserve	- Line 32	(20,835,647)	(24,764,909)	(26,536,729)	(27,012,497)	(27,484,052)	(26,983,086)	(25,509,882)	(24,033,354)	(22,556,281)	(21,079,199)	(19,602,127)	(18,125,045)	(17,209,724)	(16,620,535)
38	Working Capital	O&M and Lease Expenses, Lines 4 & 5 x (45/365)	0	54,678	56,045	57,278	58,423	59,592	60,843	62,121	63,426	64,758	66,117	67,506	68,924	70,371
39	Year End Rate Base	Sum Lines 35 thru 38	$79,174,508	$70,981,791	$64,893,205	$60,100,537	$55,311,994	$51,495,995	$48,652,318	$45,811,990	$42,972,234	$40,132,514	$37,292,813	$34,453,150	$38,055,495	$34,372,869
40																
41	Revenue Requirement Calculation:															
42	Average Rate Base	Line 39 ÷ 2	$6,597,876	$75,078,150	$67,937,498	$62,496,871	$57,706,265	$53,403,994	$50,074,156	$47,232,154	$44,392,112	$41,552,374	$38,712,664	$35,872,982	$36,254,323	$36,214,182
43	Pre-Tax Monthly ROR	Capital Structure, Line 8	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%
44	Return and Taxes	Line 42 x Line 43	$766,686	$8,724,232	$7,894,474	$7,262,262	$6,705,584	$6,205,652	$5,818,718	$5,488,471	$5,158,453	$4,828,469	$4,498,489	$4,168,513	$4,212,825	$4,208,161

Note 1 - Retirement of First Inverter, Addition of Second Inverter

Input	
Installed MW	35
Price per Installed MW - W/O Inverters	$2,350,000
Price per Installed MW - Inverters	$200,000
Sites	8
Site Preparation per site	$890,000
Interconnection per site	$500,000

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Return and Taxes
For The Years 2017 through 2042

Line No.			2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total
	Depreciable Net Plant Additions														
1	SECRM Program - Solar Panels		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$89,370,000
2	SECRM Program - Land		0	0	0	0	0	0	0	0	0	0	0	0	0
3	SECRM Program - Interconnection		0	0	0	0	0	0	0	0	0	0	0	0	4,000,000
4	SECRM Program - Inverters		0	0	0	0	0	0	0	0	0	0	0	0	7,000,000
5	Annual SECRM Gross Plant	Sum of Line 1 thru Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$100,370,000
6	Cumulative SECRM Gross Plant	CM Line 5 + PM Line 6	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	
7															
8	Deferred Tax Calculation:														
9	Annual Federal Tax Depreciation	Deferred Taxes & ITC Tax Effect	$1,969,460	$1,431,840	$1,431,860	$1,028,640	$625,460	$625,440	$580,840	$536,220	$536,220	$536,220	$536,220	$491,535	$107,370,000
10	Cumulative Federal Tax Depreciation	CY Line 9 + PY Line 10	$99,009,505	$100,441,345	$101,873,205	$102,901,845	$103,527,305	$104,152,745	$104,733,585	$105,269,805	$105,806,025	$106,342,245	$106,878,465	$107,370,000	
11															
12	Annual State Tax Depreciation	Deferred Taxes	$1,522,480	$984,840	$984,880	$581,640	$178,480	$178,440	$89,240	$0	$0	$0	$0	$0	$107,370,000
13	Cumulative State Tax Depreciation	CY Line 12 + PY Line 13	$104,372,480	$105,357,320	$106,342,200	$106,923,840	$107,102,320	$107,280,760	$107,370,000	$107,370,000	$107,370,000	$107,370,000	$107,370,000	$107,370,000	
14															
15	Book Deprec - Solar Panels	Depreciation Expense, Line 4	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,276,900	$89,370,000
16	Book Deprec - Interconnection	Depreciation Expense, Line 11	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	146,667	4,000,000
17	Book Deprec - Inverter 1	Depreciation Expense, Line 18	0	0	0	0	0	0	0	0	0	0	0	0	7,000,000
18	Book Deprec - Inverter 2	Depreciation Expense, Line 25	538,462	538,462	538,462	538,462	538,462	538,462	538,462	538,462	538,462	538,462	538,462	493,590	7,000,000
19	Total Book Depreciation	Sum of Line 15 thru Line 18	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$3,917,156	$107,370,000
20	Cumulative Book Depreciation	CY Line 19 + PY Line 20	$60,720,228	$64,993,490	$69,266,751	$73,540,013	$77,813,274	$82,086,536	$86,359,797	$90,633,059	$94,906,320	$99,179,582	$103,452,844	$107,370,000	
21															
22	Cumulative Book / Tax Timer	Line 10 - Line 20	$38,289,277	$35,447,855	$32,606,454	$29,361,832	$25,714,031	$22,066,209	$18,373,788	$14,636,746	$10,899,705	$7,162,663	$3,425,621	($0)	
23	Effective Federal Tax Rate	Tax Dept	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	
24	Deferred Federal Tax Reserve	Line 22 x Line 23	$13,401,247	$12,406,749	$11,412,259	$10,276,641	$8,999,911	$7,723,173	$6,430,826	$5,122,861	$3,814,897	$2,506,932	$1,198,967	($0)	
25	Less: Federal Deduction for Deferred State Taxes	Line 30 x -35.00%	($1,222,263)	($1,130,187)	($1,038,113)	($934,747)	($820,093)	($705,438)	($588,286)	($468,634)	($348,983)	($229,332)	($109,680)	$0	
26	Net Deferred Federal Tax Reserve	Line 24 + Line 25	$12,178,984	$11,276,562	$10,374,146	$9,341,894	$8,179,817	$7,017,735	$5,842,540	$4,654,227	$3,465,914	$2,277,600	$1,089,287	($0)	
27															
28	Cumulative Book / Tax Timer	Line 13 - Line 20	$43,652,252	$40,363,830	$37,075,449	$33,383,827	$29,289,046	$25,194,224	$21,010,203	$16,736,941	$12,463,680	$8,190,418	$3,917,156	$0	
29	Effective State Tax Rate	Tax Dept	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	
30	Deferred State Tax Reserve	Line 28 x Line 29	$3,492,180	$3,229,106	$2,966,036	$2,670,706	$2,343,124	$2,015,538	$1,680,816	$1,338,955	$997,094	$655,233	$313,373	$0	
31															
32	Total Deferred Taxes	Line 26 + Line 30	$15,671,164	$14,505,669	$13,340,182	$12,012,600	$10,522,941	$9,033,273	$7,523,356	$5,993,182	$4,463,008	$2,932,834	$1,402,660	($0)	
33															
34	Rate Base Calculation:														
35	Cumulative Incremental Spend	Line 6	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	
36	Accumulated Depreciation	- Line 20	(53,720,228)	(57,993,490)	(62,266,751)	(66,540,013)	(70,813,274)	(75,086,536)	(79,359,797)	(83,633,059)	(87,906,320)	(92,179,582)	(96,452,844)	(100,370,000)	
37	Deferred Tax Reserve	- Line 32	(15,671,164)	(14,505,669)	(13,340,182)	(12,012,600)	(10,522,941)	(9,033,273)	(7,523,356)	(5,993,182)	(4,463,008)	(2,932,834)	(1,402,660)	0	
38	Working Capital	O&M and Lease Expenses, Lines 4 & 5 x (45/365)	71,849	73,358	74,898	76,471	78,077	79,716	81,390	83,100	84,845	86,626	88,446	90,303	
39	Year End Rate Base	Sum Lines 35 thru 38	$31,050,457	$27,944,199	$24,837,965	$21,893,858	$19,111,861	$16,329,908	$13,568,237	$10,826,859	$8,085,516	$5,344,211	$2,602,942	$90,303	
40															
41	Revenue Requirement Calculation:														
42	Average Rate Base	Line 39 ÷ 2	$32,711,663	$29,497,328	$26,391,082	$23,365,911	$20,502,860	$17,720,885	$14,949,072	$12,197,548	$9,456,188	$6,714,864	$3,973,577	$1,346,623	
43	Pre-Tax Monthly ROR	Capital Structure, Line 8	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	11.62%	
44	Return and Taxes	Line 42 x Line 43	$3,801,161	$3,427,649	$3,066,697	$2,715,166	$2,382,474	$2,059,202	$1,737,112	$1,417,380	$1,098,828	$780,281	$461,738	$156,480	**$99,045,156**

Note 1 - Retirement of First Inverter, Addition of Second Inverter

Input
Installed MW
Price per Installed MW - W/O Inverters
Price per Installed MW - Inverters
Sites
Site Preparation per site
Interconnection per site

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Depreciation Expense
For The Years 2017 through 2042

Line No.	Month		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	25 Year Property															
1	SECRM Program - Solar Panels	Return and Taxes, Line 1	$89,370,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Cumulative Capital Investment	CY Line 1 + PY Line 2	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000
3	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	0.33%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
4	Annual Book Depreciation	Line 2 x Line 3	$297,900	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800
5	Cumulative Depreciation	CY Line 4 + PY Line 5	$297,900	$3,872,700	$7,447,500	$11,022,300	$14,597,100	$18,171,900	$21,746,700	$25,321,500	$28,896,300	$32,471,100	$36,045,900	$39,620,700	$43,195,500	$46,770,300
6																
7	25 Year Property															
8	SECRM Program - Interconnection	Return and Taxes, Line 3	$4,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Cumulative Capital Investment	CY Line 8 + PY Line 9	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
10	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	0.33%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
11	Annual Book Depreciation	Line 9 x Line 10	$13,333	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000
12	Cumulative Depreciation	CY Line 11 + PY Line 12	$13,333	$173,333	$333,333	$493,333	$653,333	$813,333	$973,333	$1,133,333	$1,293,333	$1,453,333	$1,613,333	$1,773,333	$1,933,333	$2,093,333
13																
14	12 Year Property															
15	SECRM Program - Inverter 1	Return and Taxes, Line 4	$7,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
16	Cumulative Capital Investment	CY Line 15 + PY Line 16	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$0
17	Annual Depreciation Rate	Annual Depreciation Rate @ 8.333333%	0.69%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%	8.33%
18	Annual Book Depreciation	Line 16 x Line 17	$48,611	$583,333	$583,333	$583,333	$583,333	$583,333	$583,333	$583,333	$583,333	$583,333	$583,333	$583,333	$534,722	$0
19	Cumulative Depreciation	CY Line 18 + PY Line 19	$48,611	$631,944	$1,215,278	$1,798,611	$2,381,944	$2,965,278	$3,548,611	$4,131,944	$4,715,278	$5,298,611	$5,881,944	$6,465,278	$7,000,000	$7,000,000
20																
21	13 Year Property															
22	SECRM Program - Inverter 2	Return and Taxes, Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
23	Cumulative Capital Investment	CY Line 22 + PY Line 23	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,000,000	$7,000,000
24	Annual Depreciation Rate	Annual Depreciation Rate @ 7.692308%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.64%	7.69%
25	Annual Book Depreciation	Line 23 x Line 24	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$44,872	$538,462
26	Cumulative Depreciation	CY Line 25 + PY Line 26	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$44,872	$583,333
27																
28	Total Book Depreciation	Line 4 + Line 11 + Line 18 + Line 25	$359,844	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,318,133	$4,314,394	$4,273,262
29	Total Cumulative Book Depreciation	CY Line 28 + PY Line 29	$359,844	$4,677,978	$8,996,111	$13,314,244	$17,632,378	$21,950,511	$26,268,644	$30,586,778	$34,904,911	$39,223,044	$43,541,178	$47,859,311	$52,173,705	$56,446,966

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Depreciation Expense
For The Years 2017 through 2042

Line No.	Month		2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total
	25 Year Property														
1	SECRM Program - Solar Panels	Return and Taxes, Line 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
2	Cumulative Capital Investment	CY Line 1 + PY Line 2	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	
3	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.67%	
4	Annual Book Depreciation	Line 2 x Line 3	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,574,800	$3,276,900	$89,370,000
5	Cumulative Depreciation	CY Line 4 + PY Line 5	$50,345,100	$53,919,900	$57,494,700	$61,069,500	$64,644,300	$68,219,100	$71,793,900	$75,368,700	$78,943,500	$82,518,300	$86,093,100	$89,370,000	
6															
7	25 Year Property														
8	SECRM Program - Interconnection	Return and Taxes, Line 3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
9	Cumulative Capital Investment	CY Line 8 + PY Line 9	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	
10	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.67%	
11	Annual Book Depreciation	Line 9 x Line 10	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$146,667	$4,000,000
12	Cumulative Depreciation	CY Line 11 + PY Line 12	$2,253,333	$2,413,333	$2,573,333	$2,733,333	$2,893,333	$3,053,333	$3,213,333	$3,373,333	$3,533,333	$3,693,333	$3,853,333	$4,000,000	
13															
14	12 Year Property														
15	SECRM Program - Inverter 1	Return and Taxes, Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
16	Cumulative Capital Investment	CY Line 15 + PY Line 16	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
17	Annual Depreciation Rate	Annual Depreciation Rate @ 8.333333%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%	
18	Annual Book Depreciation	Line 16 x Line 17	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$7,000,000
19	Cumulative Depreciation	CY Line 18 + PY Line 19	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	
20															
21	13 Year Property														
22	SECRM Program - Inverter 2	Return and Taxes, Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
23	Cumulative Capital Investment	CY Line 22 + PY Line 23	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	
24	Annual Depreciation Rate	Annual Depreciation Rate @ 7.692308%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.05%	
25	Annual Book Depreciation	Line 23 x Line 24	$538,462	$538,462	$538,462	$538,462	$538,462	$538,462	$538,462	$538,462	$538,462	$538,462	$538,462	$493,590	$7,000,000
26	Cumulative Depreciation	CY Line 25 + PY Line 26	$1,121,795	$1,660,256	$2,198,718	$2,737,180	$3,275,641	$3,814,103	$4,352,564	$4,891,026	$5,429,487	$5,967,949	$6,506,411	$7,000,000	
27															
28	Total Book Depreciation	Line 4 + Line 11 + Line 18 + Line 25	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$4,273,262	$3,917,156	**$107,370,000**
29	Total Cumulative Book Depreciation	CY Line 28 + PY Line 29	$60,720,228	$64,993,490	$69,266,751	$73,540,013	$77,813,274	$82,086,536	$86,359,797	$90,633,059	$94,906,320	$99,179,582	$103,452,844	$107,370,000	

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Deferred Taxes
For The Years 2017 through 2042

			(a)	(b)	(c)	(d)	(e)	(f)
	Federal Tax Depreciation		**CY - 2017**	**CY - 2018**	**CY - 2019**	**CY - 2020**	**CY - 2021**	**CY - 2022**
1	**Cumulative Investment Tax Basis**	Return and Taxes, Line 1	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000
2	**ITC Tax Depreciation Rate**	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
3	**ITC Tax Depreciation Reduction**	Line 1 x Line 2	$13,405,500	$13,405,500	$13,405,500	$13,405,500	$13,405,500	$13,405,500
4								
5	**Investment Tax Basis**	Line 1	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000
6	**Bonus Depreciation Rate**	Tax Dept	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
7	**Bonus Depreciation Reduction**	Line 5 x Line 6	$44,685,000	$44,685,000	$44,685,000	$44,685,000	$44,685,000	$44,685,000
8								
9	**Investment Tax Basis**	Line 5	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000
10	**ITC Tax Depreciation Reduction**	- Line 3	($13,405,500)	($13,405,500)	($13,405,500)	($13,405,500)	($13,405,500)	($13,405,500)
11	**Bonus Depreciation Reduction**	- Line 7	($44,685,000)	($44,685,000)	($44,685,000)	($44,685,000)	($44,685,000)	($44,685,000)
12	**Adjusted Investment Basis @ 85%**	Sum Lines 9 thru 11	$31,279,500	$31,279,500	$31,279,500	$31,279,500	$31,279,500	$31,279,500
13	**Annual 5 Yr MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
14	**Federal Tax Depreciation**	Line 12 x Line 13	$6,255,900	$10,009,440	$6,005,664	$3,603,398	$3,603,398	$1,801,699

	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
18	CY 2017	Line 14(a) ÷ 1 + Line 7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$50,940,900	$50,940,900
19	CY 2018	Line 14(b) ÷ 12	$834,120	$834,120	$834,120	$834,120	$834,120	$834,120	$834,120	$834,120	$834,120	$834,120	$834,120	$834,120	$10,009,440
20	CY 2019	Line 14(c) ÷ 12	$500,472	$500,472	$500,472	$500,472	$500,472	$500,472	$500,472	$500,472	$500,472	$500,472	$500,472	$500,472	$6,005,664
21	CY 2020	Line 14(d) ÷ 12	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$3,603,398
22	CY 2021	Line 14(e) ÷ 12	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$300,283	$3,603,398
23	CY 2022	Line 14(f) ÷ 12	$150,142	$150,142	$150,142	$150,142	$150,142	$150,142	$150,142	$150,142	$150,142	$150,142	$150,142	$150,142	$1,801,699
24	Total Federal Tax Depreciation		**$2,085,300**	**$2,085,300**	**$2,085,300**	**$2,085,300**	**$2,085,300**	**$2,085,300**	**$2,085,300**	**$2,085,300**	**$2,085,300**	**$2,085,300**	**$2,085,300**	**$53,026,200**	**$75,964,500**

	State Tax Depreciation							
30	**Cumulative Investment Tax Basis**	Line 1	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000
31	**5 Year MACRS**	Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
32	**State Tax Depreciation**	Line 30 x Line 31	$17,874,000	$28,598,400	$17,159,040	$10,295,424	$10,295,424	$5,147,712

	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
36	CY 2017	Line 32(a) ÷ 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17,874,000	$17,874,000
37	CY 2018	Line 32(b) ÷ 12	$2,383,200	$2,383,200	$2,383,200	$2,383,200	$2,383,200	$2,383,200	$2,383,200	$2,383,200	$2,383,200	$2,383,200	$2,383,200	$2,383,200	$28,598,400
38	CY 2019	Line 32(c) ÷ 12	$1,429,920	$1,429,920	$1,429,920	$1,429,920	$1,429,920	$1,429,920	$1,429,920	$1,429,920	$1,429,920	$1,429,920	$1,429,920	$1,429,920	$17,159,040
39	CY 2020	Line 32(d) ÷ 12	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$10,295,424
40	CY 2021	Line 32(e) ÷ 12	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$857,952	$10,295,424
41	CY 2022	Line 32(f) ÷ 12	$428,976	$428,976	$428,976	$428,976	$428,976	$428,976	$428,976	$428,976	$428,976	$428,976	$428,976	$428,976	$5,147,712
42	Total State Tax Depreciation		**$5,958,000**	**$5,958,000**	**$5,958,000**	**$5,958,000**	**$5,958,000**	**$5,958,000**	**$5,958,000**	**$5,958,000**	**$5,958,000**	**$5,958,000**	**$5,958,000**	**$23,832,000**	**$89,370,000**

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Deferred Taxes
For The Years 2017 through 2042

			(a)	(b)	(c)	(d)	(e)	(f)
43	**Federal Tax Depreciation**		**CY - 2017**	**CY - 2018**	**CY - 2019**	**CY - 2020**	**CY - 2021**	**CY - 2022**
44	**Cumulative Investment Tax Basis**	Return and Taxes, Line 4	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
45	**ITC Tax Depreciation Rate**	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
46	**ITC Tax Depreciation Reduction**	Line 44 x Line 45	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000
47								
48	**Investment Tax Basis**	Line 44	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
49	**Bonus Depreciation Rate**	Tax Dept	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
50	**Bonus Depreciation Reduction**	Line 48 x Line 49	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
51								
52	**Investment Tax Basis**	Line 48	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
53	**ITC Tax Depreciation Reduction**	- Line 46	($1,050,000)	($1,050,000)	($1,050,000)	($1,050,000)	($1,050,000)	($1,050,000)
54	**Bonus Depreciation Reduction**	- Line 50	($3,500,000)	($3,500,000)	($3,500,000)	($3,500,000)	($3,500,000)	($3,500,000)
55	**Adjusted Investment Basis @ 85%**	Sum Lines 52 thru 54	$2,450,000	$2,450,000	$2,450,000	$2,450,000	$2,450,000	$2,450,000
56	**Annual 5 Yr MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
57	**Federal Tax Depreciation**	Line 55 x Line 56	$490,000	$784,000	$470,400	$282,240	$282,240	$141,120
58								
59								

60	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
61	CY 2017	Line 57(a) ÷ 1 + Line 51	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,990,000	$3,990,000
62	CY 2018	Line 57(b) ÷ 12	$65,333	$65,333	$65,333	$65,333	$65,333	$65,333	$65,333	$65,333	$65,333	$65,333	$65,333	$65,333	$784,000
63	CY 2019	Line 57(c) ÷ 12	$39,200	$39,200	$39,200	$39,200	$39,200	$39,200	$39,200	$39,200	$39,200	$39,200	$39,200	$39,200	$470,400
64	CY 2020	Line 57(d) ÷ 12	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$282,240
65	CY 2021	Line 57(e) ÷ 12	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$23,520	$282,240
66	CY 2022	Line 57(f) ÷ 12	$11,760	$11,760	$11,760	$11,760	$11,760	$11,760	$11,760	$11,760	$11,760	$11,760	$11,760	$11,760	$141,120
67	Total Federal Tax Depreciation		**$163,333**	**$163,333**	**$163,333**	**$163,333**	**$163,333**	**$163,333**	**$163,333**	**$163,333**	**$163,333**	**$163,333**	**$163,333**	**$4,153,333**	**$5,950,000**
68															
69															
70															
71															

72	**State Tax Depreciation**							
73	**Cumulative Investment Tax Basis**	Line 44	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
74	**5 Year MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
75	**State Tax Depreciation**	Line 73 x Line 74	$1,400,000	$2,240,000	$1,344,000	$806,400	$806,400	$403,200
76								
77								

78	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
79	CY 2017	Line 75(a) ÷ 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,400,000	$1,400,000
80	CY 2018	Line 75(b) ÷ 12	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$2,240,000
81	CY 2019	Line 75(c) ÷ 12	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$1,344,000
82	CY 2020	Line 75(d) ÷ 12	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$806,400
83	CY 2021	Line 75(e) ÷ 12	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$806,400
84	CY 2022	Line 75(f) ÷ 12	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$403,200
85	Total State Tax Depreciation		**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$1,866,667**	**$7,000,000**

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Deferred Taxes
For The Years 2017 through 2042

			(a)	(b)	(c)	(d)	(e)	(f)
86	**Federal Tax Depreciation**		**CY - 2029**	**CY - 2030**	**CY - 2031**	**CY - 2032**	**CY - 2033**	**CY - 2034**
87	**Cumulative Investment Tax Basis**	Return and Taxes, Line 4	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
88	**ITC Tax Depreciation Rate**	ITC @ 0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
89	**ITC Tax Depreciation Reduction**	Line 87 x Line 88	$0	$0	$0	$0	$0	$0
90								
91	**Investment Tax Basis**	Line 87	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
92	**Bonus Depreciation Rate**	Tax Dept	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
93	**Bonus Depreciation Reduction**	Line 91 x Line 92	$0	$0	$0	$0	$0	$0
94								
95	**Investment Tax Basis**	Line 91	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
96	**ITC Tax Depreciation Reduction**	- Line 89	$0	$0	$0	$0	$0	$0
97	**Bonus Depreciation Reduction**	- Line 93	$0	$0	$0	$0	$0	$0
98	**Adjusted Investment Basis @ 85%**	Sum Lines 95 thru 97	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
99	**Annual 5 Yr MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
100	**Federal Tax Depreciation**	Line 98 x Line 99	$1,400,000	$2,240,000	$1,344,000	$806,400	$806,400	$403,200

103	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
104	CY 2029	Line 100(a) ÷ 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,400,000	$1,400,000
105	CY 2030	Line 100(b) ÷ 12	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$2,240,000
106	CY 2031	Line 100(c) ÷ 12	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$1,344,000
107	CY 2032	Line 100(d) ÷ 12	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$806,400
108	CY 2033	Line 100(e) ÷ 12	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$806,400
109	CY 2034	Line 100(f) ÷ 12	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$403,200
110	Total Federal Tax Depreciation		**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$1,866,667**	**$7,000,000**

115	**State Tax Depreciation**							
116	**Cumulative Investment Tax Basis**	Line 87	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
117	**5 Year MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
118	**State Tax Depreciation**	Line 116 x Line 117	$1,400,000	$2,240,000	$1,344,000	$806,400	$806,400	$403,200

121	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
122	CY 2029	Line 118(a) ÷ 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,400,000	$1,400,000
123	CY 2030	Line 118(b) ÷ 12	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$186,667	$2,240,000
124	CY 2031	Line 118(c) ÷ 12	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$1,344,000
125	CY 2032	Line 118(d) ÷ 12	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$806,400
126	CY 2033	Line 118(e) ÷ 12	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$67,200	$806,400
127	CY 2034	Line 118(f) ÷ 12	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$33,600	$403,200
128	Total State Tax Depreciation		**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$466,667**	**$1,866,667**	**$7,000,000**

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Deferred Taxes
For The Years 2017 through 2042

			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	Federal Tax Depreciation		**CY - 2017**	**CY - 2018**	**CY - 2019**	**CY - 2020**	**CY - 2021**	**CY - 2022**	**CY - 2023**	**CY - 2024**	**CY - 2025**	**CY - 2026**	**CY - 2027**	**CY - 2028**
	Investment Tax Basis	Return and Taxes, Line 3	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
	Bonus Depreciation Rate	Tax Dept	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
	Bonus Depreciation Reduction	Line 3 x Line 4	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
	Investment Tax Basis	Line 3	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
	Bonus Depreciation Reduction	- Line 5	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)
	Adjusted Investment Basis	Sum Lines 7 thru 8	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
	Annual 20 Yr MACRS	MACRS Half Year Depreciation Rates, Line 7	3.75%	7.22%	6.68%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%
	Federal Tax Depreciation	Line 9 x Line 10	$75,000	$144,380	$133,540	$123,540	$114,260	$105,700	$97,760	$90,440	$89,240	$89,220	$89,240	$89,220
	State Tax Depreciation													
	Cumulative Investment Tax Basis	Line 3	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
	20 Year MACRS	MACRS Half Year Depreciation Rates, Line 7	3.75%	7.22%	6.68%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%
	State Tax Depreciation	Line 16 x Line 17	$150,000	$288,760	$267,080	$247,080	$228,520	$211,400	$195,520	$180,880	$178,480	$178,440	$178,480	$178,440
	Cumulative State Tax Depreciation		$150,000	$438,760	$705,840	$952,920	$1,181,440	$1,392,840	$1,588,360	$1,769,240	$1,947,720	$2,126,160	$2,304,640	$2,483,080

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Rev
Deferred Taxes
For The Years 2017 through 2042

			(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)	(z)
	Federal Tax Depreciation		**CY - 2029**	**CY - 2030**	**CY - 2031**	**CY - 2032**	**CY - 2033**	**CY - 2034**	**CY - 2035**	**CY - 2036**	**CY - 2037**	**CY - 2038**	**CY - 2039**	**CY - 2040**	**CY - 2041**	**CY - 2042**
	Investment Tax Basis	Return and Taxes, Line 3	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
	Bonus Depreciation Rate	Tax Dept	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
	Bonus Depreciation Reduction	Line 3 x Line 4	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
	Investment Tax Basis	Line 3	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
	Bonus Depreciation Reduction	- Line 5	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)
	Adjusted Investment Basis	Sum Lines 7 thru 8	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000
	Annual 20 Yr MACRS	MACRS Half Year Depreciation Rates, Line 7	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	2.23%	0.00%	0.00%	0.00%	0.00%	0.00%
	Federal Tax Depreciation	Line 9 x Line 10	$89,240	$89,220	$89,240	$89,220	$89,240	$89,220	$89,240	$89,220	$44,620	$0	$0	$0	$0	$0
	State Tax Depreciation															
	Cumulative Investment Tax Basis	Line 3	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000
	20 Year MACRS	MACRS Half Year Depreciation Rates, Line 7	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	2.23%	0.00%	0.00%	0.00%	0.00%	0.00%
	State Tax Depreciation	Line 16 x Line 17	$178,480	$178,440	$178,480	$178,440	$178,480	$178,440	$178,480	$178,440	$89,240	$0	$0	$0	$0	$0
	Cumulative State Tax Depreciation		$2,661,560	$2,840,000	$3,018,480	$3,196,920	$3,375,400	$3,553,840	$3,732,320	$3,910,760	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Investment Tax Credit Amortization
For The Years 2017 through 2042

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	Capital Investment - Solar Panels (25-yr useful life)	Return and Taxes, Line 1	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000
2	Investment Tax Credit	Tax Dept	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
3	Qualifying Investment	Line 1 x Line 2	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000
4	Annual ITC Amortization Rate	Annual Depreciation Rate @ 4.00%	0.33%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
5	Total Annual ITC Amortization	Line 3 x Line 4	$89,370	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440
6	Cumulative Annual ITC Amortization		89,370	1,161,810	2,234,250	3,306,690	4,379,130	5,451,570	6,524,010	7,596,450	8,668,890	9,741,330	10,813,770	11,886,210	12,958,650
7															
8	Capital Investment- Inverters (12-yr useful life)	Return and Taxes, Line 4	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
9	Investment Tax Credit	Tax Dept	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
10	Qualifying Investment	Line 8 x Line 9	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000
11	Annual ITC Amortization Rate	Annual Depreciation Rate @ 8.333333%	0.69%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%
12	Total Monthly ITC Amortization	Line 10 x Line 11	$14,583	$175,000	$175,000	$175,000	$175,000	$175,000	$175,000	$175,000	$175,000	$175,000	$175,000	$175,000	$160,417
13	Cumulative Monthly ITC Amortization	CM Line 12 + PM Line 13	$14,583	$189,583	$364,583	$539,583	$714,583	$889,583	$1,064,583	$1,239,583	$1,414,583	$1,589,583	$1,764,583	$1,939,583	$2,100,000
14															
15	Total ITC Amortization	Line 5 + Line 12	$103,953	$1,247,440	$1,247,440	$1,247,440	$1,247,440	$1,247,440	$1,247,440	$1,247,440	$1,247,440	$1,247,440	$1,247,440	$1,247,440	$1,232,857
16	Total Cumulative ITC Amortization	CY Line 15 + PY Line 16	$103,953	$1,351,393	$2,598,833	$3,846,273	$5,093,713	$6,341,153	$7,588,593	$8,836,033	$10,083,473	$11,330,913	$12,578,353	$13,825,793	$15,058,650
17															
18	Tax Gross-up @ 67.224%	Line 15 x 67.224%	$69,882	$838,580	$838,580	$838,580	$838,580	$838,580	$838,580	$838,580	$838,580	$838,580	$838,580	$838,580	$828,777
19	Total Cumulative Tax Gross-up @ 67.224%	CY Line 18 + PY Line 19	$69,882	$908,462	$1,747,042	$2,585,622	$3,424,202	$4,262,782	$5,101,362	$5,939,942	$6,778,522	$7,617,102	$8,455,682	$9,294,262	$10,123,039

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Investment Tax Credit Amortization
For The Years 2017 through 2042

			2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
1	Capital Investment - Solar Panels (25-yr useful life)	Return and Taxes, Line 1	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000
2	Investment Tax Credit	Tax Dept	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
3	Qualifying Investment	Line 1 x Line 2	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000	$26,811,000
4	Annual ITC Amortization Rate	Annual Depreciation Rate @ 4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.67%
5	Total Annual ITC Amortization	Line 3 x Line 4	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$983,070
6	Cumulative Annual ITC Amortization		14,031,090	15,103,530	16,175,970	17,248,410	18,320,850	19,393,290	20,465,730	21,538,170	22,610,610	23,683,050	24,755,490	25,827,930	26,811,000
7															
8	Capital Investment- Inverters (12-yr useful life)	Return and Taxes, Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Investment Tax Credit	Tax Dept	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
10	Qualifying Investment	Line 8 x Line 9	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
11	Annual ITC Amortization Rate	Annual Depreciation Rate @ 8.333333%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
12	Total Monthly ITC Amortization	Line 10 x Line 11	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Cumulative Monthly ITC Amortization	CM Line 12 + PM Line 13	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000	$2,100,000
14															
15	Total ITC Amortization	Line 5 + Line 12	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$1,072,440	$983,070
16	Total Cumulative ITC Amortization	CY Line 15 + PY Line 16	$16,131,090	$17,203,530	$18,275,970	$19,348,410	$20,420,850	$21,493,290	$22,565,730	$23,638,170	$24,710,610	$25,783,050	$26,855,490	$27,927,930	$28,911,000
17															
18	Tax Gross-up @ 67.224%	Line 15 x 67.224%	$720,938	$720,938	$720,938	$720,938	$720,938	$720,938	$720,938	$720,938	$720,938	$720,938	$720,938	$720,938	$660,860
19	Total Cumulative Tax Gross-up @ 67.224%	CY Line 18 + PY Line 19	$10,843,977	$11,564,915	$12,285,853	$13,006,791	$13,727,729	$14,448,666	$15,169,604	$15,890,542	$16,611,480	$17,332,418	$18,053,356	$18,774,294	$19,435,154

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
ITC Tax Effect
For The Years 2017 through 2042

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	25 Year Property														
1	Cumulative Capital Investment	Investment Tax Credit Amortization, Line 1	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000
2	ITC Depreciation Rate Reduction	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
3	Cumulative Book Depreciation ITC Basis Reduction	Line 1 x Line 2	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500
4	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	0.33%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
5	Book Depreciation on ITC Basis Reduction	Line 3 x Line 4	44,685	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220
6															
7	12 Year Property														
8	Cumulative Capital Investment	Investment Tax Credit Amortization, Line 8	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000	$7,000,000
9	ITC Depreciation Rate Reduction	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
10	Cumulative Book Depreciation ITC Basis Reduction	Line 8 x Line 9	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000	$1,050,000
11	Annual Depreciation Rate	Annual Depreciation Rate @ 8.333333%	0.69%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%
12	Book Depreciation on ITC Basis Reduction	Line 10 x Line 11	$7,292	$87,500	$87,500	$87,500	$87,500	$87,500	$87,500	$87,500	$87,500	$87,500	$87,500	$87,500	$80,208
13															
14	Flowthrough Items	Line 5 + Line 12	51,977	623,720	623,720	623,720	623,720	623,720	623,720	623,720	623,720	623,720	623,720	623,720	616,428
15															
16	Tax Impact of Flowthrough Items	Line 14 x (T÷(1-T)): T = 40.20% (effective tax rate)	$34,941	$419,290	$419,290	$419,290	$419,290	$419,290	$419,290	$419,290	$419,290	$419,290	$419,290	$419,290	$414,388

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
ITC Tax Effect
For The Years 2017 through 2042

			2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	25 Year Property														
1	Cumulative Capital Investment	Investment Tax Credit Amortization, Line 1	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000	$89,370,000
2	ITC Depreciation Rate Reduction	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
3	Cumulative Book Depreciation ITC Basis Reduction	Line 1 x Line 2	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500	13,405,500
4	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.67%
5	Book Depreciation on ITC Basis Reduction	Line 3 x Line 4	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	491,535
6															
7	12 Year Property														
8	Cumulative Capital Investment	Investment Tax Credit Amortization, Line 8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	ITC Depreciation Rate Reduction	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
10	Cumulative Book Depreciation ITC Basis Reduction	Line 8 x Line 9	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
11	Annual Depreciation Rate	Annual Depreciation Rate @ 8.333333%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%
12	Book Depreciation on ITC Basis Reduction	Line 10 x Line 11	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13															
14	Flowthrough Items	Line 5 + Line 12	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	536,220	491,535
15															
16	Tax Impact of Flowthrough Items	Line 14 x (T÷(1-T)): T = 40.20% (effective tax rate)	$360,469	$360,469	$360,469	$360,469	$360,469	$360,469	$360,469	$360,469	$360,469	$360,469	$360,469	$360,469	$330,430

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Property Tax Expense
For The Years 2017 through 2042

Line No.			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Property Taxes															
2	Plant in Service	Return and Taxes, Line 35	$0	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000
3	Accumulated Depreciation	Return and Taxes, Line 36	0	(4,677,978)	(8,996,111)	(13,314,244)	(17,632,378)	(21,950,511)	(26,268,644)	(30,586,778)	(34,904,911)	(39,223,044)	(43,541,178)	(47,859,311)	(45,173,705)	(49,446,966)
4	Net Plant in Service	Sum Lines 2 thru 3	$0	$95,692,022	$91,373,889	$87,055,756	$82,737,622	$78,419,489	$74,101,356	$69,783,222	$65,465,089	$61,146,956	$56,828,822	$52,510,689	$55,196,295	$50,923,034
5	Property Tax Rate per $1000	Note 1 & 2	$24.19	$24.68	$25.17	$25.68	$26.19	$26.71	$27.25	$27.79	$28.35	$28.91	$29.49	$30.08	$30.68	$31.30
6	Annual Property Tax	(Line 4 ÷ 1000) * Line 5	$0	$2,361,503	$2,300,039	$2,235,171	$2,166,788	$2,094,776	$2,019,016	$1,939,389	$1,855,769	$1,768,028	$1,676,035	$1,579,655	$1,693,654	$1,593,783

1) Average Property Tax Rate per 2015 FERC Form 1

Gross Plant (FERC Pg. 204 - 207)	$7,167,151,009
Accumulated Depreciation (FERC Pg. 219)	2,083,686,234
Net Plant	$5,083,464,775
Property Tax Expense (FERC Pg. 262 - 263)	122,990,763
Rate per Thousand	$24.19

2) 2% Annual Inflator

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Property Tax Expense
For The Years 2017 through 2042

Line No.			2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total
1	Property Taxes														
2	Plant in Service	Return and Taxes, Line 35	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	$100,370,000	
3	Accumulated Depreciation	Return and Taxes, Line 36	(53,720,228)	(57,993,490)	(62,266,751)	(66,540,013)	(70,813,274)	(75,086,536)	(79,359,797)	(83,633,059)	(87,906,320)	(92,179,582)	(96,452,844)	(100,370,000)	
4	Net Plant in Service	Sum Lines 2 thru 3	$46,649,772	$42,376,510	$38,103,249	$33,829,987	$29,556,726	$25,283,464	$21,010,203	$16,736,941	$12,463,680	$8,190,418	$3,917,156	$0	
5	Property Tax Rate per $1000	Note 1 & 2	$31.92	$32.56	$33.21	$33.88	$34.56	$35.25	$35.95	$36.67	$37.40	$38.15	$38.91	$39.69	
6	Annual Property Tax	(Line 4 ÷ 1000) * Line 5	$1,489,240	$1,379,877	$1,265,545	$1,146,087	$1,021,344	$891,154	$755,347	$613,751	$466,190	$312,480	$152,436	$0	**$34,777,055**

1) Average Property Tax Rate per 2015 FERC Form 1

Gross Plant (FERC Pg. 204 - 207)	$7,167,151,009
Accumulated Depreciation (FERC Pg. 219)	2,083,686,234
Net Plant	$5,083,464,775
Property Tax Expense (FERC Pg. 262 - 263)	122,990,763
Rate per Thousand	$24.19

2) 2% Annual Inflator

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
O&M and Lease Expenses
For The Years 2017 through 2042

		Annual	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	**Operations & Maintenance**	$407,499	$0	$407,499	$417,686	$426,875	$435,413	$444,121	$453,448	$462,970	$472,693	$482,619	$492,754	$503,102	$513,667
2	**Panel Replacement**	36,000	0	36,000	36,900	37,712	38,466	39,235	40,059	40,901	41,759	42,636	43,532	44,446	45,379
3	**Other**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	**Total O&M Expense**	$443,499	$0	$443,499	$454,586	$464,587	$473,879	$483,357	$493,507	$503,871	$514,452	$525,256	$536,286	$547,548	$559,046
5	**Lease Payments**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Panel Replacements may be O&M or Capital depending on the nature of the replacement.
Inflation based on GDP forecast from Moody's Analytics

NSTAR Electric Company d/b/a Eversource En
Computation of Solar Expansion Cost Recovery
O&M and Lease Expenses
For The Years 2017 through 2042

		2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total O&M
1	**Operations & Maintenance**	$524,454	$535,468	$546,712	$558,193	$569,915	$581,884	$594,103	$606,579	$619,318	$632,323	$645,602	$659,160	$673,002	$13,259,562
2	**Panel Replacement**	46,332	47,305	48,299	49,313	50,348	51,406	52,485	53,588	54,713	55,862	57,035	58,233	59,456	1,171,400
3	**Other**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	**Total O&M Expense**	$570,786	$582,773	$595,011	$607,506	$620,264	$633,290	$646,589	$660,167	$674,030	$688,185	$702,637	$717,392	$732,458	**$14,430,962**
5	**Lease Payments**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

Panel Replacements may be O&M or Capital
Inflation based on GDP forecast from Moody

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Capital Structure
for the Period Ending December 31, 2017

Line No.			Capital Structure (2)	Cost Rate	Weighted Return	Taxes	Pre-tax Return
			(a)	(b)	(c)= (a) x (b)	(d)	(e)=(c)+(d)
1	Long Term Debt	2015 FERC Form 1	43.49%	4.11%	1.79%		1.79%
2							
3	Preferred Stock	2015 FERC Form 1	0.92%	4.56%	0.04%	0.03% (1)	0.07%
4							
5	Total Common Equity	2015 FERC Form 1	55.59%	10.50%	5.84%	3.92% (1)	9.76%
6							
7	Total Capitalization	Line 1 + Line 3 + Line 5	100.00%		7.67%	3.95%	11.62%
8	Monthly Capitalization	Line 7 ÷ 12					0.97%

Line Notes

(1) Tax Gross-up at 40.2%

(2)

Common Equity	FERC P. 112, L. 24, C. (c)	$2,609,461,428	55.59%
Preferred Stock	FERC P. 112, L. 24, C. (c)	43,000,000	0.92%
Long Term Debt	FERC P. 112, L. 24, C. (c)	2,041,549,648	43.49%
Total Capital		$4,694,011,076	

NSTAR Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
MACRS Half Year Depreciation Rates
For The Years 2017 through 2042

IRS Publication 946 Table A-1
MACRS Half Year Depreciation Rates

1	**Recovery Year**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
2	3	33.33%	44.45%	14.81%	7.41%																	
3	5	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%															
4	7	14.29%	24.49%	17.49%	12.49%	8.93%	8.92%	8.93%	4.46%													
5	10	10.00%	18.00%	14.40%	11.52%	9.22%	7.37%	6.55%	6.55%	6.56%	6.55%	3.28%										
6	15	5.00%	9.50%	8.55%	7.70%	6.93%	6.23%	5.90%	5.90%	5.91%	5.90%	5.91%	5.90%	5.91%	5.90%	5.91%	2.95%					
7	20	3.75%	7.22%	6.68%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	2.23%

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Summary
For The Years 2017 through 2042

Line No.			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Revenue Requirement Calculation:															
2	Return and Taxes	Return and Taxes, Line 44	$528,848	$6,018,728	$5,447,810	$5,012,560	$4,629,192	$4,284,809	$4,018,014	$3,790,157	$3,562,476	$3,334,822	$3,107,170	$2,879,521	$2,906,225	$2,899,646
3	Book Depreciation	Depreciation Expense, Line 29	281,433	3,377,200	3,377,200	3,377,200	3,377,200	3,377,200	3,377,200	3,377,200	3,377,200	3,377,200	3,377,200	3,377,200	3,374,315	3,342,585
4	Net ITC Amortization	Investment Tax Credit Amortization, Lines 15 & 18, ITC Tax Effect, Line 16	(108,132)	(1,297,587)	(1,297,587)	(1,297,587)	(1,297,587)	(1,297,587)	(1,297,587)	(1,297,587)	(1,297,587)	(1,297,587)	(1,297,587)	(1,297,587)	(1,282,555)	(1,117,210)
5	Property Taxes	Property tax Expense, Line 6	0	1,848,954	1,800,922	1,750,229	1,696,787	1,640,508	1,581,299	1,519,066	1,453,710	1,385,133	1,313,231	1,237,899	1,324,815	1,246,694
6	O&M Expense	O&M and Lease Expenses, Lines 4 & 5	0	338,356	346,815	354,445	361,534	368,765	376,509	384,415	392,488	400,730	409,146	417,738	426,510	435,467
7	Total Revenue Requirement		$702,149	$10,285,652	$9,675,161	$9,196,847	$8,767,127	$8,373,695	$8,055,435	$7,773,252	$7,488,288	$7,200,299	$6,909,161	$6,614,771	$6,749,310	$6,807,181
8	Revenue Credits															
9	Capacity		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	Energy		0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Solar Renewable Energy Credits		0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Total Revenue Credits		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Net Revenue Requirement		$702,149	$10,285,652	$9,675,161	$9,196,847	$8,767,127	$8,373,695	$8,055,435	$7,773,252	$7,488,288	$7,200,299	$6,909,161	$6,614,771	$6,749,310	$6,807,181

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requir
Summary
For The Years 2017 through 2042

Line No.			2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total
1	Revenue Requirement Calculation:														
2	Return and Taxes	Return and Taxes, Line 44	$2,619,654	$2,362,419	$2,113,719	$1,871,422	$1,641,927	$1,418,834	$1,196,651	$976,284	$756,828	$537,374	$317,924	$107,626	$68,340,638
3	Book Depreciation	Depreciation Expense, Line 29	3,342,585	3,342,585	3,342,585	3,342,585	3,342,585	3,342,585	3,342,585	3,342,585	3,342,585	3,342,585	3,342,585	3,064,036	83,980,000
4	Net ITC Amortization	Investment Tax Credit Amortization, Lines 15 & 18, ITC Tax Effect, Line 16	(1,117,210)	(1,117,210)	(1,117,210)	(1,117,210)	(1,117,210)	(1,117,210)	(1,117,210)	(1,117,210)	(1,117,210)	(1,117,210)	(1,117,210)	(1,024,110)	(30,094,776)
5	Property Taxes	Property tax Expense, Line 6	1,164,918	1,079,372	989,938	896,495	798,919	697,081	590,850	480,090	364,664	244,429	119,239	0	27,225,244
6	O&M Expense	O&M and Lease Expenses, Lines 4 & 5	444,612	453,949	463,482	473,215	483,152	493,298	503,658	514,235	525,033	536,059	547,316	558,810	11,009,738
7	Total Revenue Requirement		$6,454,557	$6,121,113	$5,792,513	$5,466,506	$5,149,372	$4,834,587	$4,516,532	$4,195,983	$3,871,900	$3,543,237	$3,209,853	$2,706,362	$160,460,844
8	Revenue Credits														
9	Capacity		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
10	Energy		0	0	0	0	0	0	0	0	0	0	0	0	0
11	Solar Renewable Energy Credits		0	0	0	0	0	0	0	0	0	0	0	0	0
12	Total Revenue Credits		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Net Revenue Requirement		$6,454,557	$6,121,113	$5,792,513	$5,466,506	$5,149,372	$4,834,587	$4,516,532	$4,195,983	$3,871,900	$3,543,237	$3,209,853	$2,706,362	$160,460,844

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Return and Taxes
For The Years 2017 through 2042

Line No.			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029 Note 1	2030
	Depreciable Net Plant Additions															
1	SECRM Program - Solar Panels		$69,680,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	SECRM Program - Land		0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	SECRM Program - Interconnection		3,500,000	0	0	0	0	0	0	0	0	0	0	0	0	0
4	SECRM Program - Inverters		5,400,000	0	0	0	0	0	0	0	0	0	0	0	0	0
5	Annual SECRM Gross Plant	Sum of Line 1 thru Line 4	$78,580,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
6	Cumulative SECRM Gross Plant	CM Line 5 + PM Line 6	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000
7																
8	Deferred Tax Calculation:															
9	Annual Federal Tax Depreciation	Deferred Taxes & ITC Tax Effect	$44,651,690	$9,020,872	$5,647,803	$3,620,903	$3,612,783	$2,091,680	$571,120	$564,715	$563,665	$563,647	$563,665	$563,647	$1,638,040	$2,224,148
10	Cumulative Federal Tax Depreciation	CY Line 9 + PY Line 10	$44,651,690	$53,672,562	$59,320,366	$62,941,269	$66,554,052	$68,645,732	$69,216,852	$69,781,567	$70,345,232	$70,908,880	$71,472,545	$72,036,192	$73,674,232	$75,898,380
11																
12	Annual State Tax Depreciation	Deferred Taxes	$15,147,250	$24,278,265	$14,649,055	$8,865,411	$8,849,171	$4,509,583	$171,080	$158,270	$156,170	$156,135	$156,170	$156,135	$1,236,170	$1,884,135
13	Cumulative State Tax Depreciation	CY Line 12 + PY Line 13	$15,147,250	$39,425,515	$54,074,570	$62,939,981	$71,789,152	$76,298,735	$76,469,815	$76,628,085	$76,784,255	$76,940,390	$77,096,560	$77,252,695	$78,488,865	$80,373,000
14																
15	Book Deprec - Solar Panels	Depreciation Expense, Line 4	$232,267	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200
16	Book Deprec - Interconnection	Depreciation Expense, Line 11	11,667	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000
17	Book Deprec - Inverter 1	Depreciation Expense, Line 18	37,500	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	412,500	0
18	Book Deprec - Inverter 2	Depreciation Expense, Line 25	0	0	0	0	0	0	0	0	0	0	0	0	34,615	415,385
19	Total Book Depreciation	Sum of Line 15 thru Line 18	$281,433	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,374,315	$3,342,585
20	Cumulative Book Depreciation	CY Line 19 + PY Line 20	$281,433	$3,658,633	$7,035,833	$10,413,033	$13,790,233	$17,167,433	$20,544,633	$23,921,833	$27,299,033	$30,676,233	$34,053,433	$37,430,633	$40,804,949	$44,147,533
21																
22	Cumulative Book / Tax Timer	Line 10 - Line 20	$44,370,257	$50,013,929	$52,284,533	$52,528,236	$52,763,819	$51,478,299	$48,672,219	$45,859,734	$43,046,199	$40,232,647	$37,419,112	$34,605,559	$32,869,284	$31,750,847
23	Effective Federal Tax Rate	Tax Dept	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.000%	35.000%	35.000%	35.000%	35.000%
24	Deferred Federal Tax Reserve	Line 22 x Line 23	$15,529,590	$17,504,875	$18,299,586	$18,384,883	$18,467,337	$18,017,405	$17,035,277	$16,050,907	$15,066,170	$14,081,426	$13,096,689	$12,111,946	$11,504,249	$11,112,796
25	Less: Federal Deduction for Deferred State Taxes	Line 30 x -35.00%	($416,243)	($1,001,473)	($1,317,085)	($1,470,755)	($1,623,970)	($1,655,676)	($1,565,905)	($1,475,775)	($1,385,586)	($1,295,396)	($1,205,208)	($1,115,018)	($1,055,150)	($1,014,313)
26	Net Deferred Federal Tax Reserve	Line 24 + Line 25	$15,113,347	$16,503,403	$16,982,502	$16,914,128	$16,843,367	$16,361,728	$15,469,372	$14,575,132	$13,680,584	$12,786,030	$11,891,482	$10,996,928	$10,449,100	$10,098,483
27																
28	Cumulative Book / Tax Timer	Line 13 - Line 20	$14,865,817	$35,766,882	$47,038,737	$52,526,948	$57,998,919	$59,131,302	$55,925,182	$52,706,252	$49,485,222	$46,264,157	$43,043,127	$39,822,062	$37,683,916	$36,225,467
29	Effective State Tax Rate	Tax Dept	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.000%	8.000%	8.000%	8.000%	8.000%
30	Deferred State Tax Reserve	Line 28 x Line 29	$1,189,265	$2,861,351	$3,763,099	$4,202,156	$4,639,913	$4,730,504	$4,474,015	$4,216,500	$3,958,818	$3,701,133	$3,443,450	$3,185,765	$3,014,713	$2,898,037
31																
32	Total Deferred Taxes	Line 26 + Line 30	$16,302,612	$19,364,753	$20,745,601	$21,116,284	$21,483,280	$21,092,232	$19,943,386	$18,791,632	$17,639,401	$16,487,163	$15,334,932	$14,182,693	$13,463,813	$12,996,521
33																
34	Rate Base Calculation:															
35	Cumulative Incremental Spend	Line 6	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000
36	Accumulated Depreciation	- Line 20	(281,433)	(3,658,633)	(7,035,833)	(10,413,033)	(13,790,233)	(17,167,433)	(20,544,633)	(23,921,833)	(27,299,033)	(30,676,233)	(34,053,433)	(37,430,633)	(35,404,949)	(38,747,533)
37	Deferred Tax Reserve	- Line 32	(16,302,612)	(19,364,753)	(20,745,601)	(21,116,284)	(21,483,280)	(21,092,232)	(19,943,386)	(18,791,632)	(17,639,401)	(16,487,163)	(15,334,932)	(14,182,693)	(13,463,813)	(12,996,521)
38	Working Capital	O&M and Lease Expenses, Lines 4 & 5 x (45/365)	0	41,715	42,758	43,699	44,573	45,464	46,419	47,394	48,389	49,405	50,443	51,502	52,583	53,688
39	Year End Rate Base	Sum Lines 35 thru 38	$61,995,954	$55,598,329	$50,841,324	$47,094,382	$43,351,059	$40,365,798	$38,138,399	$35,913,928	$33,689,954	$31,466,009	$29,242,078	$27,018,176	$29,763,822	$26,889,634
40																
41	Revenue Requirement Calculation:															
42	Average Rate Base	Line 39 ÷ 2	$5,166,330	$58,797,142	$53,219,826	$48,967,853	$45,222,720	$41,858,429	$39,252,099	$37,026,164	$34,801,941	$32,577,982	$30,354,044	$28,130,127	$28,390,999	$28,326,728
43	Pre-Tax Monthly ROR	Capital Structure, Line 8	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%
44	Return and Taxes	Line 42 x Line 43	$528,848	$6,018,728	$5,447,810	$5,012,560	$4,629,192	$4,284,809	$4,018,014	$3,790,157	$3,562,476	$3,334,822	$3,107,170	$2,879,521	$2,906,225	$2,899,646

Note 1 - Retirement of First Inverter, Addition of Second Inverter

Input	
Installed MW	27
Price per Installed MW - W/O Inverters	$2,350,000
Price per Installed MW - Inverters	$200,000
Sites	7
Site Preparation per site	$890,000
Interconnection per site	$500,000

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Return and Taxes
For The Years 2017 through 2042

Line No.			2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total
	Depreciable Net Plant Additions														
1	SECRM Program - Solar Panels		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$69,680,000
2	SECRM Program - Land		0	0	0	0	0	0	0	0	0	0	0	0	0
3	SECRM Program - Interconnection		0	0	0	0	0	0	0	0	0	0	0	0	3,500,000
4	SECRM Program - Inverters		0	0	0	0	0	0	0	0	0	0	0	0	5,400,000
5	Annual SECRM Gross Plant	Sum of Line 1 thru Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$78,580,000
6	Cumulative SECRM Gross Plant	CM Line 5 + PM Line 6	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	
7															
8	Deferred Tax Calculation:														
9	Annual Federal Tax Depreciation	Deferred Taxes & ITC Tax Effect	$1,532,965	$1,118,228	$1,118,245	$807,188	$496,165	$496,148	$457,123	$418,080	$418,080	$418,080	$418,080	$383,240	$83,980,000
10	Cumulative Federal Tax Depreciation	CY Line 9 + PY Line 10	$77,431,345	$78,549,572	$79,667,817	$80,475,005	$80,971,170	$81,467,317	$81,924,440	$82,342,520	$82,760,600	$83,178,680	$83,596,760	$83,980,000	
11															
12	Annual State Tax Depreciation	Deferred Taxes	$1,192,970	$778,215	$778,250	$467,175	$156,170	$156,135	$78,085	$0	$0	$0	$0	$0	$83,980,000
13	Cumulative State Tax Depreciation	CY Line 12 + PY Line 13	$81,565,970	$82,344,185	$83,122,435	$83,589,610	$83,745,780	$83,901,915	$83,980,000	$83,980,000	$83,980,000	$83,980,000	$83,980,000	$83,980,000	
14															
15	Book Deprec - Solar Panels	Depreciation Expense, Line 4	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,554,933	$69,680,000
16	Book Deprec - Interconnection	Depreciation Expense, Line 11	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	140,000	128,333	3,500,000
17	Book Deprec - Inverter 1	Depreciation Expense, Line 18	0	0	0	0	0	0	0	0	0	0	0	0	5,400,000
18	Book Deprec - Inverter 2	Depreciation Expense, Line 25	415,385	415,385	415,385	415,385	415,385	415,385	415,385	415,385	415,385	415,385	415,385	380,769	5,400,000
19	Total Book Depreciation	Sum of Line 15 thru Line 18	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,064,036	$83,980,000
20	Cumulative Book Depreciation	CY Line 19 + PY Line 20	$47,490,118	$50,832,702	$54,175,287	$57,517,872	$60,860,456	$64,203,041	$67,545,626	$70,888,210	$74,230,795	$77,573,379	$80,915,964	$83,980,000	
21															
22	Cumulative Book / Tax Timer	Line 10 - Line 20	$29,941,227	$27,716,870	$25,492,530	$22,957,133	$20,110,714	$17,264,277	$14,378,814	$11,454,310	$8,529,805	$5,605,301	$2,680,796	($0)	
23	Effective Federal Tax Rate	Tax Dept	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	35.000%	
24	Deferred Federal Tax Reserve	Line 22 x Line 23	$10,479,430	$9,700,905	$8,922,386	$8,034,997	$7,038,750	$6,042,497	$5,032,585	$4,009,008	$2,985,432	$1,961,855	$938,279	($0)	
25	Less: Federal Deduction for Deferred State Taxes	Line 30 x -35.00%	($954,124)	($882,322)	($810,520)	($730,009)	($640,789)	($551,568)	($460,162)	($366,570)	($272,978)	($179,385)	($85,793)	$0	
26	Net Deferred Federal Tax Reserve	Line 24 + Line 25	$9,525,306	$8,818,583	$8,111,866	$7,304,988	$6,397,961	$5,490,928	$4,572,423	$3,642,438	$2,712,454	$1,782,470	$852,486	($0)	
27															
28	Cumulative Book / Tax Timer	Line 13 - Line 20	$34,075,852	$31,511,483	$28,947,148	$26,071,738	$22,885,324	$19,698,874	$16,434,374	$13,091,790	$9,749,205	$6,406,621	$3,064,036	$0	
29	Effective State Tax Rate	Tax Dept	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	8.000%	
30	Deferred State Tax Reserve	Line 28 x Line 29	$2,726,068	$2,520,919	$2,315,772	$2,085,739	$1,830,826	$1,575,910	$1,314,750	$1,047,343	$779,936	$512,530	$245,123	$0	
31															
32	Total Deferred Taxes	Line 26 + Line 30	$12,251,374	$11,339,502	$10,427,637	$9,390,727	$8,228,787	$7,066,838	$5,887,173	$4,689,781	$3,492,390	$2,294,999	$1,097,608	($0)	
33															
34	Rate Base Calculation:														
35	Cumulative Incremental Spend	Line 6	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	
36	Accumulated Depreciation	- Line 20	(42,090,118)	(45,432,702)	(48,775,287)	(52,117,872)	(55,460,456)	(58,803,041)	(62,145,626)	(65,488,210)	(68,830,795)	(72,173,379)	(75,515,964)	(78,580,000)	
37	Deferred Tax Reserve	- Line 32	(12,251,374)	(11,339,502)	(10,427,637)	(9,390,727)	(8,228,787)	(7,066,838)	(5,887,173)	(4,689,781)	(3,492,390)	(2,294,999)	(1,097,608)	0	
38	Working Capital	O&M and Lease Expenses, Lines 4 & 5 x (45/365)	54,815	55,966	57,142	58,342	59,567	60,818	62,095	63,399	64,730	66,089	67,477	68,894	
39	Year End Rate Base	Sum Lines 35 thru 38	$24,293,324	$21,863,762	$19,434,217	$17,129,743	$14,950,324	$12,770,938	$10,609,297	$8,465,407	$6,321,545	$4,177,711	$2,033,905	$68,894	
40															
41	Revenue Requirement Calculation:														
42	Average Rate Base	Line 39 ÷ 2	$25,591,479	$23,078,543	$20,648,990	$18,281,980	$16,040,033	$13,860,631	$11,690,118	$9,537,352	$7,393,476	$5,249,628	$3,105,808	$1,051,400	
43	Pre-Tax Monthly ROR	Capital Structure, Line 8	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	10.24%	
44	Return and Taxes	Line 42 x Line 43	$2,619,654	$2,362,419	$2,113,719	$1,871,422	$1,641,927	$1,418,834	$1,196,651	$976,284	$756,828	$537,374	$317,924	$107,626	**$68,340,638**

Note 1 - Retirement of First Inverter, Addition of Second Inverter

Input
Installed MW
Price per Installed MW - W/O Inverters
Price per Installed MW - Inverters
Sites
Site Preparation per site
Interconnection per site

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Depreciation Expense
For The Years 2017 through 2042

	Month		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	25 Year Property															
1	SECRM Program - Solar Panels	Return and Taxes, Line 1	$69,680,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	Cumulative Capital Investment	CY Line 1 + PY Line 2	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000
3	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	0.33%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
4	Annual Book Depreciation	Line 2 x Line 3	$232,267	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200
5	Cumulative Depreciation	CY Line 4 + PY Line 5	$232,267	$3,019,467	$5,806,667	$8,593,867	$11,381,067	$14,168,267	$16,955,467	$19,742,667	$22,529,867	$25,317,067	$28,104,267	$30,891,467	$33,678,667	$36,465,867
6																
7	25 Year Property															
8	SECRM Program - Interconnection	Return and Taxes, Line 3	$3,500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Cumulative Capital Investment	CY Line 8 + PY Line 9	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
10	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	0.33%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
11	Annual Book Depreciation	Line 9 x Line 10	$11,667	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000
12	Cumulative Depreciation	CY Line 11 + PY Line 12	$11,667	$151,667	$291,667	$431,667	$571,667	$711,667	$851,667	$991,667	$1,131,667	$1,271,667	$1,411,667	$1,551,667	$1,691,667	$1,831,667
13																
14	12 Year Property															
15	SECRM Program - Inverter 1	Return and Taxes, Line 4	$5,400,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
16	Cumulative Capital Investment	CY Line 15 + PY Line 16	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$0
17	Annual Depreciation Rate	Annual Depreciation Rate @ 8.333333%	0.69%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%	8.33%
18	Annual Book Depreciation	Line 16 x Line 17	$37,500	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$450,000	$412,500	$0
19	Cumulative Depreciation	CY Line 18 + PY Line 19	$37,500	$487,500	$937,500	$1,387,500	$1,837,500	$2,287,500	$2,737,500	$3,187,500	$3,637,500	$4,087,500	$4,537,500	$4,987,500	$5,400,000	$5,400,000
20																
21	13 Year Property															
22	SECRM Program - Inverter 2	Return and Taxes, Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
23	Cumulative Capital Investment	CY Line 22 + PY Line 23	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,400,000	$5,400,000
24	Annual Depreciation Rate	Annual Depreciation Rate @ 7.692308%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.64%	7.69%
25	Annual Book Depreciation	Line 23 x Line 24	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$34,615	$415,385
26	Cumulative Depreciation	CY Line 25 + PY Line 26	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$34,615	$450,000
27																
28	Total Book Depreciation	Line 4 + Line 11 + Line 18 + Line 25	$281,433	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,377,200	$3,374,315	$3,342,585
29	Total Cumulative Book Depreciation	CY Line 28 + PY Line 29	$281,433	$3,658,633	$7,035,833	$10,413,033	$13,790,233	$17,167,433	$20,544,633	$23,921,833	$27,299,033	$30,676,233	$34,053,433	$37,430,633	$40,804,949	$44,147,533

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Depreciation Expense
For The Years 2017 through 2042

	Month		2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total
	25 Year Property														
1	SECRM Program - Solar Panels	Return and Taxes, Line 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
2	Cumulative Capital Investment	CY Line 1 + PY Line 2	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	
3	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.67%	
4	Annual Book Depreciation	Line 2 x Line 3	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,787,200	$2,554,933	$69,680,000
5	Cumulative Depreciation	CY Line 4 + PY Line 5	$39,253,067	$42,040,267	$44,827,467	$47,614,667	$50,401,867	$53,189,067	$55,976,267	$58,763,467	$61,550,667	$64,337,867	$67,125,067	$69,680,000	
6															
7	25 Year Property														
8	SECRM Program - Interconnection	Return and Taxes, Line 3	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
9	Cumulative Capital Investment	CY Line 8 + PY Line 9	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	
10	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.67%	
11	Annual Book Depreciation	Line 9 x Line 10	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$140,000	$128,333	$3,500,000
12	Cumulative Depreciation	CY Line 11 + PY Line 12	$1,971,667	$2,111,667	$2,251,667	$2,391,667	$2,531,667	$2,671,667	$2,811,667	$2,951,667	$3,091,667	$3,231,667	$3,371,667	$3,500,000	
13															
14	12 Year Property														
15	SECRM Program - Inverter 1	Return and Taxes, Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
16	Cumulative Capital Investment	CY Line 15 + PY Line 16	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
17	Annual Depreciation Rate	Annual Depreciation Rate @ 8.333333%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%	
18	Annual Book Depreciation	Line 16 x Line 17	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,400,000
19	Cumulative Depreciation	CY Line 18 + PY Line 19	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	
20															
21	13 Year Property														
22	SECRM Program - Inverter 2	Return and Taxes, Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
23	Cumulative Capital Investment	CY Line 22 + PY Line 23	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	
24	Annual Depreciation Rate	Annual Depreciation Rate @ 7.692308%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.05%	
25	Annual Book Depreciation	Line 23 x Line 24	$415,385	$415,385	$415,385	$415,385	$415,385	$415,385	$415,385	$415,385	$415,385	$415,385	$415,385	$380,769	$5,400,000
26	Cumulative Depreciation	CY Line 25 + PY Line 26	$865,385	$1,280,769	$1,696,154	$2,111,539	$2,526,923	$2,942,308	$3,357,692	$3,773,077	$4,188,462	$4,603,846	$5,019,231	$5,400,000	
27															
28	Total Book Depreciation	Line 4 + Line 11 + Line 18 + Line 25	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,342,585	$3,064,036	**$83,980,000**
29	Total Cumulative Book Depreciation	CY Line 28 + PY Line 29	$47,490,118	$50,832,702	$54,175,287	$57,517,872	$60,860,456	$64,203,041	$67,545,626	$70,888,210	$74,230,795	$77,573,379	$80,915,964	$83,980,000	

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Deferred Taxes
For The Years 2017 through 2042

			(a)	(b)	(c)	(d)	(e)	(f)
	Federal Tax Depreciation		**CY - 2017**	**CY - 2018**	**CY - 2019**	**CY - 2020**	**CY - 2021**	**CY - 2022**
1	**Cumulative Investment Tax Basis**	Return and Taxes, Line 1	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000
2	**ITC Tax Depreciation Rate**	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
3	**ITC Tax Depreciation Reduction**	Line 1 x Line 2	$10,452,000	$10,452,000	$10,452,000	$10,452,000	$10,452,000	$10,452,000
4								
5	**Investment Tax Basis**	Line 1	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000
6	**Bonus Depreciation Rate**	Tax Dept	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
7	**Bonus Depreciation Reduction**	Line 5 x Line 6	$34,840,000	$34,840,000	$34,840,000	$34,840,000	$34,840,000	$34,840,000
8								
9	**Investment Tax Basis**	Line 5	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000
10	**ITC Tax Depreciation Reduction**	- Line 3	($10,452,000)	($10,452,000)	($10,452,000)	($10,452,000)	($10,452,000)	($10,452,000)
11	**Bonus Depreciation Reduction**	- Line 7	($34,840,000)	($34,840,000)	($34,840,000)	($34,840,000)	($34,840,000)	($34,840,000)
12	**Adjusted Investment Basis @ 85%**	Sum Lines 9 thru 11	$24,388,000	$24,388,000	$24,388,000	$24,388,000	$24,388,000	$24,388,000
13	**Annual 5 Yr MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
14	**Federal Tax Depreciation**	Line 12 x Line 13	$4,877,600	$7,804,160	$4,682,496	$2,809,498	$2,809,498	$1,404,749
15								
16								

	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
18	CY 2017	Line 14(a) ÷ 1 + Line 7	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$39,717,600	$39,717,600
19	CY 2018	Line 14(b) ÷ 12	$650,347	$650,347	$650,347	$650,347	$650,347	$650,347	$650,347	$650,347	$650,347	$650,347	$650,347	$650,347	$7,804,160
20	CY 2019	Line 14(c) ÷ 12	$390,208	$390,208	$390,208	$390,208	$390,208	$390,208	$390,208	$390,208	$390,208	$390,208	$390,208	$390,208	$4,682,496
21	CY 2020	Line 14(d) ÷ 12	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$2,809,498
22	CY 2021	Line 14(e) ÷ 12	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$234,125	$2,809,498
23	CY 2022	Line 14(f) ÷ 12	$117,062	$117,062	$117,062	$117,062	$117,062	$117,062	$117,062	$117,062	$117,062	$117,062	$117,062	$117,062	$1,404,749
24	Total Federal Tax Depreciation		**$1,625,867**	**$1,625,867**	**$1,625,867**	**$1,625,867**	**$1,625,867**	**$1,625,867**	**$1,625,867**	**$1,625,867**	**$1,625,867**	**$1,625,867**	**$1,625,867**	**$41,343,467**	**$59,228,000**
25															
26															
27															
28															

29	**State Tax Depreciation**							
30	**Cumulative Investment Tax Basis**	Line 1	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000
31	**5 Year MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
32	**State Tax Depreciation**	Line 30 x Line 31	$13,936,000	$22,297,600	$13,378,560	$8,027,136	$8,027,136	$4,013,568
33								
34								

	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
36	CY 2017	Line 32(a) ÷ 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$13,936,000	$13,936,000
37	CY 2018	Line 32(b) ÷ 12	$1,858,133	$1,858,133	$1,858,133	$1,858,133	$1,858,133	$1,858,133	$1,858,133	$1,858,133	$1,858,133	$1,858,133	$1,858,133	$1,858,133	$22,297,600
38	CY 2019	Line 32(c) ÷ 12	$1,114,880	$1,114,880	$1,114,880	$1,114,880	$1,114,880	$1,114,880	$1,114,880	$1,114,880	$1,114,880	$1,114,880	$1,114,880	$1,114,880	$13,378,560
39	CY 2020	Line 32(d) ÷ 12	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$8,027,136
40	CY 2021	Line 32(e) ÷ 12	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$668,928	$8,027,136
41	CY 2022	Line 32(f) ÷ 12	$334,464	$334,464	$334,464	$334,464	$334,464	$334,464	$334,464	$334,464	$334,464	$334,464	$334,464	$334,464	$4,013,568
42	Total State Tax Depreciation		**$4,645,333**	**$4,645,333**	**$4,645,333**	**$4,645,333**	**$4,645,333**	**$4,645,333**	**$4,645,333**	**$4,645,333**	**$4,645,333**	**$4,645,333**	**$4,645,333**	**$18,581,333**	**$69,680,000**

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Deferred Taxes
For The Years 2017 through 2042

			(a)	(b)	(c)	(d)	(e)	(f)
43	**Federal Tax Depreciation**		**CY - 2017**	**CY - 2018**	**CY - 2019**	**CY - 2020**	**CY - 2021**	**CY - 2022**
44	**Cumulative Investment Tax Basis**	Return and Taxes, Line 4	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
45	**ITC Tax Depreciation Rate**	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
46	**ITC Tax Depreciation Reduction**	Line 44 x Line 45	$810,000	$810,000	$810,000	$810,000	$810,000	$810,000
47								
48	**Investment Tax Basis**	Line 44	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
49	**Bonus Depreciation Rate**	Tax Dept	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
50	**Bonus Depreciation Reduction**	Line 48 x Line 49	$2,700,000	$2,700,000	$2,700,000	$2,700,000	$2,700,000	$2,700,000
51								
52	**Investment Tax Basis**	Line 48	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
53	**ITC Tax Depreciation Reduction**	- Line 46	($810,000)	($810,000)	($810,000)	($810,000)	($810,000)	($810,000)
54	**Bonus Depreciation Reduction**	- Line 50	($2,700,000)	($2,700,000)	($2,700,000)	($2,700,000)	($2,700,000)	($2,700,000)
55	**Adjusted Investment Basis @ 85%**	Sum Lines 52 thru 54	$1,890,000	$1,890,000	$1,890,000	$1,890,000	$1,890,000	$1,890,000
56	**Annual 5 Yr MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
57	**Federal Tax Depreciation**	Line 55 x Line 56	$378,000	$604,800	$362,880	$217,728	$217,728	$108,864
58								
59								

	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
61	CY 2017	Line 57(a) ÷ 1 + Line 50	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,078,000	$3,078,000
62	CY 2018	Line 57(b) ÷ 12	$50,400	$50,400	$50,400	$50,400	$50,400	$50,400	$50,400	$50,400	$50,400	$50,400	$50,400	$50,400	$604,800
63	CY 2019	Line 57(c) ÷ 12	$30,240	$30,240	$30,240	$30,240	$30,240	$30,240	$30,240	$30,240	$30,240	$30,240	$30,240	$30,240	$362,880
64	CY 2020	Line 57(d) ÷ 12	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$217,728
65	CY 2021	Line 57(e) ÷ 12	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$18,144	$217,728
66	CY 2022	Line 57(f) ÷ 12	$9,072	$9,072	$9,072	$9,072	$9,072	$9,072	$9,072	$9,072	$9,072	$9,072	$9,072	$9,072	$108,864
67	Total Federal Tax Depreciation		**$126,000**	**$126,000**	**$126,000**	**$126,000**	**$126,000**	**$126,000**	**$126,000**	**$126,000**	**$126,000**	**$126,000**	**$126,000**	**$3,204,000**	**$4,590,000**
68															
69															
70															
71															

72	**State Tax Depreciation**							
73	**Cumulative Investment Tax Basis**	Line 44	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
74	**5 Year MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
75	**State Tax Depreciation**	Line 73 x Line 74	$1,080,000	$1,728,000	$1,036,800	$622,080	$622,080	$311,040
76								
77								

	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
79	CY 2017	Line 75(a) ÷ 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,080,000	$1,080,000
80	CY 2018	Line 75(b) ÷ 12	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$1,728,000
81	CY 2019	Line 75(c) ÷ 12	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$1,036,800
82	CY 2020	Line 75(d) ÷ 12	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$622,080
83	CY 2021	Line 75(e) ÷ 12	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$622,080
84	CY 2022	Line 75(f) ÷ 12	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$311,040
85	Total State Tax Depreciation		**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$1,440,000**	**$5,400,000**

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Deferred Taxes
For The Years 2017 through 2042

			(a)	(b)	(c)	(d)	(e)	(f)
86	**Federal Tax Depreciation**		**CY - 2029**	**CY - 2030**	**CY - 2031**	**CY - 2032**	**CY - 2033**	**CY - 2034**
87	**Cumulative Investment Tax Basis**	Return and Taxes, Line 4	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
88	**ITC Tax Depreciation Rate**	ITC @ 0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
89	**ITC Tax Depreciation Reduction**	Line 87 x Line 88	$0	$0	$0	$0	$0	$0
90								
91	**Investment Tax Basis**	Line 87	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
92	**Bonus Depreciation Rate**	Tax Dept	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
93	**Bonus Depreciation Reduction**	Line 91 x Line 92	$0	$0	$0	$0	$0	$0
94								
95	**Investment Tax Basis**	Line 91	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
96	**ITC Tax Depreciation Reduction**	- Line 89	$0	$0	$0	$0	$0	$0
97	**Bonus Depreciation Reduction**	- Line 93	$0	$0	$0	$0	$0	$0
98	**Adjusted Investment Basis @ 85%**	Sum Lines 95 thru 97	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
99	**Annual 5 Yr MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
100	**Federal Tax Depreciation**	Line 98 x Line 99	$1,080,000	$1,728,000	$1,036,800	$622,080	$622,080	$311,040
101								
102								

	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
104	CY 2029	Line 100(a) ÷ 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,080,000	$1,080,000
105	CY 2030	Line 100(b) ÷ 12	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$1,728,000
106	CY 2031	Line 100(c) ÷ 12	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$1,036,800
107	CY 2032	Line 100(d) ÷ 12	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$622,080
108	CY 2033	Line 100(e) ÷ 12	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$622,080
109	CY 2034	Line 100(f) ÷ 12	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$311,040
110	Total Federal Tax Depreciation		**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$1,440,000**	**$5,400,000**
111															
112															
113															
114															

115	**State Tax Depreciation**							
116	**Cumulative Investment Tax Basis**	Line 87	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
117	**5 Year MACRS**	MACRS Half Year Depreciation Rates, Line 3	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%
118	**State Tax Depreciation**	Line 116 x Line 117	$1,080,000	$1,728,000	$1,036,800	$622,080	$622,080	$311,040
119								
120								

	Monthly Remaining Tax Depreciation		January	February	March	April	May	June	July	August	September	October	November	December	Total
122	CY 2029	Line 118(a) ÷ 1	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,080,000	$1,080,000
123	CY 2030	Line 118(b) ÷ 12	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$144,000	$1,728,000
124	CY 2031	Line 118(c) ÷ 12	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$86,400	$1,036,800
125	CY 2032	Line 118(d) ÷ 12	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$622,080
126	CY 2033	Line 118(e) ÷ 12	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$51,840	$622,080
127	CY 2034	Line 118(f) ÷ 12	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$25,920	$311,040
128	Total State Tax Depreciation		**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$360,000**	**$1,440,000**	**$5,400,000**

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Deferred Taxes
For The Years 2017 through 2042

			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
1	**Federal Tax Depreciation**		**CY - 2017**	**CY - 2018**	**CY - 2019**	**CY - 2020**	**CY - 2021**	**CY - 2022**	**CY - 2023**	**CY - 2024**	**CY - 2025**	**CY - 2026**	**CY - 2027**	**CY - 2028**
2	**Investment Tax Basis**	Return and Taxes, Line 3	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
3	**Bonus Depreciation Rate**	Tax Dept	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
4	**Bonus Depreciation Reduction**	Line 2 x Line 3	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000
5														
6	**Investment Tax Basis**	Line 2	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
7	**Bonus Depreciation Reduction**	- Line 4	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)
8	**Adjusted Investment Basis**	Sum Lines 6 thru 7	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000
9	**Annual 20 Yr MACRS**	MACRS Half Year Depreciation Rates, Line 7	3.75%	7.22%	6.68%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%
10	**Federal Tax Depreciation**	Line 8 x Line 9	$65,625	$126,333	$116,848	$108,098	$99,978	$92,488	$85,540	$79,135	$78,085	$78,068	$78,085	$78,068
11														
12														
13														
14	**State Tax Depreciation**													
15	**Cumulative Investment Tax Basis**	Line 2	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
16	**20 Year MACRS**	MACRS Half Year Depreciation Rates, Line 7	3.75%	7.22%	6.68%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%
17	**State Tax Depreciation**	Line 15 x Line 16	$131,250	$252,665	$233,695	$216,195	$199,955	$184,975	$171,080	$158,270	$156,170	$156,135	$156,170	$156,135
18	**Cumulative State Tax Depreciation**		$131,250	$383,915	$617,610	$833,805	$1,033,760	$1,218,735	$1,389,815	$1,548,085	$1,704,255	$1,860,390	$2,016,560	$2,172,695

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Reve
Deferred Taxes
For The Years 2017 through 2042

			(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)	(z)
1	**Federal Tax Depreciation**		**CY - 2029**	**CY - 2030**	**CY - 2031**	**CY - 2032**	**CY - 2033**	**CY - 2034**	**CY - 2035**	**CY - 2036**	**CY - 2037**	**CY - 2038**	**CY - 2039**	**CY - 2040**	**CY - 2041**	**CY - 2042**
2	**Investment Tax Basis**	Return and Taxes, Line 3	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
3	**Bonus Depreciation Rate**	Tax Dept	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%
4	**Bonus Depreciation Reduction**	Line 2 x Line 3	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000
5																
6	**Investment Tax Basis**	Line 2	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
7	**Bonus Depreciation Reduction**	- Line 4	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)	($1,750,000)
8	**Adjusted Investment Basis**	Sum Lines 6 thru 7	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000	$1,750,000
9	**Annual 20 Yr MACRS**	MACRS Half Year Depreciation Rates, Line 7	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	2.23%	0.00%	0.00%	0.00%	0.00%	0.00%
10	**Federal Tax Depreciation**	Line 8 x Line 9	$78,085	$78,068	$78,085	$78,068	$78,085	$78,068	$78,085	$78,068	$39,043	$0	$0	$0	$0	$0
11																
12																
13																
14	**State Tax Depreciation**															
15	**Cumulative Investment Tax Basis**	Line 2	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000
16	**20 Year MACRS**	MACRS Half Year Depreciation Rates, Line 7	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	2.23%	0.00%	0.00%	0.00%	0.00%	0.00%
17	**State Tax Depreciation**	Line 15 x Line 16	$156,170	$156,135	$156,170	$156,135	$156,170	$156,135	$156,170	$156,135	$78,085	$0	$0	$0	$0	$0
18	**Cumulative State Tax Depreciation**		$2,328,865	$2,485,000	$2,641,170	$2,797,305	$2,953,475	$3,109,610	$3,265,780	$3,421,915	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000	$3,500,000

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Investment Tax Credit Amortization
For The Years 2017 through 2042

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	Capital Investment - Solar Panels (25-yr useful life)	Return and Taxes, Line 1	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000
2	Investment Tax Credit	Tax Dept	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
3	Qualifying Investment	Line 1 x Line 2	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000
4	Annual ITC Amortization Rate	Annual Depreciation Rate @ 4.00%	0.33%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
5	Total Annual ITC Amortization	Line 3 x Line 4	$69,680	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160
6	Cumulative Annual ITC Amortization		69,680	905,840	1,742,000	2,578,160	3,414,320	4,250,480	5,086,640	5,922,800	6,758,960	7,595,120	8,431,280	9,267,440	10,103,600
7															
8	Capital Investment- Inverters (12-yr useful life)	Return and Taxes, Line 4	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
9	Investment Tax Credit	Tax Dept	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
10	Qualifying Investment	Line 8 x Line 9	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000
11	Annual ITC Amortization Rate	Annual Depreciation Rate @ 8.333333%	0.69%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%
12	Total Monthly ITC Amortization	Line 10 x Line 11	$11,250	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$123,750
13	Cumulative Monthly ITC Amortization	CM Line 12 + PM Line 13	$11,250	$146,250	$281,250	$416,250	$551,250	$686,250	$821,250	$956,250	$1,091,250	$1,226,250	$1,361,250	$1,496,250	$1,620,000
14															
15	Total ITC Amortization	Line 5 + Line 12	$80,930	$971,160	$971,160	$971,160	$971,160	$971,160	$971,160	$971,160	$971,160	$971,160	$971,160	$971,160	$959,910
16	Total Cumulative ITC Amortization	CY Line 15 + PY Line 16	$80,930	$1,052,090	$2,023,250	$2,994,410	$3,965,570	$4,936,730	$5,907,890	$6,879,050	$7,850,210	$8,821,370	$9,792,530	$10,763,690	$11,723,600
17															
18	Tax Gross-up @ 67.224%	Line 15 x 67.224%	$54,404	$652,853	$652,853	$652,853	$652,853	$652,853	$652,853	$652,853	$652,853	$652,853	$652,853	$652,853	$645,291
19	Total Cumulative Tax Gross-up @ 67.224%	CY Line 18 + PY Line 19	$54,404	$707,258	$1,360,111	$2,012,965	$2,665,818	$3,318,671	$3,971,525	$4,624,378	$5,277,231	$5,930,085	$6,582,938	$7,235,792	$7,881,082

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Investment Tax Credit Amortization
For The Years 2017 through 2042

			2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
1	Capital Investment - Solar Panels (25-yr useful life)	Return and Taxes, Line 1	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000
2	Investment Tax Credit	Tax Dept	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
3	Qualifying Investment	Line 1 x Line 2	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000	$20,904,000
4	Annual ITC Amortization Rate	Annual Depreciation Rate @ 4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.67%
5	Total Annual ITC Amortization	Line 3 x Line 4	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$766,480
6	Cumulative Annual ITC Amortization		10,939,760	11,775,920	12,612,080	13,448,240	14,284,400	15,120,560	15,956,720	16,792,880	17,629,040	18,465,200	19,301,360	20,137,520	20,904,000
7															
8	Capital Investment- Inverters (12-yr useful life)	Return and Taxes, Line 4	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	Investment Tax Credit	Tax Dept	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%
10	Qualifying Investment	Line 8 x Line 9	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
11	Annual ITC Amortization Rate	Annual Depreciation Rate @ 8.333333%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
12	Total Monthly ITC Amortization	Line 10 x Line 11	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13	Cumulative Monthly ITC Amortization	CM Line 12 + PM Line 13	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000	$1,620,000
14															
15	Total ITC Amortization	Line 5 + Line 12	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$836,160	$766,480
16	Total Cumulative ITC Amortization	CY Line 15 + PY Line 16	$12,559,760	$13,395,920	$14,232,080	$15,068,240	$15,904,400	$16,740,560	$17,576,720	$18,412,880	$19,249,040	$20,085,200	$20,921,360	$21,757,520	$22,524,000
17															
18	Tax Gross-up @ 67.224%	Line 15 x 67.224%	$562,101	$562,101	$562,101	$562,101	$562,101	$562,101	$562,101	$562,101	$562,101	$562,101	$562,101	$562,101	$515,259
19	Total Cumulative Tax Gross-up @ 67.224%	CY Line 18 + PY Line 19	$8,443,183	$9,005,284	$9,567,385	$10,129,486	$10,691,587	$11,253,687	$11,815,788	$12,377,889	$12,939,990	$13,502,091	$14,064,192	$14,626,293	$15,141,552

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
ITC Tax Effect
For The Years 2017 through 2042

			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	25 Year Property														
1	Cumulative Capital Investment	Investment Tax Credit Amortization, Line 1	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000
2	ITC Depreciation Rate Reduction	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
3	Cumulative Book Depreciation ITC Basis Reduction	Line 1 x Line 2	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000
4	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	0.33%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
5	Book Depreciation on ITC Basis Reduction	Line 3 x Line 4	34,840	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080
6															
7	12 Year Property														
8	Cumulative Capital Investment	Investment Tax Credit Amortization, Line 8	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
9	ITC Depreciation Rate Reduction	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
10	Cumulative Book Depreciation ITC Basis Reduction	Line 8 x Line 9	$810,000	$810,000	$810,000	$810,000	$810,000	$810,000	$810,000	$810,000	$810,000	$810,000	$810,000	$810,000	$810,000
11	Annual Depreciation Rate	Annual Depreciation Rate @ 8.333333%	0.69%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%
12	Book Depreciation on ITC Basis Reduction	Line 10 x Line 11	$5,625	$67,500	$67,500	$67,500	$67,500	$67,500	$67,500	$67,500	$67,500	$67,500	$67,500	$67,500	$61,875
13															
14	Flowthrough Items	Line 5 + Line 12	40,465	485,580	485,580	485,580	485,580	485,580	485,580	485,580	485,580	485,580	485,580	485,580	479,955
15															
16	Tax Impact of Flowthrough Items	Line 14 x (T÷(1-T)): T = 40.20% (effective tax rate)	$27,202	$326,427	$326,427	$326,427	$326,427	$326,427	$326,427	$326,427	$326,427	$326,427	$326,427	$326,427	$322,645

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
ITC Tax Effect
For The Years 2017 through 2042

			2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	25 Year Property														
1	Cumulative Capital Investment	Investment Tax Credit Amortization, Line 1	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000	$69,680,000
2	ITC Depreciation Rate Reduction	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
3	Cumulative Book Depreciation ITC Basis Reduction	Line 1 x Line 2	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000	10,452,000
4	Annual Depreciation Rate	Annual Depreciation Rate @ 4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	3.67%
5	Book Depreciation on ITC Basis Reduction	Line 3 x Line 4	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	383,240
6															
7	12 Year Property														
8	Cumulative Capital Investment	Investment Tax Credit Amortization, Line 8	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
9	ITC Depreciation Rate Reduction	ITC @ 15%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
10	Cumulative Book Depreciation ITC Basis Reduction	Line 8 x Line 9	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
11	Annual Depreciation Rate	Annual Depreciation Rate @ 8.333333%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	8.33%	7.64%
12	Book Depreciation on ITC Basis Reduction	Line 10 x Line 11	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
13															
14	Flowthrough Items	Line 5 + Line 12	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	418,080	383,240
15															
16	Tax Impact of Flowthrough Items	Line 14 x (T÷(1-T)): T = 40.20% (effective tax rate)	$281,050	$281,050	$281,050	$281,050	$281,050	$281,050	$281,050	$281,050	$281,050	$281,050	$281,050	$281,050	$257,630

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Property Tax Expense
For The Years 2017 through 2042

Line No.			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1	Property Taxes															
2	Plant in Service	Return and Taxes, Line 35	$0	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000
3	Accumulated Depreciation	Return and Taxes, Line 36	0	(3,658,633)	(7,035,833)	(10,413,033)	(13,790,233)	(17,167,433)	(20,544,633)	(23,921,833)	(27,299,033)	(30,676,233)	(34,053,433)	(37,430,633)	(35,404,949)	(38,747,533)
4	Net Plant in Service	Sum Lines 2 thru 3	$0	$74,921,367	$71,544,167	$68,166,967	$64,789,767	$61,412,567	$58,035,367	$54,658,167	$51,280,967	$47,903,767	$44,526,567	$41,149,367	$43,175,051	$39,832,467
5	Property Tax Rate per $1000	Note 1 & 2	$24.19	$24.68	$25.17	$25.68	$26.19	$26.71	$27.25	$27.79	$28.35	$28.91	$29.49	$30.08	$30.68	$31.30
6	Annual Property Tax	(Line 4 ÷ 1000) * Line 5	$0	$1,848,954	$1,800,922	$1,750,229	$1,696,787	$1,640,508	$1,581,299	$1,519,066	$1,453,710	$1,385,133	$1,313,231	$1,237,899	$1,324,815	$1,246,694

1) Average Property Tax Rate per 2015 FERC Form 1

Gross Plant (FERC Pg. 204 - 207)	$1,809,716,084
Accumulated Depreciation (FERC Pg. 219)	290,086,587
Net Plant	$1,519,629,497
Property Tax Expense (FERC Pg. 262 - 263)	36,766,987
Rate per Thousand	$24.19

2) 2% Annual Inflator

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Property Tax Expense
For The Years 2017 through 2042

Line No.			2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total
1	Property Taxes														
2	Plant in Service	Return and Taxes, Line 35	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	$78,580,000	
3	Accumulated Depreciation	Return and Taxes, Line 36	(42,090,118)	(45,432,702)	(48,775,287)	(52,117,872)	(55,460,456)	(58,803,041)	(62,145,626)	(65,488,210)	(68,830,795)	(72,173,379)	(75,515,964)	(78,580,000)	
4	Net Plant in Service	Sum Lines 2 thru 3	$36,489,882	$33,147,298	$29,804,713	$26,462,128	$23,119,544	$19,776,959	$16,434,374	$13,091,790	$9,749,205	$6,406,621	$3,064,036	$0	
5	Property Tax Rate per $1000	Note 1 & 2	$31.92	$32.56	$33.21	$33.88	$34.56	$35.25	$35.95	$36.67	$37.40	$38.15	$38.92	$39.69	
6	Annual Property Tax	(Line 4 ÷ 1000) * Line 5	$1,164,918	$1,079,372	$989,938	$896,495	$798,919	$697,081	$590,850	$480,090	$364,664	$244,429	$119,239	$0	**$27,225,244**

1) Average Property Tax Rate per 2015 FERC Form 1

Gross Plant (FERC Pg. 204 - 207)	$1,809,716,084
Accumulated Depreciation (FERC Pg. 219)	290,086,587
Net Plant	$1,519,629,497
Property Tax Expense (FERC Pg. 262 - 263)	36,766,987
Rate per Thousand	$24.19

2) 2% Annual Inflator

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
O&M and Lease Expenses
For The Years 2017 through 2042

		Annual	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
1	**Operations & Maintenance**	$314,356	$0	$314,356	$322,215	$329,304	$335,890	$342,608	$349,803	$357,148	$364,649	$372,306	$380,125	$388,107	$396,257
2	**Panel Replacement**	24,000	0	24,000	24,600	25,141	25,644	26,157	26,706	27,267	27,840	28,424	29,021	29,631	30,253
3	**Other**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	**Total O&M Expense**	$338,356	$0	$338,356	$346,815	$354,445	$361,534	$368,765	$376,509	$384,415	$392,488	$400,730	$409,146	$417,738	$426,510
5	**Lease Payments**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Panel Replacements may be O&M or Capital depending on the nature of the replacement.
Inflation based on GDP forecast from Moody's Analytics

Western Massachusetts Electric Company d/b/a
Computation of Solar Expansion Cost Recovery
O&M and Lease Expenses
For The Years 2017 through 2042

		2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	Total O&M
1	**Operations & Maintenance**	$404,579	$413,075	$421,750	$430,606	$439,649	$448,882	$458,308	$467,933	$477,759	$487,792	$498,036	$508,495	$519,173	$10,228,805
2	**Panel Replacement**	30,888	31,537	32,199	32,875	33,566	34,271	34,990	35,725	36,475	37,241	38,023	38,822	39,637	780,933
3	**Other**	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	**Total O&M Expense**	$435,467	$444,612	$453,949	$463,482	$473,215	$483,152	$493,298	$503,658	$514,235	$525,033	$536,059	$547,316	$558,810	**$11,009,738**
5	**Lease Payments**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$0**

Panel Replacements may be O&M or Capital
Inflation based on GDP forecast from Moody

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
Capital Structure
for the Period Ending December 31, 2017

Line No.			Capital Structure (2)	Cost Rate	Weighted Return	Taxes	Pre-tax Return
			(a)	(b)	(c)= (a) x (b)	(d)	(e)=(c)+(d)
1	Long Term Debt	D.P.U. 10-70	49.30%	4.25%	2.10%		2.10%
2							
3	Preferred Stock	D.P.U. 10-70	0.00%	4.52%	0.00%	0.00% (1)	0.00%
4							
5	Total Common Equity	D.P.U. 10-70	50.70%	9.60%	4.87%	3.27% (1)	8.14%
6							
7	Total Capitalization	Line 1 + Line 3 + Line 5	100.00%		6.96%	3.27%	10.24%
8	Monthly Capitalization	Line 7 ÷ 12					0.85%

Line Notes

(1) Tax Gross-up at 40.2%

(2)

Common Equity	D.P.U. 10-70, Order Schedule 5	$349,418,000	50.70%
Preferred Stock	D.P.U. 10-70, Order Schedule 5	0	0.00%
Long Term Debt	D.P.U. 10-70, Order Schedule 5	339,806,000	49.30%
Total Capital		$689,224,000	

Western Massachusetts Electric Company d/b/a Eversource Energy
Computation of Solar Expansion Cost Recovery Mechanism (SECRM) Revenue Requirement
MACRS Half Year Depreciation Rates
For The Years 2017 through 2042

IRS Publication 946 Table A-1
MACRS Half Year Depreciation Rates

1	**Recovery Year**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
2	3	33.33%	44.45%	14.81%	7.41%																	
3	5	20.00%	32.00%	19.20%	11.52%	11.52%	5.76%															
4	7	14.29%	24.49%	17.49%	12.49%	8.93%	8.92%	8.93%	4.46%													
5	10	10.00%	18.00%	14.40%	11.52%	9.22%	7.37%	6.55%	6.55%	6.56%	6.55%	3.28%										
6	15	5.00%	9.50%	8.55%	7.70%	6.93%	6.23%	5.90%	5.90%	5.91%	5.90%	5.91%	5.90%	5.91%	5.90%	5.91%	2.95%					
7	20	3.75%	7.22%	6.68%	6.18%	5.71%	5.29%	4.89%	4.52%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	4.46%	2.23%

NSTAR ELECTRIC COMPANY **M.D.P.U. No. 502**
d/b/a EVERSOURCE ENERGY

SOLAR EXPANSION COST RECOVERY MECHANISM

1.0 PURPOSE AND APPLICABILITY

1.1 Purpose

The purpose of the Solar Expansion Cost Recovery Mechanism is to recover from Customers the investment and ongoing maintenance costs of solar generation projects constructed, owned and operated by NSTAR Electric Company d/b/a Eversource Energy (the "Company") pursuant to Section 1A(f) of Chapter 164 of the General Laws, as amended by An Act Relative to Solar Energy ("Act").

1.2 Applicability

The Solar Expansion Cost Recovery Factor ("SECRF") shall be applied to all kilowatt-hours (kWh) delivered by the Company, to all customers in the Greater Boston, Cambridge, South Shore, Cape Cod, and Martha's Vineyard territories, as determined in accordance with the provisions of Section 3.0 of this tariff. The SECRF shall be determined annually by the Company, as defined below, subject to the Department of Public Utility's (the "Department") review and approval.

1.3 Effective Date

The annual SECRF shall be effective on January 1st of each calendar year. Pursuant to Section 5.2, the annual SECRF may be adjusted to reflect a partial year revenue requirement. Such adjustment, if applicable, shall be effective July 1st of each calendar year.

2.0 DEFINITIONS

(1) Annual Revenue Requirement shall mean the Return on Rate Base and associated income taxes relating to the Company's investment in solar, along with accumulated depreciation and accumulated deferred taxes, depreciation expense, incremental operation and maintenance expense, property taxes, and amortization of investment tax credits.

(2) Rate Base shall include, but is not limited to, gross plant, depreciation reserve, accumulated deferred income taxes, and a working capital allowance as determined in the Company's most recent distribution rate case. Rate Base will be determined on a monthly basis during the initial year following the in-service date of the solar generation facility and on a quarterly basis during subsequent years.

(3) Return on Rate Base shall be based on the Rate Base multiplied by the Company's after tax weighted average cost of capital as approved in the Company's most recent

SOLAR EXPANSION COST RECOVERY MECHANISM

distribution rate case adjusted to a pre-tax basis by using currently effective federal and state income tax rates applicable to the period of the investment.

(4) Incremental Operation and Maintenance Expense is the actual monthly incremental operation and maintenance cost incurred through the prior twelve month period caused by the solar generation facilities, including but not limited to such expenses as payroll and associated employee costs, contractor costs, material and supplies, and any lease payments approved by the Department. If actual monthly expenses are unavailable at the time that rates are calculated, the Company may use an estimate and reconcile such amount in the next adjustment. Only those costs directly charged to the solar generation facilities and are necessary for the operation and maintenance of the solar generation facilities shall be included. Those direct or allocated costs recovered by any other rate, charge or tariff shall be excluded.

(5) Distribution Revenue Allocators are the allocation factors for each rate class applied to the Revenue Requirement that the Company is allowed to recover for purposes of determining the SECRF for each rate class. The following are the Distribution Revenue Allocators as approved by the Department in D.P.U. 12-126H:

For service territory in the Greater Boston area:

Rate R-1/R-2/R-4	35.7%
Rate R-2/R-3	3.6%
Rate G-1/T-1	5.7%
Rate G-2/H-2	19.5%
Rate G-3	12.2%
Rate T-2	22.7%
Rate WR	0.1%
Rate S-1/S-2/S-3	0.5%

For service territory in the South Shore, Cape Cod, and Martha's Vineyard area:

Rate R-1/R-2/R-5/R-6	62.2%
Rate R-3/R-4	6.1%
Rate G-1/G-4/G-5/G-6/G-7	22.6%
Rate G-2	5.6%
Rate G-3	3.1%
Rate S-1/S-2	0.4%

For service territory in the Cambridge area:

NSTAR ELECTRIC COMPANY **M.D.P.U. No. 502**
d/b/a EVERSOURCE ENERGY

SOLAR EXPANSION COST RECOVERY MECHANISM

Rate R-1/R-2/R-5	27.1%
Rate R-3/R-4/R-6	1.8%
Rate G-0/G-6	4.2%
Rate G-1/G-4/G-5	17.5%
Rate G-2	31.0%
Rate G-3	17.7%
Rate S-1/S-2	0.7%

3.0 RATE FORMULA

3.1 Derivation of SECRF

$$SECRF_c = \frac{(RR + RA) \times DRA_r}{FkWh_r}$$

where:

r	Designates a separate factor for each rate class.
$SECRF_r$	The Solar Expansion Cost Recovery Factor, by rate class.
DRA_r	Distribution Revenue Allocator for each rate class, as specified in Section 2.0 (6).
$FkWh_r$	Forecast kWh for each rate class.
RR	Annual Revenue Requirement as defined in Section 2.0 (1).
RA	Annual Reconciliation Adjustment, which shall include any credits for energy sales and credits for either the sales of RECs into the ISO-NE market or the market value of RECs used to comply with the RPS, credits for capacity sales, if any, plus interest, during the prior year.

3.2 Application of SECRF to Customer Bills

The SECRF ($ per kWh) shall be calculated to the nearest one one-thousandth ($0.00001) of a cent per kWh and will be applied to the monthly kWh sales. The SECRF will be included with the distribution kWh charge on customer's bills.

4.0 RECONCILIATION ADJUSTMENTS

NSTAR ELECTRIC COMPANY **M.D.P.U. No. 502**
d/b/a EVERSOURCE ENERGY

SOLAR EXPANSION COST RECOVERY MECHANISM

4.1 The prior year annual revenue requirement shall be reconciled to the actual amount of revenue billed to customers through the SECRF. Such reconciliation shall include any credits for (1) net proceeds associated with energy sales to the Independent System Operator of New England ("ISO-NE"), (2) either (a) net proceeds associated with sales of Renewable Energy Certificates ("RECs") or (b) the market value of RECs which were used to comply with the Renewable Portfolio Standards established in Mass. Gen. Laws c. 25A, § 11F and 220 C.M.R. 14.00 – 16.00 et seq., and (3) net proceeds, if any, associated with bidding the capacity of the solar generating facilities into the ISO-NE Forward Capacity Market, and the excess or deficiency, including interest rate paid on customer deposits, shall be used to adjust the subsequent year's SECRF.

5.0 INFORMATION TO BE FILED WITH THE DEPARTMENT

5.1 Each adjustment of the prices under the Company's applicable tariffs shall be in accordance with a notice filed with the Department setting forth the amount of the increase or decrease and the new SECRF. The notice shall further specify the effective date of such adjustment, which shall not be earlier than sixty days after the filing of the notice, or such other date as the Department may authorize.

5.2 During any period in which the Company completes construction and puts into service solar generation facilities, the Company shall submit two filings each year, on May 1st and November 1st, with the Department which would include new solar generation facilities with in-service dates up through December 31 and June 30, respectively, requesting approval of the partial year revenue requirement over the period beginning with the effective date of such new SECRF.

5.3 The Company shall file a schedule of solar generation projects to be recovered through the Solar Expansion Cost Recovery Mechanism. Such schedule may be amended to include new projects to the extent the Department approves additional solar generation facilities pursuant to Section 1A(f) of Chapter 164.

WESTERN MASSACHUSETTS ELECTRIC COMPANY
d/b/a EVERSOURCE ENERGY

M.D.P.U. No. 1060

SOLAR EXPANSION COST RECOVERY MECHANSIM

1.0 PURPOSE AND APPLICABILITY

1.1 Purpose

The purpose of the Solar Expansion Cost Recovery Mechanism is to recover from Customers the investment and ongoing maintenance costs of solar generation projects constructed, owned and operated by Western Massachusetts Electric Company d/b/a Eversource Energy (the "Company") pursuant to Section 1A(f) of Chapter 164 of the General Laws, as amended by An Act Relative to Solar Energy ("Act").

1.2 Applicability

The Solar Expansion Cost Recovery Factor ("SECRF") shall be applied to all kilowatt-hours (kWh) delivered by the Company, to all customers in the Company's territory, as determined in accordance with the provisions of Section 3.0 of this tariff. The SECRF shall be determined annually by the Company, as defined below, subject to the Department of Public Utility's (the "Department") review and approval.

1.3 Effective Date

The annual SECRF shall be effective on January 1st of each calendar year. Pursuant to Section 5.2, the annual SECRF may be adjusted to reflect a partial year revenue requirement. Such adjustment, if applicable, shall be effective July 1st of each calendar year.

2.0 DEFINITIONS

(1) Annual Revenue Requirement shall mean the Return on Rate Base and associated income taxes relating to the Company's investment in solar, along with accumulated depreciation and accumulated deferred taxes, depreciation expense, incremental operation and maintenance expense, property taxes, and amortization of investment tax credits.

(2) Rate Base shall include, but is not limited to, gross plant, depreciation reserve, accumulated deferred income taxes, and a working capital allowance as determined in the Company's most recent distribution rate case. Rate Base will be determined on a monthly basis during the initial year following the in-service date of the solar generation facility and on a quarterly basis during subsequent years.

(3) Return on Rate Base shall be based on the Rate Base multiplied by the Company's after tax weighted average cost of capital as approved in the Company's most recent distribution rate case adjusted to a pre-tax basis by using currently effective federal and state income tax rates applicable to the period of the investment.

WESTERN MASSACHUSETTS ELECTRIC COMPANY
d/b/a EVERSOURCE ENERGY

M.D.P.U. No. 1060

SOLAR EXPANSION COST RECOVERY MECHANSIM

(4) Incremental Operation and Maintenance Expense is the actual monthly incremental operation and maintenance cost incurred through the prior twelve month period caused by the solar generation facilities, including but not limited to such expenses as payroll and associated employee costs, contractor costs, material and supplies, and any lease payments approved by the Department. If actual monthly expenses are unavailable at the time that rates are calculated, the Company may use an estimate and reconcile such amount in the next adjustment. Only those costs directly charged to the solar generation facilities and are necessary for the operation and maintenance of the solar generation facilities shall be included. Those direct or allocated costs recovered by any other rate, charge or tariff shall be excluded.

(5) Distribution Revenue Allocators are the allocation factors for each rate class applied to the Revenue Requirement that the Company is allowed to recover for purposes of determining the SECRF for each rate class. The following are the Distribution Revenue Allocators as approved by the Department in D.P.U. 12-126I:

Rate R-1, R-2	46.7%
Rate R-3, R-4	9.0%
Rate 23, 24, G-0, T-0	18.7%
Rate G-2, T-4	9.5%
Rate T-2	10.7%
Rate T-5	4.1%
Rate S-1, S-2	1.3%

3.0 RATE FORMULAS

3.1 Derivation of SECRF

$$SECRF_c = \frac{(RR + RA) \times DRA_r}{FkWh_r}$$

where:

r	Designates a separate factor for each rate class.
$SECRF_r$	The Solar Expansion Cost Recovery Factor, by rate class.
DRA_r	Distribution Revenue Allocator for each rate class, as specified in Section 2.0(6).
$FkWh_r$	Forecast kWh for each rate class.

Issued per Order in D.P.U. XXXXX
Dated

For Consumption On and
After XXXX

WESTERN MASSACHUSETTS ELECTRIC COMPANY
d/b/a EVERSOURCE ENERGY

M.D.P.U. No. 1060

SOLAR EXPANSION COST RECOVERY MECHANSIM

RR	Annual Revenue Requirement as defined in Section 2.0(1).
RA	Annual Reconciliation Adjustment, which shall include any credits for energy sales and credits for either the sales of RECs into the ISO-NE market or the market value of RECs used to comply with the RPS, credits for capacity sales, if any, plus interest, during the prior year.

3.2 Application of SECRF to Customer Bills

The SECRF ($ per kWh) shall be calculated to the nearest one one-thousandth ($0.00001) of a cent per kWh and will be applied to the monthly kWh sales. The SECRF will be included with the distribution kWh charge on customer's bills.

4.0 RECONCILIATION ADJUSTMENTS

4.1 The prior year annual revenue requirement shall be reconciled to the actual amount of revenue billed to customers through the SECRF. Such reconciliation shall include any credits for (1) net proceeds associated with energy sales to the Independent System Operator of New England ("ISO-NE"), (2) either (a) net proceeds associated with sales of Renewable Energy Certificates ("RECs") or (b) the market value of RECs which were used to comply with the Renewable Portfolio Standards established in Mass. Gen. Laws c. 25A, § 11F and 220 C.M.R. 14.00 - 16.00 et seq., and (3) net proceeds, if any, associated with bidding the capacity of the solar generating facilities into the ISO-NE Forward Capacity Market, and the excess or deficiency, including interest rate paid on customer deposits, shall be used to adjust the subsequent year's SECRF.

5.0 INFORMATION TO BE FILED WITH THE DEPARTMENT

5.1 Each adjustment of the prices under the Company's applicable tariffs shall be in accordance with a notice filed with the Department setting forth the amount of the increase or decrease and the new SECRF. The notice shall further specify the effective date of such adjustment, which shall not be earlier than sixty days after the filing of the notice, or such other date as the Department may authorize.

5.2 During any period in which the Company completes construction and puts into service solar generation facilities, the Company shall submit two filings each year, on May 1st and November 1st, with the Department which would include new solar generation facilities with in-service dates up through December 31 and June 30, respectively, requesting approval of the partial year revenue requirement over the period beginning with the effective date of such new SECRF.

WESTERN MASSACHUSETTS ELECTRIC COMPANY
d/b/a EVERSOURCE ENERGY

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SOLAR EXPANSION COST RECOVERY MECHANSIM

5.3 The Company shall file a schedule of solar generation projects to be recovered through the Solar Expansion Cost Recovery Mechanism. Such schedule may be amended to include new projects to the extent the Department approves additional solar generation facilities pursuant to Section 1A(f) of Chapter 164.