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February 25, 2021

SENT VIA ELECTRONIC MAIL ONLY [Luly.Massaro@puc.ri.gov]:

Luly E. Massaro
Commission Clerk
Public Utilities Commission
89 Jefferson Boulevard
Warwick, Rhode Island 02888

RE: Docket No. 4604 - The Office of Energy Resources (OER) - Budget Requests to Perform 2022 Renewable Energy Growth Program Development

Dear Ms. Massaro:

In accordance with R.I. Gen. Laws § 39-26.6-4(b), the Rhode Island Office of Energy Resources (“OER”), in consultation with the Rhode Island Distributed-Generation Board (“DG Board”), is requesting approval from the Public Utilities Commission (“PUC”) to perform program and ceiling price development for the 2021 Renewable Energy (“RE”) Growth Program year. OER and the DG Board are respectfully requesting approval from the PUC to receive \$255,752 for the 2022 RE Growth Program year design. Please note that the DG Board formally approved the submission of this request at its past meeting on Monday, February 22, 2021.

Please see attached memo with budget breakdown and associated tasks from the DG Board’s contracted consultant. Also, attached is the budget and tasks presentation from the DG Board meeting. If you have any questions, please do not hesitate to contact me.

Sincerely,

Albert Vitali
Senior Legal Counsel
Department of Administration
on behalf of the Office of Energy Resources

Enclosure

c. Docket #4604 Service List



Sustainable Energy Advantage, LLC

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Memorandum

To: Rhode Island Office of Energy Resources and Distributed Generation Board

From: Jim Kennerly, Sustainable Energy Advantage, LLC

Date: February 25, 2021

Re: **Scope of Services and Budget Request for 2022 Renewable Energy Growth (REG) Program Support**

Background

In November and December of 2020, the Rhode Island Office of Energy Resources (OER) requested that Sustainable Energy Advantage, LLC (SEA) develop a budget proposal surrounding its support and assistance to OER and the DG Board during the development of the 2022 REG program year (PY) Ceiling Prices and (if requested) the development and/or evaluation of Public Policy Adders. This memorandum is intended to detail the proposed scope of these services, as well as the various cost levels of these services, depending upon the number of tasks SEA is requested to undertake by OER and the Board.

Summary of Budget Request

SEA requests funding of **\$205,854** for its “core scope” (for Tasks 0-7 below), plus an additional **\$49,898 in budgetary headroom** to cover certain activities (described in Task 8) that are contingent on decisions that may be made by National Grid and the Rhode Island General Assembly, **for a total “not-to-exceed” value of \$255,752**. The budgeted amounts by task are shown in the table below.

Task	Total Budget
Task 0: Contracted Ceiling Price Analysis ¹	\$65,000
Task 1: Incremental Ceiling Price Assistance ²	\$54,703
Task 2: Carport Adder Support	\$38,975
Task 3: Low Income Adder or Program Evaluation/Development	\$0 ³
Task 4: Solar+Storage Adder Investigation	\$14,835
Task 5: Stakeholder Engagement	\$13,954
Task 6: Incremental PUC Support	\$12,901
Task 7: Client Communication/Project Management	\$5,486
Task 8: Efforts Contingent Upon National Grid Decisions and/or Enactment of New Laws and Policies	\$49,898
Total “Core Scope” (Tasks 0-7)	\$205,854
Total “Not-to-Exceed” (Including Task 8: Efforts Contingent on National Grid Decisions and/or New Laws and Policies)	\$255,752

We describe each of these tasks and itemize the effort by subtask in the remaining sections of this memorandum.

¹ Represents current contracted SEA scope of services.

² Represents activities closely related to Ceiling Price development, but not immediately within contracted scope of services.

³ Currently set at \$0 but may be revised based on PUC proposal regarding Low Income CRDG (see Task 3 description herein).

Proposed 2022 Renewable Energy Growth Program Support Tasks and Budget Values

Task 0: Ceiling Price Development

This task encompasses SEA’s annual Ceiling Price support.

Table 1: Task 0 Budget Summary

Tasks/Subtasks	Total
Task 0 Total	\$65,000

Task 1: Incremental Ceiling Price Assistance (Under Existing Laws and Rules)

The purpose of these tasks is to provide support that goes beyond the typical changes to Ceiling Prices that occur from year to year, but that do not require changes to federal or state law or policy. We detail the proposed scope for this assistance below.

Task 1.1: Feasibility of Incorporating Single-Axis Tracking into 2023 PY Ceiling Prices

During 2020, several larger-scale distributed solar projects using single-axis tracking were selected in the Connecticut Shared Clean Energy Facilities (SCEF) program at substantially lower per kWh prices over 20 years than typical fixed-axis projects of similar sizes. Under this Task, SEA would investigate if single-axis tracking should be assumed for all or part of the population of Medium, Commercial or Large Solar projects for the 2023 program year, and whether doing so would balance ratepayer benefit with technical feasibility and market development. Activities under this task will include liaising with stakeholders to determine whether trackers can bear snow load, or whether projects utilizing trackers can be sited on disturbed parcels (or other parcels with atypical siting characteristics) or parcels with more unevenness or slope than what has been technically possible for single-axis tracker installations historically. In addition, SEA would examine the cost of land acquisition for such projects as well.

Task 1.2: Sensitivity Analysis of Residential Ceiling Prices by Tilt/Azimuth

Certain REG stakeholders have raised the possibility of changing the DC capacity factor-based formula for calculating the size of Small Solar projects, arguing that the current 14% value assumed by National Grid is insufficient for sizing a system to offset the state law-mandated threshold of 100% of a residential or small commercial customer’s on-site load. These stakeholders have proposed changing the 14% value to a value based on a matrix of tilts and azimuths. Therefore, under this task, SEA has budgeted for the development of a formula for arriving at appropriate capacity factors for Small Solar I projects based on changes to National Grid’s formula.⁴

Task 1.3: Potential Further Subdivision of Solar Classes/Targeting of Compensation to Enhance Ratepayer Savings

At the hearing regarding the 2021 PY filing in Docket 5088, PUC Chairman Gerwatowski thanked OER and the Board for its proposal to subdivide the Commercial Solar class into 251-750 kW and 751-999 kW size ranges to reduce the cost of the program to ratepayers⁵ and asked if it was possible to propose further subdivisions to enhance the cost-effectiveness of the program. The PUC also signaled its interest in this potential approach for

⁴ This task would not include variance in system shading since such factors are highly site-specific and change over time with vegetation growth and cut-back.

⁵ Ultimately, the cost of the program to ratepayers will be a function of both accepted bid prices (capped by category-specific ceiling prices) and MW allocation.

the 2022 PY when issuing its rulings in Docket 5088. Under this task, SEA would develop a proposal for further subdivision of the REG Solar classes, and vet the proposal with OER, National Grid, the DPUC and market participants.

Table 2: Task 1 Budget Summary

Tasks/Subtasks	Total
Task 1.1: Feasibility of Incorporating Single-Axis Tracking into 2023 PY Ceiling Prices	\$18,547
Task 1.2: Sensitivity Analysis of Residential Ceiling Prices by Tilt/Azimuth	\$14,574
Task 1.3: Subdivision/Adjustment of Proxy (Modeled) Sizes for REG Solar Classes	\$21,582
Task 1 Totals	\$54,703

Task 2: Carport Adder Support

On February 18, 2021, the PUC accepted OER and the Board’s recommendation to continue the Carport Solar pilot for one additional year to collect sufficient data to determine whether to propose the program on a longer-term basis. To determine whether doing so is likely to be cost-effective under the Docket 4600 Benefit-Cost Framework, SEA and Mondre Energy propose to update their 2020 PY Carport Adder program evaluation to capture data from new projects to provide OER and the Board with the information necessary to determine the shape of future compensation for Carport Solar projects beyond the 2021 PY. In addition, SEA would support the calculation of a proposed adder value, which would serve as the “cost” portion of the benefit-cost analysis SEA will independently undertake, and as the range of values within which National Grid can reasonably select a 2022 PY adder value (if it chooses to do so).⁶

Task 2.1 – Combined 2020 & 2021 PY Evaluation (If Approved by PUC)

Under this task, SEA and Mondre would:

- Develop a survey to determine what unanswered questions remain after the 2020 evaluation to include in a follow up survey to developers and municipalities. SEA also would identify any developers new to the program to collect data from;
- Conduct further research utilizing the survey developed in the above subtask. Surveying would likely be done by interviews (vs. filling out online questionnaires);
- Estimate the costs and benefits of the 2021 selected Carport projects utilizing the PUC’s Docket 4600 Benefit-Cost Framework. SEA would also use this opportunity to ensure that its analysis draws upon the most up-to-date sources regarding the societal benefits of Carport development, as well as collecting more information about benefits calculated in the 2020 review; and
- Draft a 4-5 page memorandum to attach to its direct testimony summarizing our findings.

Task 2.2: Carport Incremental Cost Analysis/Adder Value Development

Under this task, SEA would collaborate with National Grid to collect data on the reported incremental upfront capital costs of developing a Carport Solar project from 2021 Program Year selected projects, as well as develop survey questions and collect data from the industry regarding incremental changes in Carport operating costs. SEA also would consider incorporating additional data on capital costs if OER is interested in having sources to supplement the procured values. SEA would utilize the capital and operating costs calculated in the prior subtask to calculate a proposed Carport Adder value.

⁶ As such, the calculation of this adder value is considered Core Scope within this proposal, rather than an activity conditional on National Grid’s decision regarding a 2022 PY Carport Adder.

Table 3: Task 2 Budget Summary

Tasks/Subtasks	Total
Task 2.1: Combined 2020 & 2021 PY Evaluation	\$33,602
Task 2.2: Carport Incremental Cost Analysis/Adder Value Development	\$5,373
Task 2 Total	\$38,975

Task 3: Low Income CRDG Program Development Support

On February 18, 2021, the PUC rejected National Grid’s proposed Low Income CRDG Public Policy Adder pilot program for the 2021 PY in Docket 5088. As a result, SEA does not currently propose a budget for support relating to the evaluation and/or development of a Low Income CRDG adder or another program. However, in rejecting the adder, the Commission noted its interest in developing an alternative proposal to enhance the benefits of solar PV for low- and moderate-income (LMI) customers of National Grid for the consideration of the parties to Docket 5088. Since these parties include OER and the DG Board, OER has directed SEA to include a placeholder for potential support to OER, the Board and National Grid related to developing such an alternative program design.

Task 4: Paired Solar and Storage Adder Development Support

REG stakeholders in the developer community have expressed interest in developing a Public Policy Adder for solar PV projects paired with energy storage. OER and the Board have also expressed to SEA their desire to explore this issue further. At the outset of the budgeting process for SEA’s 2022 PY support activities, OER requested that SEA determine what activities (and what resources) would be required to develop a potential Public Policy Adder for the 2022 PY.

After further discussion with SEA (regarding resources needed for a full analysis) and with National Grid, OER and the Board have determined that the questions involved in developing such an adder were substantial enough to approach the question in two phases. In the first phase, SEA would collaborate with OER and National Grid to undertake threshold research and quantitative analysis during the 2022 PY to determine whether a Solar+Storage adder (which would compensate the solar component of a paired solar and storage project eligible for the REG program) has a credible chance of being considered cost-effective under the Docket 4600 Benefit-Cost Framework. Subsequently, if OER, National Grid and the Board determine that such a credible chance of cost-effectiveness exists (and the PUC agrees), OER will move to a second analysis phase, in which it would request the resources needed to engage in a more in-depth analysis of paired solar and storage resource economics needed to formally develop a potential Public Policy Adder during the 2023 PY.

Task 4.1 – Data Collection/Market Participant Surveys Regarding Paired Solar+Storage Cost and Performance Data

Under this task, SEA would assist OER and National Grid in making an initial determination regarding whether a Paired Solar+Storage Public Policy Adder would have sufficient “identifiable benefits to customers” to support a full analysis ahead of the 2023 PY. SEA would provide this support by engaging with stakeholders identified by OER, undertaking an analysis of the most promising residential and commercial use cases (maximum one per category) utilizing the CREST model, and writing a memorandum summarizing our findings for the Board’s (and PUC’s) consumption.

Table 4: Task 4 Budget Summary

Tasks/Subtasks	Total Cost
Task 4.1: Solar+Storage Feasibility Analysis (to Support Decision to Proceed During 2023 PY)	\$14,835
Task 4 Total	\$14,835

Task 5: Supplemental Stakeholder Engagement Regarding 2022 Public Policy Adder Development

Under this task, SEA would conduct further stakeholder engagement in conjunction with National Grid.⁷

Task 5.1: Public Policy Adder Meeting #1

SEA and National Grid would utilize one meeting to gather feedback regarding potential Solar+Storage use cases for SEA’s Task 4 analysis.

Task 5.2: Public Policy Adder Meeting #2

SEA and National Grid would utilize one meeting to gather feedback regarding the design of a potential 2022 PY (and/or thereafter) Carport Solar incentive, as well as on the methodology for calculating its value.

Task 5.3: Public Policy Adder Meeting #3

SEA and National Grid would utilize one meeting to follow up with stakeholders regarding a potential Carport Solar 2022 PY proposal and the Solar+Storage recommendation OER might make to the DG Board and/or PUC.

Table 5: Task 5 Budget Summary

Tasks/Subtasks	Total
Task 5.1: Public Policy Adder Meeting #1	\$4,652
Task 5.2: Public Policy Adder Meeting #2	\$4,652
Task 5.3: Public Policy Adder Meeting #3	\$4,652
Task 5 Total	\$13,956

Task 6: Additional PUC Engagement

Under this task, SEA would develop additional testimony and supporting documents to support requests that fall outside the Task 0 (Ceiling Price) scope.

Table 6: Task 6 Budget Summary

Tasks/Subtasks	Total
Task 6.1: Additional Carport Adder Pilot Evaluation Testimony/Data Requests	\$3,110
Task 6.2: Incremental Solar+Storage Related Testimony/Data Requests	\$3,257
Task 6.3: Incremental Ceiling Price Support (Task 1)-Related Testimony/Data Requests	\$6,534
Task 6 Total	\$12,901

⁷ OER and the Board will likely recommend additional stakeholder sessions regarding an LMI program if the PUC recommends consideration of a program that would “go live” during the 2022 PY.

Task 7: Project Management/Client Communication

Under this task, SEA will propose a regular schedule of check-in calls with OER, and a small amount of time needed to manage the expanded scope from an administrative perspective.

Table 7: Task 8 Budget Summary

Tasks/Subtasks	Total
Task 7 Total	\$5,486

Task 8: Efforts Contingent Upon Enactment of New Laws/Adoption of New Policies

OER and the Board have determined that there are several activities that fall outside of SEA’s proposed 2022 PY program development “core scope” (contained in Tasks 0-7), but nonetheless have a material chance of being necessary to undertake. Specifically, these activities are contingent upon decisions made by National Grid, the federal government and/or the Rhode Island General Assembly. We describe these activities below.

Task 8.1: New Public Policy Adder Development (If Passed by General Assembly)

Under this task, SEA would engage in the data collection, market participant surveys, quantitative analysis, and additional engagement with the PUC necessary to support any Public Policy Adders that might be enacted by the General Assembly during its 2021 session. The types of adders most likely to be enacted into law appear to be those that would incentivize siting projects on disturbed parcels of land.

Task 8.2: Changes to Federal Policy Affecting REG-Eligible Projects

Given the end-of-year timing of most legislation affecting the federal tax code, SEA often is in the position of needing to re-propose the Ceiling Prices following a change in federal law or policy. Both SEA and OER have determined that there are increased odds that the current Congress and Administration could pursue significant changes to both the level and structure of federal tax credits after the time by which the 2022 PY filings are due. Under this task, SEA will carry out the re-analysis and re-proposal of 2022 Ceiling Prices if and only if changes are made to federal policy at a time that falls after the DG Board approves the final recommended prices.

Task 8.3: Incremental 2022 PY Public Policy Adder Development Testimony/Data Requests

Under this task, SEA would support its findings before the PUC related to a 2022 PY Carport Solar adder, but only if recommended by National Grid.

Table 8: Task 8 Budget Summary

Tasks/Subtasks	Total
Task 8.1: Development of Public Policy Adders (If Required by New State Laws/Policies)	\$31,133
Task 8.2: Changes to Federal Policy Affecting REG-Eligible Projects (Contingent on Adoption Following Recommendation of 2022 PY Prices/Adders)	\$14,224
Task 8.3: Incremental 2022 PY Public Policy Adder Development Testimony/Data Requests (Dependent Upon National Grid Development of 2022 PY Public Policy Adders)	\$4,541
Task 8 Total	\$49,898

Overview of 2022 REG Program and Ceiling Price Development Tasks

Sustainable Energy Advantage, LLC

*Delivered before the Rhode Island Distributed
Generation Board (DG Board) on February 22, 2021*



Summary of Revised REG 2022 PY Budget Proposal

PUC Decisions in Docket 5088 (2021 PY Ceiling Prices & Program Development)

- Approved revised Ceiling Prices filed January 8, 2021 (reflecting changes in federal tax law passed in Consolidated Appropriations Act of 2021), but recommended exploring further subdivision of the Solar renewable energy classes (along with increases in proxy system sizes for cost analysis and production modeling) in 2022 PY in order to capture greater ratepayer savings
- Approved one-year continuation of the Carport Solar adder pilot program (through 2021 PY) at an adder value of 5 ¢/kWh, subject to the following conditions:
 - That the distribution interconnection costs of selected projects during the 2021 PY be lower than a two-year rolling capacity-weighted average for that size category; and
 - That selected projects must produce documentation sufficient to verify final costs of the canopy structure and mounting system at the time of Certificate of Eligibility issuance;
- Rejected expansion of Carport Solar adder pilot eligibility to Medium Solar projects;
- Rejected proposed Low Income CRDG adder pilot (with a value of 3 ¢/kWh) but suggested openness to non-adder alternative approaches to increasing LMI customer participation in the REG program, and indicated that it would circulate proposals during 2022 PY budget development process; and
- Approved most of proposed MW Allocation plan, but rejected proposed increase in Commercial and Large Solar CRDG categories to 5 MW, restoring the 3 MW allocations for each class from 2020 PY

2021 PY v. 2022 PY Budget Comparison

Task	Equivalent 2021 PY Task (& Approved Budget	1st Draft 2022 PY Requested Budget (January 2021)	2nd Draft 2022 PY Requested Budget (February 2021)
Contracted Ceiling Price Analysis ¹	\$65,000	\$65,000	\$65,000
Incremental Ceiling Price Assistance	N/A	\$33,121	\$54,703
Carport Solar Adder Evaluation/Development	\$89,392	\$38,975	\$38,975
Low Income Adder or Program Evaluation/Development	\$55,630 ²	\$66,198	\$0 ³
Energy Storage Adder Investigation		\$14,835-\$108,415	\$14,835
<u>Stakeholder Engagement</u>	\$11,806	\$18,606	\$13,954
Incremental PUC Support	\$14,140	\$20,533-\$23,790	\$12,901
Client Communication/Project Management	\$5,385	\$5,486	\$5,486
Efforts Contingent Upon National Grid Decisions and/or Enactment of New Laws and Policies	N/A	\$45,357	\$49,898
Total Core Scope	\$241,353	\$262,754-\$359,591	\$205,854
Total With Efforts Contingent on National Grid Decisions and/or New Laws and Policies		\$308,111-\$404,948	\$255,752

¹Represents annual contracted value for SEA Ceiling Price scope of services

²Represents sum of budget for of 2021 PY adder development tasks (2021 PY Tasks 2 and 3)

³Currently set to \$0, but may be revised based on PUC proposal regarding Low Income CRDG

KEY: Bold Red Text Indicates Brand New OER-Requested Task for 2022 PY, Underline text indicates tasks with material OER-requested increases in efforts relative to 2021 PY

Summary of Changes from REG 2022 Program Year 1st Draft Budget (Following PUC Decision in Docket 5088)

- **Changes to Core Scope**

- **\$66,198 decrease** in (legacy) Task 3 budget to account for zeroing out Low Income CRDG Public Policy Adder evaluation and 2022 adder value development following PUC's rejection of an adder-based approach for enhancing LMI engagement. Task 3 eliminated (at least, until further guidance can be given by PUC on potential LMI approaches)
- **(Up to) \$93,580 decrease** in Task 3 (legacy Task 4) budget to account for electing to take initial steps towards development of a Solar+Storage adder in 2022 PY, but delaying full development until at least 2023 PY
- **\$4,654 decrease** in Task 4 (legacy Task 5) budget to account for elimination of additional stakeholder meeting to discuss potential 2022 PY Low Income CRDG adder value
- **\$10,889 decrease** in Task 5 (legacy Task 6) budget to account for more optional/conditional activities (e.g., those that might require National Grid or General Assembly approval)
- **\$21,582 increase** in Task 1 budget to account for PUC request in Docket 5088 to further subdivide the Solar renewable energy classes and increase the assumed proxy system sizes

- **Changes to Activities Optional/Conditional on External Approvals**

- **\$4,541 increase** in Task 7 (legacy Task 8) budget to account for optional/conditional nature of time submitting testimony related to any potential 2022 PY adder values (represents an equal reduction in "core scope" share of Task 5 effort associated with PUC engagement)

Example of Potential Solar Class Subdivision and Proxy (Modeled) System Size Adjustment

2021 PY			2022 PY		
<i>Renewable Energy Class</i>	<i>Size Bin</i>	<i>Modeled Size</i>	<i>Renewable Energy Class</i>	<i>Size Bin</i>	<i>Modeled Size</i>
Small Solar I	1-15 kW	5 kW	Small Solar I	1-15 kW	Average in REG and NEM
Small Solar II	15-25 kW	25 kW	Small Solar II	15-25 kW	25 kW
Medium Solar	26-250 kW	250 kW	Medium Solar I	26-150 kW	150 kW
			Medium Solar II	151-250 kW	250 kW
Commercial Solar	251-750 kW	500 kW	Commercial Solar I	251-500 kW	500 kW
			Commercial Solar II	501-750 kW	750 kW
			Commercial Solar III	751-999 kW	999 kW
Large Solar	1-5 MW	4,500 kW	Large Solar I	1,000-2,000 kW	2,000 kW
			Large Solar II	2,001-5,000 kW	5,000 kW

Appendix: Revised Task-by-Task Summaries, Budgets and Timelines

Task 0 – 2022 Ceiling Price Development

- **Overview:** Sustainable Energy Advantage (SEA) plans to undertake the same scope of services it has rendered since 2011 to develop Ceiling Prices for Solar, Wind, Hydro and Anaerobic Digestion (AD) resources specified by the REG statute (and, as necessary, adjust said prices in response to changes in federal policy)
- **Tasks and Timing:**
 - **April-May 2021:** Initial Research/DG Board Decision Regarding 2021 Program Development plan
 - **June 2021:** Data Request/Survey Development and Administration/Initial Analysis
 - **June-October 2021:** Stakeholder Engagement and Follow-Up Analysis
 - **Week Ending October 29, 2021:** Expected DG Board Approval of 2021 Program Plan
 - **October-November 2021:** Development of Final Report/Recommendations
 - **Mid-November 2021:** Filing of Report and Recommendations at PUC
 - **November 2021-February 2022:** PUC Engagement in Support of Price and Program Approval

Task 1 – Incremental Ceiling Price Assistance (Under Existing Laws and Rules)

- **Overview:** The purpose of these tasks is to provide support that goes beyond the typical changes to Ceiling Prices that occur from year to year, but that do not require changes to federal or state law or policy to be authorized by OER or the DG Board.
 - **Task 1.1:** Under this Task, SEA would investigate if single-axis tracking (which has shown in some instances to result in lower bid prices in neighboring states than typical fixed-axis mounting) should be assumed for all or part of the population of Medium, Commercial or Large Solar projects for the 2023 program year, and whether doing so would balance ratepayer benefit with technical feasibility and market development.
 - **Task 1.2:** Certain REG stakeholders have raised the possibility of changing the DC capacity factor-based formula for calculating the size of Small Solar projects ahead of the 2022 PY. Under this task, SEA would work with National Grid to develop a range of DC capacity factors based on a range of typical tilts and azimuths. SEA would then work with National Grid to develop a formula for determining what a project's Ceiling Price would be based on the project's tilt and azimuth.
 - **Task 1.3:** At the hearing regarding the 2021 Program Year filing, PUC Chairman Gerwatowski thanked OER and the Board for its proposal to subdivide the Commercial Solar class into 251-750 kW and 751-999 kW size ranges as a means to reduce the cost of the program to ratepayers, and asked if it was possible to propose further subdivisions to enhance the cost-effectiveness of the program to ratepayers. The PUC also signaled its interest in this potential approach for the 2022 PY when issuing their rulings in Docket 5088. Under this task, SEA would develop a proposal for further subdivision of the REG Solar classes, vet the proposal with OER, National Grid, the DPUC and market participants.
- **If Additional Ceiling Price Support Activities Recommended by Board:** During the spring, summer and fall, SEA would focus on engaging in these efforts that dovetail with the Task 0 schedule.
- **If Additional Ceiling Price Support Activities Not Recommended by Board:** No additional SEA analysis or effort under this task.

Task 1 – Proposed Project Schedule

TASK/DATE (HALF-MONTH ENDING)	April		May		June		July		Aug		Sept		Oct		Nov		Dec		Jan	
	2021		2021		2021		2021		2021		2021		2021		2021		2021		2022	
	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H
Task 1: Incremental Ceiling Price Assistance																				
1.1 Single-Axis Tracking Feasibility Analysis																				
1.1.1 Incremental Data Collection/Surveys Regarding Single-Axis Tracking Cost and Performance																				
1.1.2 Development of Recommendation for 2023 PY																				
1.2 Residential Tilt/Azimuth Analysis																				
1.2.1 Incremental Data Collection from National Grid/PVWatts																				
1.2.2 Quantitative Analysis of Small Solar I Capacity Factors and Ceiling Prices at Varying Tilts/Azimuths																				
1.3 Subdivision of REG Solar Classes																				
1.3.1 Internal (OER/National Grid/DPUC) Development of Initial Draft Proposal																				
1.3.2 Vetting of Proposal with Stakeholders/Finalization of Recommendation																				

Initial Task 1 Budget Estimate

Tasks/Subtasks	Total
Task 1.1: Feasibility of Incorporating Single-Axis Tracking into 2023 PY Ceiling Prices	\$18,547
Task 1.2: Sensitivity Analysis of Residential Ceiling Prices by Tilt/Azimuth	\$14,574
Task 1.3: Subdivision/Adjustment of Proxy (Modeled) Sizes for REG Solar Classes	\$21,582
Task 1 Totals	\$54,703

Task 2 – Carport Adder Support

- **Overview:** Under this task, SEA and Mondre Energy would update its 2020 PY Carport Adder program evaluation (including its Docket 4600-based Benefit-Cost Analysis (BCA)) to capture data from new projects to provide OER and the Board with the information necessary to determine whether to create a permanent Carport Solar adder. In addition, and assuming that such a permanent adder is pursued by National Grid, SEA would support the calculation of the adder value.
- **Timing:** During the spring and summer, SEA and Mondre Energy will collect additional information from market participants, then spend the fall updating the existing BCA.

TASK/DATE (HALF-MONTH ENDING)	April		May		June		July		Aug		Sept		Oct		Nov		Dec		Jan	
	2021		2021		2021		2021		2021		2021		2021		2021		2021		2022	
	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H
2.1 Combined 2020 & 2021 Program Evaluation																				
2.1.1 Data Collection/Survey Drafting																				
2.1.2 Surveying Developers, Municipalities and Program Participants																				
2.1.3 Benefit-Cost Analysis																				
2.1.4 Memorandum Writing/Edits																				
2.2 2022 Program Year Adder Development																				
2.2.1 OpEx Data Collection																				
2.2.2 Calculation of Proposed Carport Adder																				

Initial Task 2 Budget Estimate

Tasks/Subtasks	Total
Task 2.1 – Combined 2020 & 2021 PY Evaluation	\$33,602
Task 2.2 – 2022 PY Adder Development (For National Grid Consideration Ahead of 2022 PY)	\$5,373
Task 2 Total	\$38,975

Compare to ~\$90k cost of Carport adder development during 2021 PY development process

Task 3 – Energy Storage Feasibility Analysis

- **Overview:** SEA would collaborate with National Grid and with stakeholders to determine whether developing a Public Policy Adder value for the solar component of a paired solar and storage project eligible for the REG program (regardless of size category) is justified for the 2023 PY.
 - **Task 3.1:** Under this task, SEA would assist OER and National Grid in making an initial determination regarding whether an Energy Storage Public Policy Adder would have sufficient “identifiable benefits to customers” to support a full analysis ahead of the 2023 PY. SEA would provide this support by engaging with stakeholders identified by OER, undertaking a “lite” analysis of certain use cases, and writing a memorandum summarizing our findings for the Board’s consumption.
- **If DG Board Recommends Initial Consideration of Energy Storage Adder:** SEA will spend time in September-October assisting OER, the DG Board and National Grid in deciding about whether to proceed to full consideration of a Public Policy Adder for the 2023 PY.

TASK/DATE (HALF-MONTH ENDING)	April 2021		May 2021		June 2021		July 2021		Aug 2021		Sept 2021		Oct 2021		Nov 2021		Dec 2021		Jan 2022		
	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	
	Task 3: Paired Solar and Storage Adder Development																				
3.1 Initial Determination Regarding Proceeding to 2023 PY Adder Development																					
3.1.1 Meetings with Stakeholders (on behalf of OER/Board)																					
3.1.2 Initial "lite" analysis of two select use cases (one residential, one commercial)																					
3.1.3 Memorandum with Results of Analysis																					

Initial Task 3 Budget Estimate

Tasks/Subtasks	Total Cost
Task 3.1: Initial Analysis to Support Decision to Proceed in 2023 PY	\$14,835
Task 3 Total	\$14,835

Task 4 – Supplemental Stakeholder Engagement Regarding 2022 Public Policy Adder Development

- **Overview:** Under this task, SEA would conduct further stakeholder engagement in conjunction with National Grid.
- **If 2022 PY Adder or Other Program Development Recommended by Board to National Grid):** At OER and the Board’s request, SEA would engage with National Grid and stakeholders in at least three stakeholder technical meetings regarding a potential 2023 PY solar+storage adder, any potential re-proposal of the Low Income CRDG adder, a third year of a Carport adder, or any other changes needed

TASK/DATE (HALF-MONTH ENDING)	April 2021		May 2021		June 2021		July 2021		Aug 2021		Sept 2021		Oct 2021		Nov 2021		Dec 2021		Jan 2022		
	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	
	Task 4: Incremental Stakeholder Engagement																				
4.1 Stakeholder Meeting Prep and Execution (Likely RE: Solar+Storage)																					
4.2 Stakeholder Meeting Prep and Execution (Likely RE: Solar+Storage)																					
4.3 Prep and Meeting to Discuss Revised Draft of 2022 PY Adders																					

Initial Task 4 Budget Estimate

Tasks/Subtasks	Total
Task 4.1: Incremental Stakeholder Engagement Meeting #1	\$4,652
Task 4.2: Incremental Stakeholder Engagement Meeting #2	\$4,652
Task 4.3: Incremental Stakeholder Engagement Meeting #3	\$4,652
Task 4 Total	\$13,956

Task 5 – Additional PUC Engagement

- **Overview:** Under this task, SEA would develop additional testimony and supporting documents to support requests that fall outside the Task 0 (Ceiling Price) scope.
- **If Adder Evaluation Required by PUC (and 2022 PY Adder Development Recommended by Board to National Grid):** The additional effort would be expended during the period in which filings and data request responses are being prepared for the PUC.
- **If Adder Development Not Recommended by Board to National Grid:** No further SEA analysis or effort assumed.

TASK/DATE (HALF-MONTH ENDING)	April		May		June		Sept		Oct		Nov		Dec		Jan	
	2021		2021		2021		2021		2021		2021		2021		2022	
	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H
Task 6: Incremental PUC Engagement																
6.1 Develop and submit testimony																
6.2 Respond to data requests																
6.3 In-person verbal testimony, as needed																
6.4 Additional follow-up analysis or post-hearing data requests, as needed																

Initial Task 5 Budget Estimate

Tasks/Subtasks	Total
Task 5.1: Additional Carport Adder Pilot Evaluation Testimony/Data Requests	\$3,110
Task 5.2: Incremental Solar+Storage Related Testimony/Data Requests	\$3,257
Task 5.3: Incremental Ceiling Price Support (Task 1)-Related Testimony/Data Requests	\$6,534
Task 6 Total	\$12,901

Task 6 – Client Coordination/Project Management

- **Overview:** Under this task, SEA would coordinate with OER on a biweekly basis, and prepare for those meetings.
- **Budget:** We have estimated that this cost, over 20 weeks of project duration, would be **\$5,486**.

Task 7 – Efforts Contingent Upon Enactment of New Laws/Adoption of New Policies

- **Overview:** During its 2021 session, OER has identified that the General Assembly could potentially consider and/or develop adders related to optimally-sited solar projects for the REG and/or net metering programs. In addition, OER has also identified that further changes to federal tax law or trade policy could occur during the first year of a new federal administration, but after the DG Board’s approval of recommended 2022 prices. Under this task (and if such legislation is enacted in 2021), SEA would support National Grid’s development of non-Carport siting-related adders, as well as undertake any incremental changes related to federal policy that happen after the approval of Ceiling Prices by the DG Board.
 - **NOTE: OER and SEA will be aware of the need for changes resulting from possible legislation passed by the General Assembly no later than June, and of the need for changes based on changes to federal policy no later than December 2021/January 2022.**
- **If New Policies/Laws Adopted:** The timing under this task is unknown, except for Task 7.4 (shown in the table below).
- **If New Policies/Laws Not Adopted:** No further SEA effort or analysis would be undertaken.

Task 7 – Efforts Contingent Upon National Grid Decisions and/or Enactment of New Laws and Policies

TASK/DATE (HALF-MONTH ENDING)	April 2021		May 2021		June 2021		July 2021		Aug 2021		Sept 2021		Oct 2021		Nov 2021		Dec 2021		Jan 2022		
	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	1H	2H	
	7.1 New Siting Adders: Data Collection/Market Participant Surveys																				
7.2 New Siting Adders: Quantifying Adder Values																					
7.3 New Siting Adders: Additional PUC Process Effort																					
7.5 Other 2022 PY Adders: Additional PUC Process Effort																					
7.4 Changes to Federal Policy Affecting REG-Eligible Projects (If Necessary Following DG Board Approval of 2022 PY Ceiling Prices)																					
<i>7.4.1 Incremental Data Collection Regarding Changes to Federal Policy</i>																					
<i>7.4.2 Incremental Re-Analysis and Re-Proposal of Ceiling Prices Following Changes to ITC, PTC or Other Federal Policy</i>																					

TBD (Dependent on Possible Timing of Bill/Policy Passage)

Initial Task 7 Budget Estimate

Tasks/Subtasks	Total
Task 7.1 – Data Collection/Market Participant Surveys (Optional & Dependent Upon New Laws or Policies)	\$13,165
Task 7.2: Quantifying Adder Values (Optional & Dependent Upon New Laws or Policies)	\$14,866
Task 7.3: Additional PUC Process Effort Related to Siting Adders (Optional & Dependent Upon New Laws or Policies)	\$3,102
Task 7.4: Changes to Federal Policy Affecting REG-Eligible Projects (Optional & Dependent Upon New Laws or Policies)	\$14,224
Task 7.5: Incremental 2022 PY Public Policy Adder Development Testimony/Data Requests (Optional & Dependent on National Grid Development of 2022 PY Public Policy Adders)	\$4,541
Task 7 Total	\$49,898



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