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Public Hearing – March 5, 2020
Energy and Technology Committee

Testimony Submitted by Thomas Melone, President, Allco Renewable Energy Limited

S.B. 10 – An Act Concerning Certain Recommendations Regarding Climate Change

S.B. No. 290 - An Act Concerning Taxation of Certain Solar Power Facilities.

H.B. No. 5349 - An Act Concerning the Ownership of Certain Solar Energy Projects by Electric Distribution Companies.

Thank you for the opportunity to submit testimony regarding **S.B. 10 - An Act Concerning Certain Recommendations Regarding Climate Change**, **S.B. No. 290 - An Act Concerning Taxation of Certain Solar Power Facilities**, and **H.B. No. 5349 - An Act Concerning the Ownership of Certain Solar Energy Projects by Electric Distribution Companies**.

ALLCO commends the Committee for raising these bills, indicating a recognition that climate change is an exigent threat to Connecticut that needs to be addressed immediately. All of the topics addressed in these bills deserve immediate action.

The Committee has a unique opportunity to create good paying jobs in Connecticut, increase revenue to towns and schools, rapidly reduce harmful CO2 emissions, and build an electric grid for Connecticut that is required for the future – all **without laying the cost at the feet of already over-burdened ratepayers**. The first step should be to put to work the dollars that ratepayers already spend, without looking at adding more non-bypassable charges. How can that be done?

Connecticut's annual electric load is approximately 29.5TWh.¹ The Millstone nuclear facility, which ratepayers have agreed to subsidize, can generate 2,111 MWs,² or approximately 17.1 TWh annually. The costs of the Millstone subsidy are borne entirely by Connecticut ratepayers, and the benefits are shared with other New England states. But, as members of the committee have stated, Millstone can serve as the foundation of a zero-carbon electricity sector in Connecticut until other sources of zero-carbon electricity can take its place.

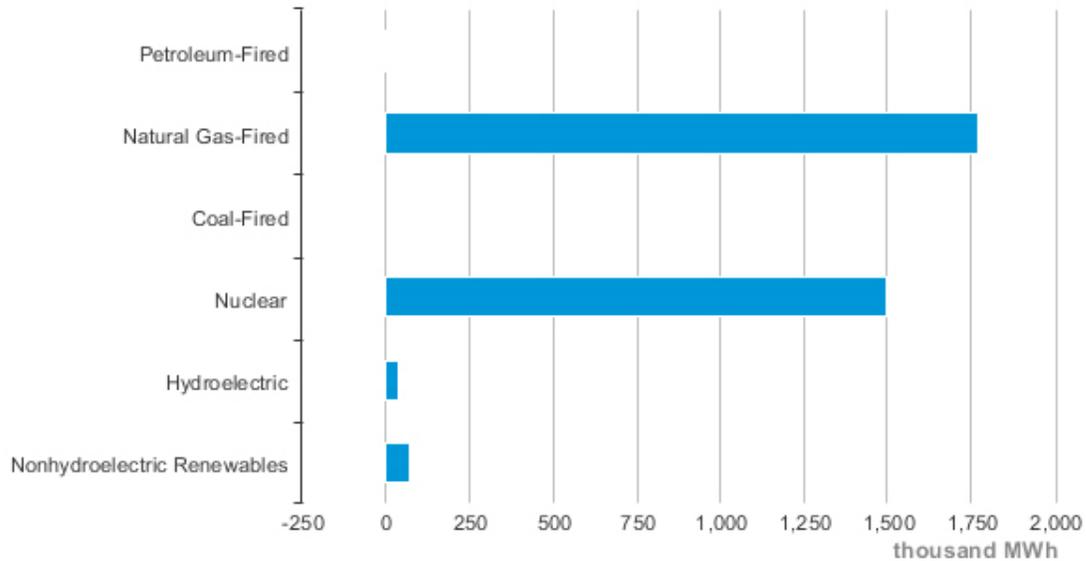
According to the EIA, Connecticut has one of the lowest energy-intensive economies and uses less energy to produce each dollar of gross domestic product (GDP) than any state except for

¹ See, https://www.energy.gov/sites/prod/files/2015/06/f22/CT_Energy%20Sector%20Risk%20Profile.pdf. With the addition of the recently approved Killingly gas plant, the EIA will need to add two more lines to the graph, 2,250 and 2,500, if that plant enters service.

² See, Tierney and Aubuchon, Analysis Group Inc., *Millstone Power Station: Providing support for achieving Connecticut's clean energy goals* (December 2016) at p.ii. available at https://www.analysisgroup.com/globalassets/content/insights/publishing/analysis_group_millstone_report_final_12-1-2016.pdf

Massachusetts and New York, but *it has the highest average retail electricity price among the Lower 48 states.* <https://www.eia.gov/state/?sid=CT>.

Connecticut Net Electricity Generation by Source, Nov. 2019



 Source: Energy Information Administration, Electric Power Monthly

S.B. 10 – An Act Concerning Certain Recommendations Regarding Climate Change

ALLCO **SUPPORTS** Sections 1 and 2 of the Bill. ALLCO opposes Section 3 of the Bill because while the goals are laudable, the implementation relies a competitive procurement model that potentially involves out-of-state projects in ISO-New England.

On January 15, 2020, DEEP Commissioner Katie Dykes stated: “We are at the mercy of a regional capacity market that is driving investment in more natural gas and fossil fuel power plants that we don’t want and we don’t need . . . This is forcing us to take a serious look at the cost and benefits of participating in the ISO New England markets.”³ Enacting a bill that authorizes an ISO-New England-wide procurement runs at cross-purposes to Commissioner Dykes’ statement.

Moreover, Connecticut has other tools at its disposal to promote renewable energy.

Connecticut has a mixed history with competitive procurements. The competitive procurement approach that Connecticut has primarily relied upon in seeking renewable energy does not create

³ <https://ctmirror.org/2020/01/16/conn-taking-a-serious-look-at-exiting-regional-power-market/>

a sustainable industry in Connecticut, does not create a base for sustainable job growth, and it sends billions of Connecticut ratepayer dollars out-of-state to create jobs in those states.

A better approach, which would leverage renewable developers in a more consistent way, would be to follow the approach used by Massachusetts, where they implemented virtual net metering equal to 16% of the EDCs' peak load and a SMART solar program for ISO-NE "load reducers" of less than 5 megawatts. How this could benefit Connecticut is explained below, and in the attached presentation.

S.B. 290 (Raised) - An Act Concerning Taxation of Certain Solar Power Facilities.

Although ALLCO **OPPOSES S.B. No. 290 in its current form, we support the idea of local taxation of solar facilities.** Unfortunately, this bill retroactively imposes taxation on facilities that relied on the taxation exemption in building and financing their projects and in calculating the level of savings that would be passed through to municipal virtual net metering customers. **Changing the rules retroactively will discourage future investment in CT.**

ALLCO **SUPPORTS** a proposal that would fix the local taxation of solar facilities at a pre-determined fixed dollar amount per MW AC capacity, such as Rhode Island has in place, and to have that change in law applied prospectively to new facilities that enter service on or after January 1, 2021.

H.B. 5349 (Raised) - An Act Concerning the Ownership of Certain Solar Energy Projects by Electric Distribution Companies.

ALLCO **OPPOSES H.B. 5349. There are several problems with H.B. 5349 as written.** The new Section 16-244v(e)(1) is uneconomic for ratepayers, and unfair to non-utility solar developers. The bill allows the EDCs to sell their output through bilateral contracts with third parties, which presumably includes industrial and commercial customers, which is a virtual net metering program.

What's good for the goose is good for the gander. The Connecticut EDCs have supported an approach to solar development by independent developers that would pay solar developers an energy rate from time-to-time at the ISO-New England market. If the EDCs build solar, shouldn't the compensation they are paid be limited to what they have claimed is sufficient for independent developers?

Utility owned solar is always more expensive for ratepayers.

In the EDCs' hands, a solar facility is defined as a "public utility property" under the Internal Revenue Code. *See*, 26 U.S.C. §168(i)(10). Congress has given utilities a choice regarding tax depreciation and tax credits with respect to such property. If a utility wants to claim investment tax credits and accelerated depreciation, the utility must "normalize" those benefits, which means that it cannot pass the economic benefits to ratepayers in the form of a lower cost of electricity.

That means that a utility's ownership of solar facilities is disadvantaged by the tax system, resulting in usually at least a 25% increase in ratepayer costs.

Utility owned solar is also more expensive because the utility calculates its charges to ratepayers based upon an approved rate-of-return, which guarantees the utilities' profits regardless of how the solar facilities perform.

Finally, if the EDCs are given the right under this Bill to own solar facilities, then under the Federal Public Utility Policies Act of 1978, independent developers must be given the right to displace what the EDC would be entitled to build, at the same price that the EDC would charge ratepayers.

ALLCO welcomes any opportunity to work with the Committee on these bills.

Thank you for the opportunity to present testimony on these important proposals.

ALLCO offers the attached proposal for the Committee's consideration *to start using existing ratepayer expenditures to build solar, create sustainable jobs, raise revenues for schools and towns and transition to a cleaner future.*

If you should require any additional information, please contact me at Thomas.Melone@AllcoUS.com or 212-681-1120.



March 5, 2020

Green New Deal for Connecticut Municipalities, Non-Profit Entities And Businesses

Objectives—Jobs, Jobs, Jobs~Keep rates in check~Go Solar

- Leverage what ratepayers already pay for retail service and establish Two Green New Deal Programs Based On Proven Models:
 1. **Permanent and Reliable Virtual Net Metering For Municipalities, Non-profit entities and businesses at no or nominal marginal net cost to CT ratepayers**
 2. **Create a CT Solar SMART program based upon the proven model in Massachusetts**
- Expand Solar Energy Use in CT creating jobs and economic benefits for CT.
- Establish Local Taxation Rates for VNM projects to Raise Revenue for local municipalities
- Recognize Damage Caused By Continued Fossil Fuel Use



Windham Solar, Lebanon, CT

Environmental Costs to Connecticut of Fossil Fuel Use Continues to Grow



One million plant and animal species are on the verge of extinction, with alarming implications for human survival, according to a United Nations report released Monday.

Last November a new report by 11,258 scientists in 153 countries from a broad range of disciplines warned that the planet “clearly and unequivocally faces a climate emergency.” *“More than 11,000 scientists from around the world declare a ‘climate emergency.’”* Washington Post, November 5, 2019, <https://www.washingtonpost.com/science/2019/11/05/more-than-scientists-around-world-declare-climate-emergency/>.

‘Bleak’ U.N. report urges drastic action on climate



Unprecedented cuts in emissions are needed, according to new findings

By Brady Dennis

November 26 at 3:00 AM ET

The world has squandered so much time mustering the action necessary to combat climate change that rapid, unprecedented cuts in greenhouse gas emissions offer the only hope of averting an ever-intensifying cascade of consequences, according to new findings from the United Nations.

Already, the past year has brought devastating hurricanes, relentless wildfires and crippling heat waves, prompting [millions of protesters](#) to take to the streets to demand more attention to a problem

The Physics of the Electric Grid

Electric generation and consumption must be constantly balanced.

How electricity is produced, transported, and delivered to consumers



Source: ISO-New England

When a solar array on a rooftop starts generating electricity in the morning, other generation resources back-down.

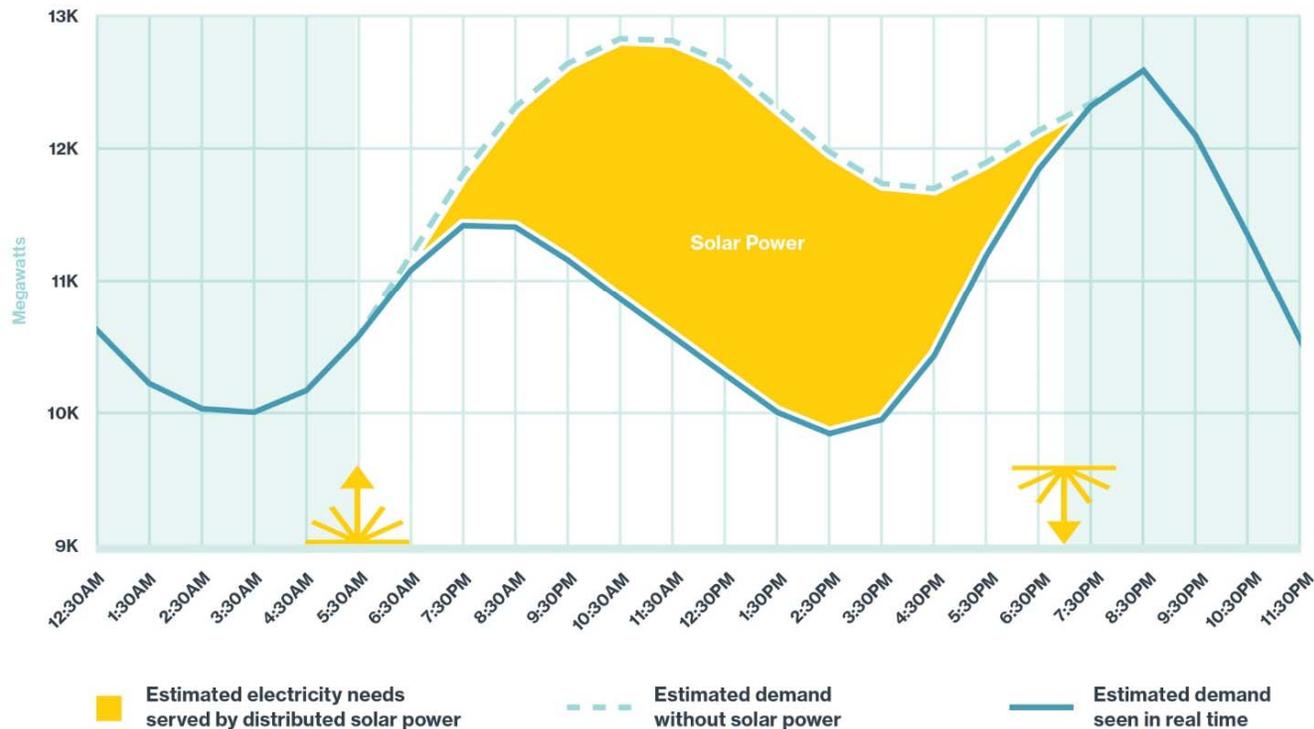


The same holds true with any ISO-New England solar project under 5 megawatts located in an EDC's territory because those are treated as load reducers, just like a rooftop project. Thus, when a rooftop solar project or a load reducer (e.g., virtual net metering) solar project turns on, the EDCs need to acquire less energy, i.e., their load is reduced and the load-following purchases that they need to make under their standard service and last resort service contracts is reduced on a 1:1 basis. Moreover, such load reducers provide a bundled energy and capacity product because load reducers reduce the capacity obligation and network service obligation.

“Behind-the Meter” solar makes a big contribution to the electric grid.

For the First Time, in 2018, New England Used Less Grid Electricity During the Day than in the Middle of the Night

On April 28, 2018, at 1:30 p.m., behind-the-meter solar reduced grid demand by more than 2,300 MW



A storage component and an incentive for trackers of a sustainable solar program would flatten out that “duck curve.”

Source: ISO-New England, 2020 Regional Energy Outlook

The Bookkeeping Problem Created By C.G.S. § 16-244u

C.G.S. § 16-244u establishes a valuable virtual net metering (“VNM”) program for municipalities, state agencies and agricultural users. When a VNM solar facility generates electricity, it causes other generation resources back-down. It also results in the EDCs need to acquire less energy, i.e., their load is reduced and the load-following purchases that they need to make under their standard service and last resort service contracts is reduced on a 1:1 basis.

But where does that electricity get accounted for and credited to ratepayers? Apparently nowhere.

Ratepayers end up being double-billed simply because of the mechanics of bookkeeping under the EDCs’ standard service contracts. The behind-the-meter electricity production IS NOT reducing what the EDCs pay under their standard service supply contracts *but it should* because that same electricity production reduces the actual load.

Fixing C.G.S. 16-244u and Creating Jobs with Solar



Step 1. Amend Conn. Gen. Stat. § 16-244c (Standard service) to add the following new subsection:

(n) Contracts for load-following standard service or last resort service shall provide that the load of the electric distribution utility is reduced by the aggregate electricity supplied to the electric distribution utility from facilities under C.G.S. 16-244u.

Fixing C.G.S. 16-244u and Creating Jobs with Solar



Step 2. Amend Conn. Gen. Stat. § 16-244u to create a sustainable virtual net metering program that can generate thousands of jobs in Connecticut. Proposed amendments are attached.

Step 3. Add a storage and tracker component to the program that will flatten out the solar “duck curve.” The optimal size facility in ISO-New England for Connecticut ratepayer value is under 5 megawatts. That is because such a facility is treated as a “load reducer” for ISO-New England purposes.

There's No Reason To Wait For 2021 or 2029

- 1) PURA and DEEP's Value of Distributed Energy Study Will be Completed After the 2020 Legislative Session.
- 2) Legislative Action Would Occur No Earlier Than 2021.
- 3) PURA would then take at least a year to implement 2021 Legislative Action, likely delaying the first solar projects under whatever is enacted to 2023 in service.
- 4) The Federal ITC is decreasing, which raises costs.
- 5) Realistic best-case scenario for Vineyard Wind is 2028-2029.
- 6) Every year of delay imposes a cost!



EPA TELLS AMERICANS TO BRACE FOR CLIMATE-CHANGE IMPACT
150-page document conflicts with agency leader

By Juliet Eilperin and Brady Dennis

April 27 at 4:41 PM ET

The Environmental Protection Agency published a [150-page document](#) this past week with a straight-forward message for coping with the fallout from natural disasters across the country: Start planning for the fact that climate change is going to make these catastrophes worse.

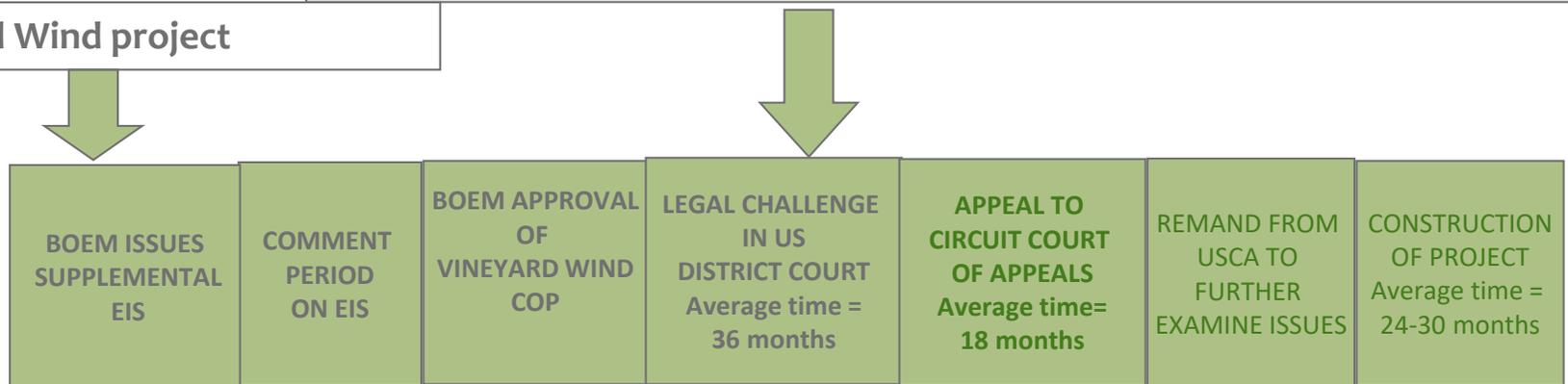
Avoid Putting Too Many Eggs In One Basket

Offshore Wind Issues and Timetable

LIKELY ISSUES –

- Endangered Species Act, NEPA,
- Impact on Marine life
- Harvard Study says wind will increase warming in the Wind Energy Area by up to 2 degrees—further impact on marine life and fisheries and Endangered Species

First Vineyard Wind project



BEST CASE SCENARIO

MID 2020 END 2020 EARLIEST 1ST HALF 2021 Mid- 2024 Early 2027 2029-2030

MEDIUM CASE SCENARIO

LATE 2020 MID 2021 2022 Mid- 2025 Early 2028 Early 2031 2033-2034

WORST CASE SCENARIO = PROJECT ABANDONED LIKE CAPE WIND—LIKELY TIMEFRAME 2032-2034

LIKELY CASE SCENARIO = SOLAR RESOURCES NOT BUILT BECAUSE OF HOPE OF OSW



NOMINAL COST VIRTUAL NET METERING FOR ALL

VNM and a SMART Solar program that reflects ISO-New England Rules and Physics

- Solar small power production facilities (i.e., 5MWs or less) are treated as “load-reducers” in ISO-New England which means that as far as ISO-New England is concerned it is as if the solar facility was on the roof of a house. It is “behind-the-meter” for ISO-New England and hence carries no separate capacity obligation.
- CT Utilities provide Standard Service and Last Resort Service that is sourced through short-term auctions on a “load-following” basis.
- Small solar facilities displace on a one-to-one kWh basis the amount needed from SS and LRS suppliers because they reduce load. Fix the bookkeeping terms of the EDCs of SS/LRS RFP to reflect that reality.
- Small solar facilities provide a bundled product because as a load reducer they also eliminate a capacity obligation.

Nominal Cost to Ratepayers:

- VNM customers receive a 1:1 kWh credit for every kWh generated by the solar facility. Solar facilities’ generation displaces SS/LRS supply price leaving ratepayers indifferent. Solar facilities (as they do now) may charge a different price to VNM customers providing savings for the municipality and non-profit.
- VNM Solar facilities receive a fixed per MWh rate for RECs reflecting (but not greater than) the quantifiable social, environmental and health costs of avoided fossil fuel use, and quantifiable additional benefits of local small solar

VINEYARD WIND (PARK CITY) 804MWs = \$1.75billion UI PREDICTED RATEPAYER LOSS

THE VINEYARD WIND AGREEMENT IS A SIMPLE ENERGY TRADING TRANSACTION. THE CONNECTICUT UTILITIES BUY THE POWER AND IMMEDIATELY RESELL IT INTO THE ISO-NEW ENGLAND MARKET.

BASED UPON THE UNITED ILLUMINATING COMPANY'S RECENT FORECAST OF ISO-NEW ENGLAND ENERGY PRICES, THE VINEYARD WIND AGREEMENT WILL RESULT IN AN ADDITIONAL \$1.75 BILLION LOSS FOR CT RATEPAYERS.

IS SPENDING \$1.75 BILLION FOR A FORECASTED \$980 MILLION IN ECONOMIC ACTIVITY IN THE BEST INTERESTS OF RATEPAYERS??

The Price of Park City Wind Has not been made public so the numbers in this presentation are an estimate and subject to change.

Vineyard Wind OSW		804 MWs		3,153,600	MWhs per year
		UI Forecasted Energy Price \$/MWh (as of 4/29/19)	Vineyard Wind Assumed Energy Price \$/MWH	Forecasted Ratepayer Loss per MWh (\$/MWH)	Forecasted Ratepayer Loss \$\$ On Energy Trading*
				64	
1	2023	31.55	64	-32.45	\$ (102,332,169)
2	2024	32.96	64	-31.04	\$ (97,888,154)
3	2025	33.87	64	-30.13	\$ (95,004,558)
4	2026	34.46	64	-29.54	\$ (93,148,766)
5	2027	33.18	64	-30.82	\$ (97,179,106)
6	2028	33.26	64	-30.74	\$ (96,947,384)
7	2029	34.11	64	-29.89	\$ (94,266,371)
8	2030	34.55	64	-29.45	\$ (92,861,063)
9	2031	34.21	64	-29.79	\$ (93,934,328)
10	2032	36.09	64	-27.91	\$ (88,030,232)
11	2033	36.45	64	-27.55	\$ (86,884,974)
12	2034	37.23	64	-26.77	\$ (84,412,514)
13	2035	39.44	64	-24.56	\$ (77,463,849)
14	2036	41.07	64	-22.93	\$ (72,303,060)
15	2037	41.38	64	-22.62	\$ (71,321,713)
16	2038	41.78	64	-22.22	\$ (70,079,781)
17	2039	41.96	64	-22.04	\$ (69,507,772)
18	2040	\$ 36.00	64	-28.00	\$ (88,301,194)
19	2041	\$ 36.00	64	-28.00	\$ (88,301,194)
20	2042	\$ 36.00	64	-28.00	\$ (88,301,194)
TOTAL PROJECTED RATEPAYER LOSSES					\$ (1,748,469,376)
Notes	Assumes Vineyard Wind separate REC price = \$0.				
	*estimated MWhs per year 45% capacity factor				

Putting the \$1.75B Ratepayer Loss To Create A Net Positive Impact

- For the \$1.75 billion ratepayer loss, VW claims an estimated \$890 million in direct economic development in Connecticut, including Bridgeport Harbor and the local supply chain, and VW estimates 2,800 direct full-time employment will be created in Connecticut through the project.
- **Using those funds for a solar net meter and SMART program would produce:**
- **\$5.2 billion estimated in direct economic development in Connecticut and an estimated 31,000 direct full-time employment in Connecticut through the project construction and an additional \$1.3 billion during operation.**

Vineyard Wind

- Pray for no category 3 hurricanes
- What if Harvard climate scientists are right?
- Built-in loss of almost \$2 billion to ratepayers based upon United Illuminating's forecast of future rates. Could be more.
- Does not reinforce CT grid, line losses
- No municipal taxes
- Potentially No State income taxes as the project situs is outside CT jurisdiction
- VW claims estimated \$890 million in direct economic development in Connecticut, including Bridgeport Harbor and the local supply chain.
- VW estimates 2,800 direct full-time employment will be created in Connecticut through the project.
- Risk of destruction to marine and fisheries

vs.

Distributed Solar

- Ratepayers pay what they otherwise would for energy for VNM facilities— Standard Service price floating from time to time
- Increase in Municipal taxes of \$200 million over 20 years if both programs implemented to match energy from VW804
- Projects pay CT state income tax
- Projects reinforce CT grid
- Projects sets stage for micro-grids with battery storage
- No risk to marine and fisheries
- Over \$5 billion of economic impact to CT
- Estimated full-time equivalent of more than 31,000 jobs
- CT SMART Solar fixed contract based on forecast of Standard Service price

Enact Legislation Implementing Permanent VNM and CT SMART Solar

Program 1

Permanent VNM for Public and Privates Entities As Exists in Massachusetts

On a population equivalent basis the Massachusetts program would translate into the following VNM caps in Connecticut

Public VNM cap = 460.26 MW

Private VNM cap = 402.73 MW

Program 2

A fixed 20-year contract program modeled after the Massachusetts SMART program with a capacity of 1100 MWs.

ADD A Storage Component

The capacity of both programs totals the MWHs generated by the proposed VW Park City project.

Today's Snapshot

AS OF 03/02/2020 08:33 AM

20,494

AVAILABLE CAPACITY (MW)

15,550

FORECASTED PEAK DEMAND (MW)

2,561

SURPLUS CAPACITY (MW)

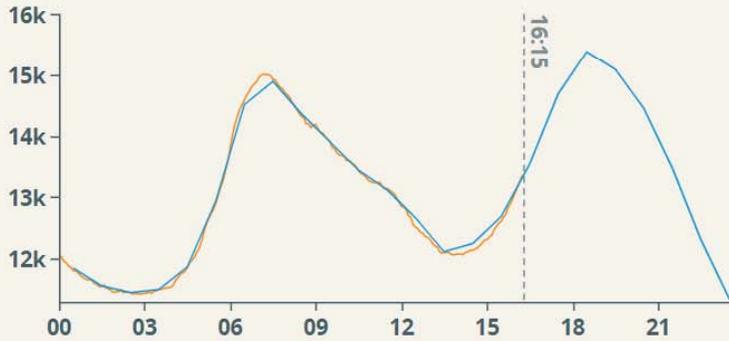
15,729

YESTERDAY'S PEAK DEMAND (MW)

[Go To Today's Morning Report](#)

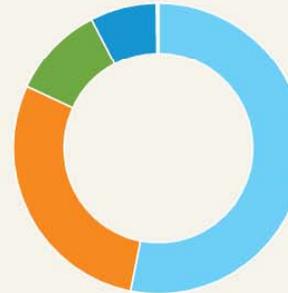
REAL-TIME DATA

SYSTEM DEMAND



13530 FORECASTED (MW) 13352 ACTUAL (MW)

FUEL MIX



- 53% NATURAL GAS
- 29% NUCLEAR
- 10% RENEWABLES
- 7% HYDRO
- <1% OIL
- <1% OTHER

INTERNAL HUB PRICE

\$15.20	ENERGY
\$0.00	CONGESTION
\$-0.03	LINE LOSS

\$15.17 ↑

SYSTEM STATUS

Normal ●

[More Real-Time Data](#)

ISO-New England snapshot 3-2-20

Conn. Gen. Stat. § 16-244u

Current through the 2019 First Regular Session, and the July and December 2019 Special Sessions.

LexisNexis® Connecticut Annotated Statutes > Title 16 Public Service Companies (Chs. 277 — 293) > Chapter 283 Telephone, Gas, Power and Water Companies (§§ 16-228 — 16-262z)

Sec. 16-244u. Virtual net metering.

(a) As used in this section:

- (1) “Beneficial account” means an in-state retail end user of an electric distribution company designated by a customer host in such electric distribution company’s service area to receive virtual net metering credits from a virtual net metering facility;
- (2) “Customer host” means an in-state retail end user of an electric distribution company that owns, leases or enters into a long-term contract for a virtual net metering facility and participates in virtual net metering;
- (3) “Unassigned virtual net metering credit” means, in any given electric distribution company monthly billing period, a virtual net metering credit that remains after both the customer host and its beneficial accounts have been billed for zero kilowatt hours related to the generation service charges and a declining percentage of the transmission and distribution charges on such billings through virtual net metering;
- (4) “Virtual net metering” means the process of combining the electric meter readings and billings, including any virtual net metering credits, for a customer host and a beneficial account related to such customer host’s account through an electric distribution company billing process related to the generation service charges and a declining percentage of the transmission and distribution charges on such billings;
- (5) “Virtual net metering credit” means a credit equal to the retail cost per kilowatt hour the customer host may have otherwise been charged for each kilowatt hour produced by a virtual net metering facility that exceeds the total amount of kilowatt hours used during an electric distribution company monthly billing period; and
- (6) “Virtual net metering facility” means a Class I renewable solar energy source that: (i) Is served by an electric distribution company, owned, leased or subject to a long-term contract by a customer host and serves the electricity needs of the customer host and its beneficial accounts; (ii) is within the same electric distribution company service territory as the customer host and its beneficial accounts; and (iii) has a nameplate capacity rating of three megawatts or less; and
- (7) “Declining percentage of the transmission and distribution charges” means, during the period commencing on the first day of commercial operation of a virtual net metering facility and ending after one year, eighty per cent of the transmission and distribution charges, during the period commencing at the beginning of the second year of commercial operation of a

Deleted: or an agricultural customer host

Deleted: or an agricultural virtual net metering facility

Deleted: “Agricultural customer host” means an in-state retail end user of an electric distribution company that uses electricity for the purpose of agriculture, as defined in subsection (q) of section 1-1, owns, leases or enters into a long-term contract for an agricultural virtual net metering facility and participates in agricultural virtual net metering;¶
(4) ¶
(A)

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(B) “Unassigned agricultural virtual net metering credit” means, in any given electric distribution company monthly billing period, an agricultural virtual net metering credit that remains after both the agricultural customer host and its beneficial accounts have been billed for zero kilowatt hours related to the generation service charges and a declining percentage of the transmission and distribution charges on such billings through agricultural virtual net metering;¶

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Deleted: municipal, state or agricultural

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(A)

Deleted: or a Class III source

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(B) “Agricultural virtual net metering facility” means a Class I renewable energy source that is operated as part of a business for the purpose of agriculture, as defined in subsection (q) of section 1-1, that: (i) Is served by an electric distribution company on land owned or controlled by an agricultural customer host and serves the electricity needs of the agricultural customer host and its beneficial accounts; (ii) is within the same electric distribution company service territory as the agricultural customer host and its beneficial accounts; and (iii) has a nameplate capacity rating of three megawatts or less....

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Deleted: or an agricultural virtual net metering facility

virtual net metering facility and ending after one year, sixty per cent of the transmission and distribution charges, and commencing at the beginning of the third year of commercial operation of a virtual net metering facility and for each year thereafter, forty per cent of the transmission and distribution charges.

Deleted: or an agricultural virtual net metering facility

Deleted: or an agricultural virtual net metering facility

(b) Each electric distribution company shall provide virtual net metering to its customer hosts and shall make any necessary interconnections for a virtual net metering facility. Upon request by a customer host to implement the provisions of this section, an electric distribution company shall install metering equipment, if necessary. For each customer host, such metering equipment shall (1) measure electricity consumed from the electric distribution company's facilities; (2) deduct the amount of electricity produced but not consumed; and (3) register, for each monthly billing period, the net amount of electricity produced and, if applicable, consumed. If, in a given monthly billing period, a customer host supplies more electricity to the electric distribution system than the electric distribution company delivers to the customer host, the electric distribution company shall bill the customer host for zero kilowatt hours of generation and assign a virtual net metering credit to the customer host's beneficial accounts for the next monthly billing period. Such credit shall be applied against the generation service component and a declining percentage of the transmission and distribution charges billed to the beneficial accounts. Such credit shall be allocated among such accounts in proportion to their consumption for the previous twelve billing periods.

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Deleted: or an agricultural virtual net metering facility

Deleted: municipal, state or agricultural

(c) An electric distribution company shall carry forward any unassigned virtual net metering credits earned by the customer host from one monthly billing period to the next until the end of the calendar year. At the end of each calendar year, the electric distribution company shall compensate the customer host for any unassigned virtual net metering generation credits at the rate the electric distribution company pays for power procured to supply standard service customers pursuant to section 16-244c and a declining percentage of the transmission and distribution charges.

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Deleted: or unassigned agricultural virtual net metering credits earned by the agricultural customer host from one

Deleted: municipal, state or agricultural

(d) At least sixty days before a municipal or state customer host's virtual net metering facility or an agricultural customer host's agricultural virtual net metering facility becomes operational, the municipal, state or agricultural customer host shall provide written notice to the electric distribution company of its beneficial accounts. The municipal, state or agricultural customer host may change its list of beneficial accounts not more than once annually by providing another sixty days' written notice. The municipal or state customer host shall not designate more than twenty beneficial accounts, except that such customer host may designate up to five additional nonstate or municipal beneficial accounts, provided such accounts are critical facilities, as defined in subdivision (2) of subsection (a) of section 16-243y, and connected to a microgrid.

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Deleted: The agricultural customer host shall not designate more than ten beneficial accounts each of which shall (1) use electricity for the purpose of agriculture, as defined in subsection (q) of section 1-1, (2) be a municipality, or (3) be a noncommercial critical facility, as defined in subdivision (2) of subsection (a) of section 16-243y.¶

Deleted: twenty million dollars per year apportioned to each electric distribution sixteen percent (16%) of each

Deleted: company based on consumer load,

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Deleted: state and agricultural

Deleted: each in the aggregate,

Deleted: forty per cent of the dollar amount established pursuant to this subdivision.¶

(e)

(1) On or before October 1, 2013, the Public Utilities Regulatory Authority shall conduct a proceeding to develop the administrative processes and program specifications, including, but not limited to, a cap of sixteen percent (16%) of each electric distribution company's highest historical peak load, for credits provided to beneficial accounts pursuant to subsection (b) of this section and payments made pursuant to subsection (c) of this section, provided that non-municipal customer hosts, and the designated beneficial accounts of such customer hosts, shall receive not more than 50% of such cap.

(2) In addition to the provisions of subdivision (1) of this subsection, the authority shall authorize six million dollars per year for municipal customer hosts, apportioned to each

electric distribution company based on consumer load, for credits provided to beneficial accounts pursuant to subsection (b) of this section and payments made pursuant to subsection (c) of this section where such municipal customer hosts have: (A) Submitted an interconnection application to an electric distribution company on or before April 13, 2016, and (B) submitted a virtual net metering application to an electric distribution company on or before April 13, 2016.

(3) In addition to the provisions of subdivisions (1) and (2) of this subsection, the authority shall authorize, apportioned to each electric distribution company based on consumer load for credits provided to beneficial accounts pursuant to subsection (b) of this section and payments made pursuant to subsection (c) of this section three million dollars per year for agricultural customer hosts, provided each agricultural customer host utilizes a virtual net metering facility that is an anaerobic digestion Class I renewable energy source and not less than fifty per cent of the dollar amount for such agricultural customer hosts established under this subparagraph is utilized by anaerobic digestion facilities located on dairy farms that complement such farms' nutrient management plans, as certified by the Department of Agriculture, and that have a goal of utilizing one hundred per cent of the manure generated on such farm.

(4) A beneficial account electing virtual net metering service shall select the electric distribution company as its energy supplier.

(5) Each beneficial account shall receive the credits in kilowatt hours which will reduce the kilowatt hours charged to the beneficial account for energy supply on a one-to-one basis, and reduce the transmission and distribution charges in accordance with the declining percentage of the transmission and distribution charges.

(f) On or before January 1, 2013, and annually thereafter, each electric distribution company shall report to the authority on the cost of its virtual net metering program pursuant to this section and the authority shall combine such information and report it annually, in accordance with the provisions of section 11-4a, to the joint standing committee of the General Assembly having cognizance of matters relating to energy.

(g) A municipal, state or agricultural customer host shall be allowed to aggregate all electric meters that are billable to such customer host.

(h) Where a virtual net metering facility requires a permit from the Department of Energy and Environmental Protection under chapter 446c or chapter 446d and the customer host has submitted a virtual net metering application to the electric distribution company for such virtual net metering facility on or before December 1, 2015, and the electric distribution company has accepted such virtual net metering application, such customer host shall have eighteen months from the date of the issuance of the final permit from the Department of Energy and Environmental Protection to cause such virtual net metering facility to become operational.

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