STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: RENEWABLE ENERGY GROWTH PROGRAM FOR YEAR 2018 RI DISTRIBUTED GENERATION BOARD AND NATIONAL GRID	))))	Docket 4774

NEW ENERGY RHODE ISLAND
SUPPLEMENTAL MEMORANDUM

New Energy Rhode Island (NERI) submits this supplemental memorandum and the attached Pre-filed Testimony of Fred Unger in further support of its position on the proposed rate of return and ceiling pricing response to comments of the Commission at their open meeting on January 12, 2018, and to the Division's memorandum filed on January 17, 2018.

NEW ENERGY RHODE ISLAND

By its attorneys,

HANDY LAW, LLC

Seth H. Handy (#5554)
42 Weybosset Street
Providence, RI 02903
Phone: (401) 626-4839
Facsimile: (401) 753-6306
seth@handylawllc.com

State of Rhode Island Public Utilities Commission

In Re: Renewable Energy Growth Program for Year 2018 RI Distributed Generation Board and National Grid

Docket No. 4774

Pre-Filed Testimony of

Fred Unger

January 17, 2018

Q. Please state your name and business address.

A. My name is Fred Unger and my business address is 165 Evergreen Street, Providence, Rhode Island 02906.

Q. By whom are you employed and in what capacity?

A. I am the principal of the Heartwood Group, Inc. a Providence based renewable energy development and consulting firm.

Q. What is your experience with renewable energy development/finance?

A. For over a decade I have been a clean energy project development consultant and owner's representative responsible for the development of over 80 renewable energy projects in Massachusetts and Connecticut with combined capacity over 10 megawatts. I have provided development services to two financial institutions that invest in solar facilities, a public university that built a 3 MW wind project, a publicly owned utility that built a 1.6 MW wind turbine, land owners interested in developing solar projects and solar installer contractors.

My primary roles in projects have involved assuring the financial feasibility and technical quality of projects, as well as overseeing the design and local, state and federal permitting process on behalf of project owners and investors. As projects move to the operations stage, for most of the projects I have been involved with, my clients own the project and I continue to have a role in overseeing operations and maintenance contracts as well as in trouble shooting and resolving unexpected problems of all kinds that arise.

Prior to taking on this role, I started an early internet based remote monitoring service for renewable energy providers that enabled performance tracking, monitoring for system problems, and reporting to ISO New England for generating renewable energy certificates. One of our customers for that business was SunEdison which grew to become the largest solar developer in the world. That company was sold and merged with a competitor. I also have over twenty years' experience working as a builder and real estate developer.

Q. In your experience and opinion is the IRR provided for in the REG pricing a reasonable rate of return?

A. It's my understanding that the CREST model developed and used by Sustainable Energy Advantage Inc. assumes 6.5% after-tax return for a large solar project and for medium solar projects or large wind projects an after-tax return of 7.1%. This is on projects that include significant debt financing.

My client that is both a lender and tax equity investor has set a minimum target of 7% after tax return. Several developers have found their somewhat unique offering to be attractive. While Sustainable Energy Advantage, Inc. may know more about the overall tax equity market than I do, my view is that the returns they have modeled are low.

It is important to compare these rates with other opportunities that investors have relative to risk involved. The Rhode Island market is small and the program

fairly new, so investments in these projects inherently carry more risk than investments in more established markets.

While avoiding taxes is perhaps attractive, investors in these projects also need to consider potential returns after tax considerations from other types of investments available to them or from their core businesses and compare those risks and returns to investments in potential REG projects.

An obvious benchmark for the Commission to consider is the returns provided to National Grid. In the current rate case, National Grid is proposing 10.1% returns on their investments. It is my understanding they currently receive over 9%. If the monopoly utility can earn essentially guaranteed no-risk regulated returns at those levels, why is it considered reasonable to expect investors in significantly riskier private investments to expect less? While it is important for the commission to carefully examine ratepayer impacts like the rate of return for REG projects, the rate of return proposed by National Grid in the current rate case will clearly have an exponentially larger impact on rate payers and seems to me much harder to justify based on the level of risk involved.

Q. What evidence can you offer that the ceiling pricing is too low to generate even the established rate of return?

A. It seems that the enrollment and build out from the results of previous years speak for themselves. For some sectors like residential solar, demand has exceeded

the available contracts for that class or sector, so it would seem pricing for those sectors is adequate. For other project sectors, the tranches for the various classes have not been fully subscribed while development across the rest of the country has been growing. That is a pretty clear indicator that pricing has not been adequate to attract development.

Perhaps more importantly, numerous projects that have won DEG or REG awards have not been built within their allotted time with developers sacrificing their deposit rather than lose even more by building at the low prices that they bid in.

Numerous large projects are opting to be virtual net metering facilities. At today's average annual rates and REC prices, virtual net metering offers only slightly better financial returns than REG projects after considering the discounts to off-takers necessary to get them involved. But the risks are significantly higher, especially the risk of regulatory changes, with utilities across the nation determined to undermine net metering policies. Those projects are also harder to finance than a project with what is effectively a 20-year contract with a large regulated utility. Unlike REG with fixed costs for twenty years, developers are anticipating the likelihood of compensation for net metering projects increasing as the cost of electricity increases over time. But with recent trends in energy costs, and at least the potential for regulators to get transmission and distribution cost increases under control, there is no certainty that utility prices will increase. Hopefully, as the

Commission implements Power Sector Transformation, Rhode Island's long-term electricity prices will be lower than they are today. It is notable that despite significantly higher risks, projects are choosing to net meter rather than pursue fixed REG pricing.

Further evidence that the rates proposed are too low is the recent SMART program auction results in Massachusetts. The auction mechanism was used to set compensation level came in setting compensation levels significantly higher than RI values for large solar projects despite the fact that they did not get bids for the entire block in any region of the state because the Massachusetts significantly higher ceiling prices were still too low to encourage significant auction participation. In NStar territory, which is the most like RI in terms of land use and land availability and significantly larger than Rhode Island in both land area and electrical load, there was only one 2 MW project bid into the auction for a block of over 21 MW available. It was bid at the ceiling price, suggesting the ceiling prices were way too low at 17 cents per kWh. It should also be noted that the Massachusetts program will include adders for different land use types and off-taker types. For instance in addition to the 17 cent base rate for Eversource NStar territory, projects serving community solar will get an additional 5 cent adder and if it is on farm land that continues in use for agriculture, it will get an additional 6 cent adder. So the community solar project on farmland in eastern Massachusetts will get 28 cents per kWh, or about twice what the same project will get under the Rhode Island REG program. It should not

be hard to imagine where developers will invest their time and development risk capital if they have a choice of 28 cents per kWh or the ceiling price proposed for large solar projects in Rhode Island.

Q. Why are so many projects that are enrolled in the DG Contracts and REG programs not getting built?

Q. As an investor's representative, I have reviewed many proposals for projects in which projected costs of development and operation have been significantly below what experience with operating projects for the last decade has shown to be reasonable. It does not surprise me that many projects have not been completed. In fact, one of the solar installer clients I advised submitted and later walked away from an REG award that I had advised them was too low.

The Cadmus Study of Renewable Energy Installation Quality in the Renewable Energy Growth Program is another clear indicator that the folks winning these awards are in many cases companies with inadequate knowledge and experience to build and operate projects well. The 41% of renewable energy systems inspected exhibited major or critical installation deficiencies that they cite is a real concern.

I was involved in overseeing the investment in a project developed, designed and built by a Fortune 50 conglomerate that had well over 100 faulty design and construction issues to resolve and was nine months behind schedule. Even some

very large and experienced firms seem to have trouble properly accounting for the real costs of developing and operating a good quality renewable energy project.

Q. Is the ceiling price setting process meeting the statutory requirement to establish a reasonable rate of return on investment?

A. Based on all of the above, I would say no, the ceiling price setting process is inappropriate. I might go further to suggest it is unnecessary. It seems to me that projects should be allowed to bid whatever price they wish and then have projects selected on both price and benefit criteria until each allocation is filled.

Q. Beyond failing that basic statutory economic standard for the program, what kind of added values/benefits should be considered in setting the ceiling prices per docket 4600?

A. There are numerous benefits these projects provide that need to be considered in awarding REG awards. Those might include: avoided energy cost; avoided generation capacity and reserve capacity costs; avoided transmission capacity cost; avoided distribution capacity; avoided distribution infrastructure cost; distribution system voltage and frequency regulation; avoided regulatory compliance costs of CO2, SO2, and NOx ; wholesale energy market price suppression; avoided wholesale energy supply costs; avoided fuel price uncertainty from our overdependence on volatile priced natural gas; avoided natural gas pipeline costs; avoided social and medical costs related to of CO2, SO2, and NOx pollution; benefits of jobs, local

businesses and other economic factors of locally generated energy. A good estimate of some of these benefits can be found in the Acadia Center's July 2015 report "Value of Distributed generation – Solar PV in Rhode Island" - http://acadiacenter.org/wp-content/uploads/2015/07/AcadiaCenter_GridVOS_RhodeIsland_Updated_2016_0119.pdf

Q. Did you or other NERI members raise these issues with the DG Board for its consideration?

A. Yes. As part of our comments on the assumptions regarding a reasonable rate of return, requesting the study of program performance that the Board ultimately asked of National Grid and National Grid produced on September 25, 2017. We are concerned that the study was not properly accounted for in reaching the final pricing.

I attended a DG Board meeting and pointed out to the Board that in contradiction of the clear guidance of Docket 4600 stakeholder consensus and the subsequent order from the Commission, the REG price setting process completely ignored the benefits projects provided and only considered costs. I further suggested that the process needed to be redesigned to consider benefits.

Despite very clear language in the enabling legislation CHAPTER § 39-26.6-22 that the utility may propose "incentive payments to achieve other technical or public policy objectives that provide identifiable benefits to customers" and that "any

incentive-payment adders must be approved by the commission, and shall not be counted as part of the bid price when the bids are selected at an enrollment event," along with the very clear results of Docket 4600 that benefits as well as costs need to be considered, the DG Board Chair responded to me that "the Public Utility Commission is not the Legislature". The Board ignored my request as well as any consideration of the benefits of distributed energy resources in setting the rates for compensating those resources. NERI's counsel, Attorney Handy, raised similar concerns at later DG Board meetings that were similarly disregarded. As well established in Docket 4600, if the ceiling price setting process is not cognitive and reflective of the real value these resources provide to customers, the distribution system and society, Rhode Island will not see the levels of investment needed to reach the goals that the Governor and Legislature have established.

Q. Does this conclude your testimony?

Yes.