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To: Sustainable Energy Advantage
From: Handy Law, LLC
Date: February 16, 2023
Regarding: OER's Distributed Generation Policy Planning Initiative

We were asked to provide more specifics about an alternative approach to achieving the general assembly's energy and climate mandates. We are advised that there is little time to consider such alternatives according to the schedule set by OER. This is extremely important work and stakeholders should be given adequate opportunity to consider and propose alternative approaches for consideration.

I. <u>One Considered and Proposed Approach</u>

The general assembly has now mandated a new clean energy future for Rhode Island that must now be designed to expeditiously, efficiently and cost effectively meet our energy needs. Current programs cannot measure up to the transformation mandated by our legislature. In fact, they have underperformed and are underperforming. It is time to give customers (state, munis, industrial parks, colleges, schools, businesses, residents. . .) the support and the flexibility they need to plan and provide for their own secure and cost- effective clean energy future (thermal, transportation, electricity). Europe & other proactive states are providing such support and authority in order to achieve security/resilience, economic and climate objectives (CT, MA, HI, CA, NJ, NY… see https://www.thinkmicrogrid.org/assets/Think%20Microgrid%20State%20Assessment%20-%20June%202022.pdf).

Effectively scale the goal of self-reliant homes (eg, demand response, efficiency, solar, air source heat pumps, electric vehicles, battery….) at every customer level, taking the outsourced (and disincentivized, expensive and slow) middlemen out of the middle. The program would provide financial support for system planning, remove obstructions and provide adequate compensation through a microgrid feed-in tariff. In our municipalities we can build on municipal aggregation - let the customer do what they can to provide for their better energy future while also striving together to propel state goals.

i. Planning & Implementation Support

The customers will need financial and technical support to plan comprehensively and effectively for their closed loop energy futures. This is the opportunity to leverage newly authorized federal funding to expand on the RI Infrastructure Bank's municipal resiliency grant funding program to include all multi-user microgrid projects (state, municipal, industrial park, affordable housing, etc). Enable such collaborative efforts to hire pros with experience implementing such strategies in Europe, HI and elsewhere. Instead of

just planning for resilience of physical infrastructure, support planning and providing for total energy resilience.

Given especially the lack of initiative and accomplishment on scaled thermal energy (heating and cooling) solutions, give particular planning emphasis and funding support to multi-customer microgrid initiatives for centralized and shared thermal solutions. This prioritization is also important for many other reasons, including: 1) scale & required speed demands for centralized thermal solutions; 2) cost effectiveness will demand centralized thermal solutions; 3) electrification through air source heat pumps alone will greatly increase our demand for electricity which has significant ramifications (demand = cost under standard economic theory, demand = siting challenges, etc); 4) there are viable alternatives implemented in other places (like scaled implementation of geothermal, biomass) that have not received nearly adequate attention here as of yet. The State of RI and/or its municipalities should really be driving hard to evaluate these scaled thermal opportunities on a state-wide basis right away, thereby relieving the planning and impact pressure (eg, demand for more electricity) at smaller customer levels. See eg, https://www.canarymedia.com/articles/geothermal/utilities-may-use-their-pipes-for-geothermal-heat-instead-of-gas?utm_source=Sailthru&utm_medium=email&utm_campaign=Issue:%202023-02-13%20Utility%20Dive%20Newsletter%20%5Bissue:48025%5D&utm_term=Utility%20Dive

On the other hand, scaled implementation of EV programs will now receive broad based support (federal funding for local implementation) even in the absence of specific prioritization in RI.

Of course, continued state requirements for timely and effective implementation of highly cost-effective demand side management strategies (time of use rates) and energy efficiency will be another essential complement to any customer efforts to build energy self-reliance.

ii. The Microgrid Feed-in Tariff Rate

A microgrid tariff would be based on the average rate for the class over the last ten years, per the net metering formula (omitting some bill elements). In effect, pay people to beat past rates rather than game future rates. But, adjust for preferred rates so that rate preferred customers like low income and municipalities are given a preferred rate (rather than their discounted rate). Any customer unit can get this rate by applying to RI Infrastructure Bank to be recognized (and supported) as a "microgrid." Some customers don't have to apply (residences or businesses, affordable housing, anyone currently enrolled in net metering).

Microgrid customers get the renewable energy credits for their production of clean energy as well, as they should (for producing the value that is meant to be compensated under RI renewable energy standard).

Rate adjustment every 10 years - if you have closed loop energy system (defined to include electricity procured within RI - including offshore, thermal self-reliance and adequate EV infrastructure) you can lock in to the previous 10 year rate, if better/preferred. Otherwise, adjust up to new average over prior 10 years (if/as rates would be expected to come down w reduced reliance on gas).

If your microgrid cannot close the loop for practical reasons (roof size inadequate to power air source heat pumps in your house) you can purchase clean energy from RI projects. REG program redesigned as a supplier program for this pool of microgrid customers needing additional clean energy (credits to be provided at the microgrid tariff rate).

State can apply too and also given 10 years to close its loop (including offshore). But, if a larger unit (State, municipality) doesn't succeed at closing their energy loop but a smaller customer within that larger customer (industrial park, college, affordable housing, residence) does, then that smaller unit remains eligible to opt for prior rate.

iii. The Cost Benefit Analysis

The CBA for this has already been done in a long stakeholder process run by energy experts. You can see it in our State Energy Plan (Energy 2035), here, beginning at page 46 -
https://planning.ri.gov/sites/g/files/xkgbur826/files/documents/LU/energy/energy15.pdf
https://energy.ri.gov/sites/g/files/xkgbur741/files/documents/energyplan/ENE_RISEP_Business_As_Usual_Forecast.pdf
https://energy.ri.gov/sites/g/files/xkgbur741/files/documents/energyplan/Navigant_RISEP_Scenario_Modeling_Executive_Summary_Results.pdf

The full modelling results are provided here - https://energy.ri.gov/resources/major-initiatives/state-energy-plan#:~:text=The%20Plan%20demonstrates%20that%20Rhode,percent%20by%20the%20year%202035.

This well researched and documented work speaks for itself and does not have to be redone here. (see attached excerpt)

Energy 2035 also modeled the energy security and energy sustainability benefits of this evolution of our thermal, transportation and electric systems relative to continued business as usual. Those impacts should also be accounted for in this current evaluative process.

iv. The Legal/Tariff Reform - Removing Obstructions

Fortunately, OER's microgrid report already engaged stakeholders extensively in identifying some legal reforms that would be advisable. See https://energy.ri.gov/renewable-energy/energy-storage/battery-storage/resilient-

microgrids-critical-services. Some of the more important of those reforms are highlighted here:

- Require, incent or enable the electric and gas distribution companies to create custom tariffs for cost recovery and/or rate risk reduction in microgrid locations, and/or for microgrids to monetize sources of value that they provide.
- Enable approved microgrids to distribute power across public rights of way and utility easements.
- Create enabling structures to facilitate economical and legal low-risk project development behind the meter (BTM).
- Require, incent or enable the electric and gas distribution companies to support microgrids.
- Enable non-utility third parties to own and operate multi-user microgrids.

II. Why Benefit Cost Analyses of Existing Programs is Inadequate to Serve the General Assembly's Mandates

A BCA approach to existing electricity programs will not serve the general assembly's purposes or intent because our existing renewable programs are designed to be incremental only (not transformational) and are structurally and/or politically unable to scale to the extent needed to satisfy 100% by 2032 or the Act on Climate.

i. Renewable Energy Growth

REG was designed as an incremental program (moderate annual targets by class) but its administrative complexity (and cost) and its unforgiving focus on cost effectiveness together with the utility's inattention to delivering projects cost effectively has rendered it ineffective at meeting its purpose. The REG program has long underperformed on its modest annual targets with especially alarming underperformance in most recent years, now when we need renewable energy growth more than ever.

Why is this so? The detailed process of administering this law has strangled its effectiveness. The annual process of setting cost of development projections is so cumbersome and inaccurate that it has lost the interest of the development community that is meant to provide and guide its input. It is the developers that truly understand the costs of project development – like, for example, the costs to interconnect projects. But, when those developers participate in one of the painstaking annual CREST cost modelling exercises, their input too often is not heeded, leaving the actual economics of the program irreparably broken.

This problem of deficient accounting for costs is only accentuated by utility administration of renewable energy development. For example, as the DG Board attempts to peg the actual cost of interconnection, the utility's billed costs have gone up at a rate that greatly exceeds any projected costs. This while PUC dockets 5205 and 5206 recently exposed RIE's admission that it has charged and still charges renewable energy projects for its costs of upgrading its system to their standards for service of its load

requirements rather than just the cost of interconnecting the renewable energy project, despite our law's requirement that they only charge renewable energy projects for the actual cost of interconnecting those projects. This while RIE admits to disallowing recovery of those excess costs until and unless another customer makes use of the excess upgrades and denying any and all such recovery if that subsequent user comes to the system more than 5 years after the issuance of an impact study to the renewable energy project (all of which, again, is in direct violation of RI's interconnection statute). This while RIE admits that its tariff is inconsistent with RI law in allowing it discretion on whether to allow cost sharing for system upgrades that benefit more than one customer rather than automatically administering such sharing as required by the statute. This while RIE long delays all projects over 1 megawatt in size to study their purported strain on the region's transmission system despite the fact that RI's distributed generation programs are designed and intended to, among other benefits, reduce strain on and cost of the regional transmission system, which is designed and used to move electricity long distances. Any developer that had once planned to build a project of more than one megawatt has long awaited the completion of these "affected system operator" studies, not knowing the possible economic impacts of transmission system upgrade costs and ongoing costs of operating and maintaining the regional transmission system (so called "Direct Assignment Facility" charges or "DAF charges").[1] So, these developers that enrolled in the REG program anticipating one timeline and cost paradigm are now locked into 20 year obligations to provide electricity at a price that did not anticipate (could not have possibly anticipated) the potential cost to upgrade our region's transmission system on a development (and revenue) schedule that they no longer have any control over. The utility's administration of interconnection very clearly is not and has not been designed for "renewable energy growth."[2]

In addition, when activists concerned about siting renewable energy in forested and open space advocated with the DG board to adequately compensate REG projects for the actual cost of constructing solar canopies over previously developed land, and the DG board developed a viable price for such developments, the PUC refused to approve it. We have reached a time where misinformed outlooks on cost effectiveness have handcuffed the capacity to build economically and politically viable renewable energy projects through our REG program. That dynamic can no longer coexist with the general assembly's mandates for 100% by 2032 and its Act on Climate.

REG has been strangled administratively and economically and (sadly) is, therefore, no longer a viable prospect to achieve the general assembly's mandates of 100% renewable energy by 2032 or the Act on Climate. That is why few developers engage in development of the ceiling prices and why the program is way off its modest (especially

[1] This all despite Pennsylvania Power & Light's admission, when it proposed to take over the Narragansett Electric Company, that it does not require local renewable energy projects to submit to these transmission ASO studies and upgrade costs in its other jurisdictions.

[2] And the utility has overcome the legislature's attempt to appoint an independent, qualified interconnection ombudsman to appropriately oversee its deeply conflicted administration of interconnection by engaging the former speaker of the house to effectively lobby the Governor and our general assembly, all with inexplicable support from our own utility regulators, both the PUC and the DPUC.

relative to the new legislative mandates) enrollment targets. Those that are supposed to participate have completely lost faith.

Under these conditions, RI's REG has not met and cannot be expected to meet its purposes to "to facilitate and promote installation of grid-connected generation of renewable energy; support and encourage development of distributed renewable energy generation systems; reduce environmental impacts; reduce carbon emissions that contribute to climate change by encouraging the siting of renewable energy projects in the load zone of the electric distribution company; diversify the energy-generation sources within the load zone of the electric distribution company; stimulate economic development; improve distribution-system resilience and reliability within the load zone of the electric distribution company; and reduce distribution system costs." R.I. Gen. Laws § 39-26.6-1. Needless to say, under these conditions, our "Renewable Energy Growth" program cannot achieve the much more aggressive purposes of the general assembly's new energy and climate mandates.

ii. Net Metering

The viability of our net metering program has also been strangled by the utility's administration of interconnection and by concerns about siting economically viable projects, but it is mostly doomed because of political assault through a sustained campaign of economic misinformation.

First, net metering has always been an incremental program. It started as a toe under the curtain, allowed to only make up 3% of any utility's base load requirement. Only when advocates lobbied that it made no sense to restrict a customer's capacity to self-supply electricity at a cost lower than what they would have to obtain that power on the open market, did the utility (and then the general assembly) agree to remove the total load restriction. But then, in order to be able to self-produce electricity below the retail cost, local renewable energy projects have to have equitable access to the electric distribution system (ie, interconnection), which has become a severe problem (see above).

Moreover, in RI there are limits to how much electricity can be generated to supply load "behind the meter." We simply do not have a lot of commercial/industrial customers with large on-site load requirements that are adequately situated to co-locate substantial renewable energy projects on the site of that load. Many large load customers have too much infrastructure on site to allow space for significant renewable energy projects.[3] Similarly, many RI residents do not have the roofs or the capital to build their own renewable energy projects at home. Thus, when the general assembly approved a thirty-megawatt program to allow "community solar" projects developed off site but contracted to supply electricity to RI residents (CNM) it was very quickly oversubscribed. That program was to be reevaluated for expansion in 2018 but has yet to be expanded. . . Likewise, when the general assembly allowed public entities and non-profits to source their net metering credits off-site (aka "remote net metering"), the program became very popular. But, as with CNM, when the general assembly has regularly entertained the

[3] This problem is also (sadly and unsustainably) accentuated by the resistance to siting wind on shore in RI.

possible expansion of RNM, the utility and its supporters have claimed that net metering is somehow subsidized and too expensive for other ratepayers. Last session, environmental advocates joined in the utility-inspired myth that net metering is too expensive for RI customers (see https://ritv.devosvideo.com/show?video=60029f4a6d25&apg=634c8273). It is that political myth that now kills the possibility that net metering might meet the general assembly's mandates.

Utilities have long tried to convince regulators and legislators that distributed generation is too expensive for ratepayers, but all the experts and studies prove them wrong on that. It's not at all surprising that utilities propound such a myth. As RI's Power Sector Transformation report concluded,

> While many industries have become more efficient over the last few decades by leveraging information technologies to more fully utilize capital investment, Rhode Island's peak to average demand ratio is 1.98, meaning that nearly half of the utility's capital investment is not utilized most of the time. (pp. 14-15). . .Over the last decade, Rhode Island did not need more than 1200 MW of capacity during most hours. The electric grid has been built to ensure that those few hours a year that approach 2000 MW of demand can be met. The top 1% of hours cost the state ratepayers around 9% of spending, at around $23 million, while the top 10% of hours cost 26% of costs at $67 million, as illustrated in Figure 4. To meet peak demand, our system currently invests in solutions that are more expensive than is necessary. https://ripuc.ri.gov/sites/g/files/xkgbur841/files/utilityinfo/electric/PST-Report_Nov_8.pdf (pp. 14-15)

The evident opportunity is in cost avoidance – but that is not part of the utility vocabulary or modus operandi. Study after study has concluded that distributed generation is cost effective for our energy future in RI and everywhere.[4] That includes a study the Acadia Center conducted specifically for RI.[5] Indeed, our own general assembly has had the benefit of a direct expert briefing on why a distributed energy economy is so effective for RI.[6] Finally, and maybe most importantly, RI's energy plan, Energy 2035, is extremely well researched and clear in its position that what is unaffordably expensive for RI is our continuation and perpetuation of business as usual.[7]

Under these political conditions, net metering can no longer be relied on to serve its purposes to "to facilitate and promote installation of customer-sited, grid-connected generation of renewable energy; to support and encourage customer development of renewable generation systems; to reduce environmental impacts; to reduce carbon emissions that contribute to climate change by encouraging the local siting of renewable energy projects; to diversify the state's energy generation sources; to stimulate economic

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[4] See https://ripuc.ri.gov/sites/g/files/xkgbur841/files/eventsactions/docket/4568-WED-Ex4-BeyondRewards%2811-23-15%29.pdf. It is not at all surprising that this collection of studies demonstrates that the only studies showing otherwise are studies that were conducted by or on behalf of utilities.

[5] See https://ripuc.ri.gov/sites/g/files/xkgbur841/files/eventsactions/docket/4568-Acadia-Anthony%2811-23-15%29.pdf at Exh AC-5.

[6] http://ritv.devosvideo.com/show?video=jforobsf&apg=61f109a4

[7] When advocates attempted to raise the systemic benefits of distributed generation with the consultants that conducted RI OER's report on achieving 100% by 2030 they were mystifyingly denied access to the consultant and the comments went unrecognized and unincorporated. Access to Public Information Act requests related to that proceeding are still unresolved and in litigation.

development; to improve distribution system resilience and reliability; and to reduce distribution system costs." R.I. Gen. Laws § 39-26.4-1. Needless to say, under these conditions, net metering cannot achieve the much more aggressive purposes of the general assembly's new energy and climate mandates.

iii. Siting

Sadly, some of our State's most prominent energy and environmental advocates have recently sided with utility supporters on the question of properly valuing net metering. It seems that is principally out of an understandable motivation to prevent the siting of sprawling solar projects on land preferred to be prioritized for conservation and species protection.

The reforms contemplated here would likely have ancillary benefit of producing much better alignment around siting local renewable energy. Under a customer-oriented action plan for greater self-reliance, customers would "bring home" the responsibility/opportunity/benefits of achieving energy self-reliance rather than perceiving clean energy as something pushed on them by developers seeking profit.

We submit that OER ought to join these stakeholders in supporting uniform protection of specified, key natural resources in our state from all development (renewable energy and otherwise). Such reform ought to be implemented equitably and consistently across all user groups so that we actually ensure the protection of our prized natural areas rather than denying access to renewable energy while allowing other more permanent and utility service demanding alternatives. This balanced approach is also necessary to comply with agency obligations under the Resilient RI Act (2014 – see https://energy.ri.gov/heating-cooling/fossil-fuels/learn-about-natural-gas/resilient-rhode-island-act-2014) (all state departments to exercise authority to climate change mitigation, adaptation, and resilience in so far as climate change affects its mission, duties, responsibilities, projects, or programs) and the Act on Climate (2022 – see https://climatechange.ri.gov/act-climate) (same).

Now that we have fallen behind on our energy plan (Energy 2035), the Systems Integration RI report (SIRI), "Power Sector Transformation" and the purposes of our existing renewable energy legislation, we effectively need to turn to scaled open sourcing. Let us simply get out of the way and watch RI customers make it happen.

III. Reiterated Procedural Concern

Stakeholders got notice of this effort to reevaluate RI's energy programs on February 2, 2023. We are told that we must come up with alternatives to existing energy programs quickly so that they can be included in time to meet OER's aggressive schedule for the consultant to conduct benefit cost analysis of alternative program options. That is a status quo and results oriented process for this transformative time.

If, upon full review and discussion, stakeholders do not like the idea presented here, please give us all a chance to devise and introduce better ideas that are adequately comprehensive and attuned to achieving the general assembly's mandates. At this time, stakeholders aren't even adequately apprised and aware of their capacity to rethink and propose alternative energy programs for analysis. It is important to focus this process on coming up with the best ideas not just valuing/preferring existing alternatives.

Please fully inform stakeholders of this opportunity to rethink and propose new energy programs for RI. RI's energy customers and providers need to be deliberative and intentional now more than ever, rather than just deferring to solutions devised and perpetuated by others. When that happens we will truly have a "stakeholder process."

If, for some unknown (as of yet) reason, this reevaluation of Rhode Island's energy programs is not the place to recommend alternative program approaches that may better meet the general assembly's energy and climate mandates, please better inform us of the purpose of these proceedings and where and how such proposals should be made so that the state will give them adequate consideration.