

Legislative History for Connecticut Act

PA 16-196

SB272

Senate	1276-1282	7
Energy & Technology	64, 67, 69, 82, 84, 210- 213, 220-224, 352, 355, 530A	17

House Transcripts have not been received. They are available on CGA website, but are not the Official copy. Contact House Clerk for assistance (860) 240-0400 **24**

**Transcripts from the Joint Standing Committee Public
Hearing(s) and/or Senate and House of Representatives
Proceedings**

**Connecticut State Library
Compiled 2017**

S - 694

**CONNECTICUT
GENERAL ASSEMBLY
SENATE**

**PROCEEDINGS
2016**

**VOL. 59
PART 4
1033 - 1367**

cf
SENATE

189
April 27, 2016

THE CHAIR:

So ordered, sir. Mr. Clerk. Next bill, please.

THE CLERK:

On Page 8, Calendar 316, Substitute for Senate Bill
Number 272, AN ACT CONCERNING THE USE OF MICROGRID
GRANTS AND LOANS FOR CERTAIN DISTRIBUTED ENERGY
GENERATION PROJECTS. There are amendments.

THE CHAIR:

Senator Witkos.

SENATOR WITKOS (8TH):

Good evening again, Madam President.

THE CHAIR:

Good evening.

SENATOR WITKOS (8TH):

Under article rule 15 of the chamber, I ask to be
recused from this vote and conversation. Thank you.

THE CHAIR:

So ordered. Thank you. Senator Kissel.

SENATOR KISSEL (7TH):

Good evening, Madam President. I would also ask to
be recused from this vote, under rule 15.

cf
SENATE

190
April 27, 2016

THE CHAIR:

Please proceed. Thank you, sir. Anybody -- there we go. Senator Linares.

SENATOR LINARES (33RD):

Good evening. Good evening, Madam President. Under rule 15, I ask to be recused. Thank you.

THE CHAIR:

Please proceed, sir. This definitely will pass tonight. Senator Doyle.

SENATOR DOYLE (9TH):

Good evening.

THE CHAIR:

Please don't start until Senator Linares leaves the building -- the room, rather. Thank you. Senator Doyle.

SENATOR DOYLE (9TH):

Thank you for that guidance, Madam President. First of all, I move acceptance of the Joint Committee's favorable report and passage of the bill.

THE CHAIR:

Motions on acceptance and passage. Will you remark, sir?

SENATOR DOYLE (9TH):

Yes. Thank you, Madam President. The -- the file copy before you deals with our current, existing microgrid grant and loan program -- PILOT program. This has been around for a few years and the file copy before you -- this is a grant program for our municipalities and the current law -- under the current law, we are -- the -- the -- DEEP is permitted to provide funding for the -- for design engineering services, interconnection, infrastructure only. The file copy before you now allows the funding to be used for microgrid grant and a loan program in addition to that.

And the reason why it was expanded is because DEEP has found at this point in time, now that we're into the program, more and more municipalities cannot utilize additional -- this doesn't expand any funding, it just -- it just enables more municipalities to be able to cooperate and utilize the program. But before I go further, Madam Chair, the clerk has an Amendment LCO 5136. Will the Clerk please call and I be allowed to summarize?

THE CHAIR:

Mr. Clerk.

THE CLERK:

LCO Number 5136, Senate "A" offered by Senators
Doyle, Formica, et al.

THE CHAIR:

Senator Doyle.

SENATOR DOYLE (9TH):

Thank you, Madam President. I first move adoption of the Amendment.

THE CHAIR:

Motion on adoption. Will you remark further, sir?

SENATOR DOYLE (9TH):

Yes. Thank you, Madam President. This Amendment -- the first portion of this Amendment as I just described to the chamber -- first -- the file copy permits the -- DEEP to deal -- to permit municipalities -- the money to go for micro grant and loan program and this expands it to energy storage systems and that would make it more valuable. You know, energy storage systems is tied to Class I renewable. Again, the storage is important for all of our different micro grids and projects, so this would expand and make it -- make the program more viable for our municipalities.

Also, this section in -- from Line 8 on, it deals with the current ZREC program and in this program, the language here -- we're in the sixth year of the ZREC solicitation program. Sixth and last year. This language does not expand the program, it does not increase the money for the program, but simply permits LREC projects to compete in and seek funding through this -- through this sixth year or the \$8 Million. I urge the chamber to support this Amendment. Thank you, Madam President.

THE CHAIR:

Will you remark on the Amendment? Senator Crisco.

SENATOR CRISCO (17TH):

Thank you, Madam President. I rise in support of the Amendment and commend Senator Doyle for his leadership in correcting certain inequities that exist at -- in the legislation.

THE CHAIR:

Thank you, sir. Will you remark further on the Amendment? Will you remark further on the Amendment? If not, I will try your minds. All those in favor of the Amendment, please say "aye".

SENATORS:

Aye.

THE CHAIR:

Opposed? The Amendment passes. Will you remark further on the bill? Senator Doyle.

SENATOR DOYLE (9TH):

Yes. Thank you, Madam President. Now the bill as Amended, you're -- you're on -- Madam President. Clarifies and makes the underlying micro grid grant program more efficient and more accessible to our communities and also it makes the ZREC fund I think, more equitable and I urge the -- the chamber to support it. Thank you, Madam President.

THE CHAIR:

Thank you. Will you remark? Will you remark? Senator Formica. Good after -- good evening, sir.

SENATOR FORMICA (20TH):

cf
SENATE

194 001281
April 27, 2016

Good evening, Madam President, and thank you. I rise to make a few comments in support of this Bill, please.

THE CHAIR:

Please proceed, sir.

SENATOR FORMICA (20TH):

Thank you, Madam President. This is a good bill that would encourage and improve the development of micro grids, enhancing energy, increases grid reliability in the state, it calls for matching funds or low interest loans and it will help our municipalities and I urge my colleagues to vote in support of this bill.

THE CHAIR:

Will you remark further on the bill? Will you remark further on the bill? Senator Crisco.

SENATOR CRISCO (17TH):

Thank you, Madam President. I just wanted to associate myself with the remarks of my colleagues. Thank you.

THE CHAIR:

Thank you, Senator Crisco. Will you remark further? Will you remark further? If not, Mr. Clerk. Will you please call for a roll call vote and the machine will be open.

THE CLERK:

cf
SENATE

195
April 27, 2016

Immediate Roll Call has been ordered in the Senate.
Immediate Roll Call has been ordered in the Senate.

THE CHAIR:

All members have voted, all members have voted. The machine will be closed. Mr. Clerk, will you please call the tally.

THE CLERK:

On Senate Bill 272.

Total number voting	33
Necessary for Adoption	17
Those voting Yea	33
Those voting Nay	0
Those absent and not voting	3

THE CHAIR:

The Bill passes. Mr. Clerk.

THE CLERK:

On Page 9, Calendar 340, Substitute for Senate Bill Number 423, AN ACT CONCERNING MUNICIPAL FIRE APPARATUS SAFETY AND TESTING. There are amendments.

THE CHAIR:

Senator Osten. Good evening, Ma'am.

SENATOR OSTEN (19TH):

**JOINT
STANDING
COMMITTEE
HEARINGS**

**ENERGY AND
TECHNOLOGY
PART 1
1 – 355**

**2016
INDEX**

Michaud. Then it's Elin Katz. So, first, Paul Michaud.

PAUL MICHAUD: Well, good afternoon, Senator Doyle. Representative Reed, and members of the Energy and Technology committee. My name is Paul Michaud, and I'm the Executive Director of the Renewable Energy and Efficiency Business Association, better known as REEBA.

On behalf of REEBA, I thank you for the opportunity to offer comments -- very brief comments -- on Senate Bill 224, Senate Bill 272, House Bill 5242, House Bill 5309, and House Bill 5427.

So, starting with Senate Bill 224 -- which is utility-owned renewable generation -- REEBA supports this bill, but believes that the provision allowing the local distribution utilities to own renewable generation is inconsistent with the legislature's 1998 goal of electric industry restructuring and separating rate-based generation from utility distribution operations.

REEBA how a -- in no way -- opposes the local electric distribution utilities forming their own competitive affiliates that could compete in the renewable generation space, but on a level playing field with the private renewable energy companies.

Moving on, to Senate Bill 272 -- microgrids -- REEBA supports the use of microgrid grants and loans to help fund the generation component of microgrids. REEBA believes that by helping to fund both the interconnection side -- which was already funded -- and the generation side now -- micro -- makes good sense and is in the public interests.

Moving on, to House Bill 5242 -- agricultural net metering -- REEBA strongly supports this bill. This bill is a benefit because it puts farmers on a level playing field with the state and municipal players in the virtual net metering program.

however, we continue to support the use of a competitive process. We think any -- any of these procurements should involve repetitive -- competitive process -- I think Deputy Commissioner Dykes' detailed admirably the great successes we have with competitive processes. So, if this bill should go forward, we would ask that it include only a competitive process for such facilities. Finally, on the act concerning the shared clean energy facility pilot program -- 5427 -- again, we support this legislation because there's been no clear funding mechanism and that has stalled the pilot process from being completed -- and while this will have a small impact on electric bills, we have supported the pilot so that we can best examine how to create opportunities for consumers who would like to support solar development for environmental or financial reasons, but who cannot install solar at their homes and business, so...

With that, I will ask if there's any questions.

SENATOR DOYLE (9TH): Thank you. Any questions from the committee? Well, I think you're off. There's advantages to coming later -- everyone else gets -- the questions are gone. Thank you for coming.

REP. REED (102ND): Thank you.

ELIN KATZ: Absolutely.

SENATOR DOYLE (9TH): Next speaker is Dan Bosley, then John Emra, then Maureen Westbrooke.

DAN BOSLEY: Thank you, Mr. Chairman. And through you, to the members of your committee. For the record, my name is Dan Bosley. From the NECEC, the Northeast Clean Energy Council. I appreciate the opportunity to speak today. I would also like to echo the remarks of the gentleman from Colombia, Coventry, Tolland, and Vernon, congratulating the gentleman from Westport, on his -- and also the Commissioner. Commissioner Klee on their clean

SB 224
SB 272
HB 5242
HB 5309
HB 5427

larger comprehensive energy strategy discussion that's taking place later this year, and then, we would also urge that there is a lot of -- of companies that are actively competing right now -- fuel cell companies, other clean energy companies -- many of them use LRECs, and the LREC participation will end in 2017, so we would hope that as part of an overall strategy to get at what this bill tries to get at -- that we extend that out -- that you -- we would urge you to extend that out -- because the LREC program not only takes advantage of private investment, but it also takes advantage of federal investment tax breaks. So, it actually may be cheaper to do this through this the LREC program than to do this through this bill.

272 -- the microgrid grant and loan program -- we support that. We support the agricultural virtual net metering. This bill -- 5242 -- I think, is just a technical change. Instead of ownership, it's talking about long-term lease, long-term contracts. It seems to be a very small change, but it's very important to the agricultural community. And then, finally, we -- well, not finally -- but 5309 -- facilitation of the residential solar application process -- we strongly support this bill. There are -- there are an op -- there is an opportunity here to standardize the application process. There's also an opportunity to put this online, and whether it's done through the State Building Inspector or it's done through the Green Bank, we think that it's important to standardize and spread those best [inaudible 2:07.20] as the gentleman mentioned. That's really to get at the heart of this. There are a lot of communities in this state -- and a lot of communities all over New England -- that haven't really -- that haven't changed their procedure, but instead of getting five or ten applications a week, some of those towns are getting 100 applications a week, so it's important to have a standardization

In the EU managing solid waste through energy recovery and -- and recycling is one of the biggest sectors in which they have been able to make aggressive progress in -- in making their KYOTO goals.

So, just in summary, the plants -- the plants are economically challenged. If you send the waste to the landfill, you're going to lose the greenhouse gas benefits of the avoidance of the methane that is realized by waste-to-energy plants. There is a lot of good that comes with these plants. They -- and we urge you to preserve them through a policy that will help supplement the energy revenues that we've lost.

SENATOR DOYLE (9TH): Thank you, and as Chairman Reed echoed earlier, we're aware of it, and we're gonna' work with -- you know -- DEEP and PURA to try and address it down the road. Thank you. Any questions from the committee members? Sorry -- not PURA -- Sorry, Mr. Chairman. With DEEP -- [cross talk] DEEP -- DEEP --

REP. REED (102ND): [interposing] He's gonna' fix it, I think. Right?

SENATOR DOYLE (9TH): Representative Reed corrected me. DEEP -- DEEP only. Thank you. Any further questions? Seeing none, thank you.

FRAZIER BLAYLOCK: Thank you.

SENATOR DOYLE (9TH): Next speaker is Joel Gordes. Then Derek Phelps, and Jim Ginneti. Joel Gordes.

JOEL GORDES: Senator Doyle. Representative Reed. Committee members and staff. My name's Joel Gordes. I am with the Center for Energy Security Solutions and I'm an Independent Consultant. While I served as the study advisor for the Connecticut Academy of Science and Engineering Report on shared clean energy facilities, I am not in any way representing

HB 5427
SB 272

JOEL GORDES: Okay, the core problem as I see it, is we have to stop doing this piece meal and we need to do something similar to what New York is doing in its reforming the energy vision. I remember you had Richard Kauffman as a speaker last year -- and they are moving ahead -- California is moving ahead. We need to start doing that -- and doing it in a comprehensive way. If I could make one fast remark on 272 -- and that is, the last lines say that they are recognizing for eligibility. I quote: "A gas micro turbine with a thermal efficiency factor of at least 40 percent as established by the manufacturer." The last five words do raise flags because basically, what you want to do is not get the efficiency from the manufacturer. You want to go to an independent accredited testing laboratory to get that type of result.

With that, I'd like to take any -- any -- any questions. Also, on anything on ener -- cyber security that you might have.

SENATOR DOYLE (9TH): Sure. Any questions from the Committee? Representative Steinberg.

HB5427
REP. STEINBERG (135TH): Thank you, Mr. Chair, and thank you Mr. Gordes for testifying today. Starting with the issue of 15 years or more, you mentioned the case recommendations of the life of the facility. That sounds a little squishy. Who gets to determine what the life of the facility would be?

JOEL GORDES: Well, we're seeing varying numbers for it. That's why I -- I'd say -- the -- the -- there is a -- a degree and it depends upon different types of solar cells and stuff on degradation that determine the life -- and some of the earlier cells were degrading faster and then what we call thin film technology went through -- I'm trying to remember the name for it -- an effect where it would lose a few percent in the early years and then stabil -- Wronski -- Wronski-Staebler Effect it was



Renewable Energy and Efficiency Business Association, Inc. c/o Murtha Cuffina LLP | CityPlace I | 185 Asylum Street | Hartford, CT 06103 | 860-240-6131

TESTIMONY OF

THE RENEWABLE ENERGY AND EFFICIENCY BUSINESS ASSOCIATION, INC.

ON S.B. NO. 224, S.B. NO. 272, H.B. NO. 5242, H.B. NO. 5309 AND H.B. NO. 5427

March 1, 2016

Good afternoon Senator Doyle, Representative Reed, Senator Formica and Representative Ackert and members of the Energy & Technology Committee. My name is Paul Michaud and I am the Executive Director the Renewable Energy and Efficiency Business Association, Inc. ("REEBA"). With over 60 members, REEBA is a Connecticut business trade association that promotes renewable energy and energy efficiency in Connecticut. On behalf of REEBA, I thank you for the opportunity to offer comments on S.B. 224, S.B. 272, H.B. 5242, H.B. 5309 and H.B. 5427.

S.B. No. 224: AN ACT CONCERNING THE CAPACITY AND CRITERIA FOR CERTAIN RENEWABLE ENERGY GENERATION FACILITIES

REEBA generally supports this bill, but believes that the provision allowing the local distribution utilities to own renewable "generation" is inconsistent with the legislature's 1998 goal of electric industry restructuring and separating rate-based generation from utility electric distribution operations. REEBA, however, in no way opposes the local electric distribution utilities forming competitive affiliates that could compete in the renewable generation space on a level playing field with the renewable energy companies.

S.B. No. 272: AN ACT CONCERNING THE USE OF MICROGRID GRANTS AND LOANS FOR CERTAIN DISTRIBUTED ENERGY GENERATION

REEBA supports the use of microgrid grants and loans to help fund the generation component of microgrids. Currently, state funding can only be used to fund the design, engineering services and interconnection infrastructure. This bill calls for matching funds or low interest loans for Class I and Class III renewable energy generating projects, gas micro-turbines and energy storage systems. REEBA believes that helping to fund both the interconnection and generation infrastructure of microgrids makes good sense and is in the public interest.

H.B. No. 5242: AN ACT CONCERNING AGRICULTURAL VIRTUAL NET METERING

REEBA supports this bill. It modifies the definition of "Agricultural Customer Host" to allow the owner of farmland to lease or enter into a long-term contract for an agricultural virtual net metering project. The benefit of this bill is that it puts farmers on a level playing field regarding the development of renewable energy projects as municipalities and the state.

H.B. No. 5309: AN ACT CONCERNING FACILITATION OF THE MUNICIPAL RESIDENTIAL SOLAR APPLICATION PROCESS

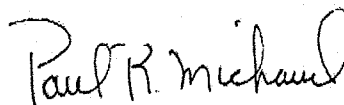
REEBA strongly supports the ongoing discussions aimed at improving the residential solar permitting process. Most residential rooftop solar projects have a capacity rating of twelve kilowatts or less and are basic "cookie cutter" installations. Thus, a standardized permitting process will not only reduce soft costs for the solar installers, but will also increase permitting efficiencies for local building officials. REEBA and other stakeholders have worked diligently since the end of the 2015 legislative session to improve the efficiency of the solar installation permitting process statewide. REEBA looks forward to continuing these discussions with the state building inspectors, local building inspectors, The Council of Small Towns (COST) and the Connecticut Conference of Municipalities (CCM) on this important issue.

H.B. No. 5427: AN ACT CONCERNING THE SHARED CLEAN ENERGY FACILITY PILOT PROGRAM

REEBA supports this bill, which will make important changes to the program in connection with utility cost recovery, tariff mechanisms, and other technical changes. Regarding the proposed 15-year financing mechanism, REEBA believes that this is too short. A 20-year financing mechanism is much more in line with industry financing and is consistent with other long-term renewable contracts supported by this legislature.

On behalf of all of the REEBA's members, I thank the Energy and Technology Committee for their consideration.

Kind regards,



Paul R. Michaud, Esq.
Executive Director



TESTIMONY OF THE NORTHEAST CLEAN ENERGY COUNCIL

Regarding

Senate Bill 224 (Raised)

An Act Concerning the Capacity and Criteria for Certain Renewable Energy Generation Facilities

Senate Bill 272 (Raised)

An Act Concerning the Use of Microgrid Grants and Loans for Certain Distributed Energy Generation

House Bill 5242 (Raised)

An Act Concerning Agricultural Virtual Net Metering

House Bill 5309 (Raised)

An Act Concerning Facilitation of the Municipal Residential Solar Application Process

House Bill 5427 (Raised)

An Act Concerning the Shared Clean Energy Facility Pilot Program

Submitted by:

Dan Bosley, NECEC Government Relations Executive

March 1, 2016

To the Members of the Energy and Technology Committee:

The Northeast Clean Energy Council (NECEC) appreciates the opportunity to comment on the five raised Senate and House bills noted above.

NECEC is the lead voice for hundreds of clean energy companies across the Northeast, helping to grow the clean energy economy. NECEC's mission is to create a world-class clean energy hub in the Northeast delivering global impact with economic, energy and environmental solutions. NECEC is the only organization in the Northeast that covers all of the clean energy market segments, representing the business perspectives of investors and clean energy companies across every stage of development. NECEC members span the broad spectrum of the clean energy industry, including energy efficiency, demand response, renewable energy, combined heat and power, energy storage, fuel cells and advanced and "smart" technologies. Many of our members are operating and investing in Connecticut, and more are interested in doing so.

SB 224 (Raised) *An Act Concerning the Capacity and Criteria for Certain Renewable Energy Generation Facilities*

This bill would increase the size and number of Class I renewable generation facilities for which “an electric distribution company, or owner or developer of generation projects that emit no pollutants” could submit unsolicited proposals to the Department of Energy and Environmental Protection (DEEP). While NECEC strongly supports action that would allow a range of independent owners and developers of “generation projects that emit no pollutants” (such as fuel cell and other clean energy technology companies) to submit unsolicited proposals to the Department of Energy and Environmental Protection (DEEP), we do not support policies that would make it easier for electric distribution companies to increase their ownership of clean energy or any generation as proposed here. Therefore, **NECEC opposes the bill in its current form.**

We respectfully urge the Committee to consider that action on the proposals in this bill might better be vetted as part of the larger Comprehensive Energy Strategy discussion to take place later this year. In the meantime, Connecticut is already undertaking procurements of grid scale and small renewable and clean energy resources pursuant to Public Act 15-107.

There is also an existing “customer side of the meter” fuel cell program in the Connecticut LREC program, which is currently set to expire after the April 2016 solicitation. The LREC program leverages private investment and federal investment tax dollars into “customer side of the meter projects” that may require less ratepayer support than the proposed bill. Regardless of action taken on this proposed bill, the General Assembly should assure that action on the extension of the Connecticut LREC program is a policy priority.

SB 272 (Raised) *An Act Concerning the Use of Microgrid Grants and Loans for Certain Distributed Energy Generation*

NECEC supports this bill, which would allow DEEP to provide microgrid grants and loans for additional types of costs associated with microgrids.

HB 5242 (Raised) *An Act Concerning Agricultural Virtual Net Metering*

NECEC supports this bill, which clarifies that agricultural customers are allowed to lease or enter into long-term contracts for an agricultural virtual net metering facility.

HB 5309 (Raised) *An Act Concerning Facilitation of the Municipal Residential Solar Application Process*

NECEC strongly supports this bill, which would require the Green Bank to develop, in consultation with the State Building Inspector, a standardized solar photovoltaic system permit application form and make it available for use by municipalities.

Local permitting processes for residential solar installations of smaller projects (generally 12 kilowatts or less) can be inconsistent, cumbersome, time-consuming and costly, without providing compensating benefits for customers and the general public. Among other concerns, these possible delays place an unnecessary brake on the SHREC program, which calls for an additional 300 MW of residential solar (roughly 40,000 new home installations) by 2022. The



FuelCell Energy

March 1, 2016

To: The Honorable Paul R. Doyle
The Honorable Lonnie Reed
Co-Chairs, Energy and Technology Committee

Re: **RAISED SENATE BILL NO. 272**
AN ACT CONCERNING THE USE OF MICROGRID GRANTS AND LOANS FOR CERTAIN DISTRIBUTED ENERGY GENERATION

FuelCell Energy, Inc. (FCE), a manufacturer of ultra-clean high efficiency fuel cell power systems with operations in Danbury and Torrington, is pleased to provide these comments with respect to Raised Senate Bills 272.

FCE employs more than 600 people worldwide in the fields of research, development manufacturing, installation, and servicing of clean energy technology. We currently generate more than 300MW of power across three continents. Here in Connecticut, there are over 500 companies in the state that are part of the hydrogen and fuel cell supply chain, contributing approximately 1,500 additional indirect jobs.

FCE is supportive of SB272, which seeks to expand the types of costs and expenses for which funds awarded under the state's grants and loans programs may be used.

So-called microgrids, which are discrete energy sources and loads capable of operating in parallel with, or independently from, the main power grid are an integral component to our state's Comprehensive Energy Strategy. Particularly since the historic storms of Hurricane Irene and the Halloween Nor'easter of 2011 that left several thousand customers without power for as much as 11 days, improving grid reliability has been a priority. And Microgrids have been central to that effort.

Public Acts 12-148 (Section 7) and 13-298 have been a success. The initial \$18 million, followed by an additional round of \$30 million, has been used to assist about a dozen projects with the design work allowed under the legislation. Among the projects awarded under this program was a FuelCell Energy 400kW fuel cell project in Woodbridge and a 1.4MW fuel cell project in Bridgeport.

This proposal will allow for additional forms of financial assistance, including low interest loans for specific types of generation facilities including Class I projects.

FCE enthusiastically supports this proposal as a natural next step to help facilitate the investment in and development of microgrid projects in Connecticut.

FuelCell Energy appreciates the opportunity to provide these comments.

Respectfully Submitted,

S. Derek Phelps
Director, Market & Project Development
FuelCell Energy, Inc.
Phone 203 825 6000

**SB 272 AAC The Use Of Microgrid Grants And Loans For
Certain Distributed Energy Generation.
Energy & Technology Committee, March 1, 2016**

Testimony by Joel N. Gordes, Consultant, dba Center for Energy Security Solutions
38 Brookmoor Rd., West Hartford, CT 06107, (860) 561-0566

Co-Chair Doyle, Co-Chair Reed, Committee Members and staff, my name is Joel Gordes. I am an independent energy consultant representing myself.

I would like to offer my support for this bill that takes several steps to make this program more viable. While forward-looking in intent, as originally offered, this program has not previously provided the type of support required to attract many worthy projects. Microgrids, done correctly, offer the opportunity to provide greater resilience than the electric grid we have now. For instance, in the past week, utilities had upwards of 100,000 customers out of service from a storm with winds ~60 miles per hour,¹ far below even a Category I or Category II hurricane. While restoration times were more acceptable than during the Two Storms, one might expect even better results for the ~\$300 to \$400+ million approved to prevent outages to begin with. "Hardening" in a tightly coupled, complex centralized system such as in the grid today, may only make it more "brittle" when it encounters more newly emerging threats. Sometimes these threats can take place in combination with each other such as a cyber-attack in conjunction with a hurricane, ice storm or blizzard. Hardening does not aid at all in cyberattacks or in natural or manmade electromagnetic events.

The core problem is inaction to mandate changes to the over 100 year old utility business model. Other states have already begun. For instance, NY's *Reforming the Energy Vision* (REV) process, begun by Gov. Cuomo after massive damage by Hurricane Sandy, may form one model for this. In REV and other models, progressive utilities are investigating or developing other products to offer customers and enhancing their own value streams to keep rates down. Because we have this bill before us, it is an opportunity for adding incremental steps toward this. Almost five years ago, in a published OP-ED on microgrids I wrote:

...but the key to successful implementation will be to compensate utilities with equal or better rates of return so they cooperate in installation of these systems. We have taken similar steps for their involvement in energy efficiency programs since 1988. Only by making the utilities monetarily whole can a secure, reliable distributed generation plan become a reality.²

Let me reiterate that in order to make them truly viable and more willing participants in programs such as this we should consider that same provision in 16a-49 for a 1% -5% bonus rate of return for utilities to reward their role for superior integration of microgrids. Instead of opposing a new business model(s), we can hope our utilities will follow suit and even profit from it but without infringing upon the private sector.

Finally, the integration of gas microturbines as eligible generation sources if they are able to attain a thermal efficiency of 40% or more does add greater flexibility for those times when other sources are unable to meet loads. That being said, the wording in the bill for eligibility says, "a gas microturbine with a thermal efficiency factor of at least forty percent as **established by the manufacturer...**" [emphasis added]. These last five words raise red flags as it is inappropriate to depend upon information solely from a manufacturer who has a vested interest or who may be hoping to stem competition. Appropriate substitute language might read "as certified by an independent, accredited testing laboratory."

Thank you for your attention in this matter.

¹ Rondinone, Nicholas. Outages Drop, But Linger. February 27, 2016. P. B1

² Gordes, Joel N. *Smaller Electric Grids Safe, Reliable*. The Hartford Courant. September 4, 2011. P. C1.



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

**STATE OF CONNECTICUT
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION**

Public Hearing – March 1, 2016
Energy & Technology Committee

Testimony Submitted by Commissioner Robert J. Klee
Presented By Deputy Commissioner Katie S. Dykes

**Senate Bill No. 272 – AN ACT CONCERNING THE USE OF MICROGRID GRANTS AND LOANS FOR CERTAIN
DISTRIBUTED ENERGY GENERATION**

Thank you for the opportunity to present testimony regarding **Senate Bill No. 272 – An Act Concerning the Use of Microgrid Grants and Loans for Certain Distributed Energy Generation**. The Department of Energy and Environmental Protection (DEEP) welcomes the opportunity to offer the following testimony.

We appreciate the Committee's willingness to raise this bill at the request of the DEEP. This proposal, which we strongly support, would authorize DEEP to use bond money to be applied towards clean generation and energy storage in its microgrid program.

DEEP's microgrid program provides grants to support local distributed energy generation for critical facilities during times of larger electricity grid outages. In 2011 and 2012 Connecticut experienced significant weather events that led to over 2,000,000 residents without electricity. Connecticut's microgrid program was developed in the wake of those storms (Public Act 12-148) to provide reliable electrical service to critical facilities during times of electricity grid outages and increase the safety and quality of life of residents. The program funds design, engineering, wiring and interconnection costs for technically feasible microgrids that best address Connecticut's energy security, reliability and clean energy goal.

Currently, the program's funding is limited by statute to interconnection infrastructure. Based on feedback from stakeholders, DEEP believes that funding clean distributed generation is a barrier to participation and the program could deliver resiliency benefits to additional communities, beyond the 11 projects currently funded, if DEEP could use existing funding for clean distributed generation and energy storage to power critical facilities in case the grid goes down. This proposal would not increase the level of current funding for the microgrid program, but it would give DEEP flexibility to use the existing funding

for additional purposes that support our state energy goals. Clean distributed generation increases grid reliability and furthers the goals in our state Comprehensive Energy Strategy.

In summary, DEEP strongly supports **Senate Bill No. 272 – An Act Concerning the Use of Microgrid Grants and Loans for Certain Distributed Energy Generation** and looks forward to taking this step to support local clean distributed generation to power critical facilities in municipalities using existing resources.

Thank you for the opportunity to present testimony on this proposal. If you should require any additional information, please contact Robert LaFrance, DEEP's Director of Governmental Affairs, at 860.424.3401 or Robert.LaFrance@ct.gov or, Elizabeth McAuliffe, DEEP Legislative Liaison, at 860.424.3458 or Elizabeth.McAuliffe@ct.gov.



TESTIMONY OF
ANGELA L. RUGGIERO, SENIOR COUNSEL
EDWARD DAVIS, DIRECTOR - RATES

Energy and Technology Committee
March 1, 2016

AB5309

Good afternoon, Senator Doyle, Representative Reed and members of the Energy and Technology Committee. My name is Angela Ruggiero and I am a Senior Counsel at Eversource Energy and I am joined by Edward Davis, Director of Rates for Eversource Energy. Eversource Energy thanks the committee for the opportunity to provide testimony on various bills that have been raised during this short session.

SB103

SB224

SB372

Eversource transmits and delivers electricity to 1.2 million customers in 149 cities and towns and provides natural gas to 222,000 customers in 72 communities in Connecticut. Eversource harnesses the commitment of its approximately 8,000 employees across three states to build a single, united company around the mission of delivering reliable energy and superior customer service.

H.B. No. 5427 AN ACT CONCERNING THE SHARED CLEAN ENERGY FACILITY PILOT PROGRAM.

Connecticut has made good progress in its quest for a cleaner, more resilient, and cheaper energy system. To that end, Eversource supports this bill and is committed to this pilot. We have been working closely with DEEP, PURA, and UI on the shared solar pilot program. This bill, as presented, represents the cooperation and collaboration between all of the stakeholders.

Eversource continues to support the establishment of a pilot program and the requirement of a competitive solicitation by the Department of Energy and Environmental Protection ("DEEP") as sound approaches to control costs and minimize negative rate impacts to non-participating customers. Eversource believes that the modifications to the prior Shared Clean Energy pilot program, including billing credits issued through the electric distribution companies ("EDCs"), tariff mechanisms to purchase the energy products produced by the facilities, and the EDCs' ability to recover reasonable costs, are workable and are endorsed by Eversource. Lastly, the requirement

Page 4 of 4

**S.B. No. 272 AN ACT CONCERNING THE USE OF MICROGRID GRANTS AND LOANS FOR
CERTAIN DISTRIBUTED ENERGY GENERATION**

Eversource is opposed to the revisions set forth in this bill. This bill essentially eliminates the use of Standby Emergency Generation and could prove to be unfair and uneconomical for remote or small municipalities, as their critical facilities are generally located farther away from natural gas facilities. This bill seems to favor specific types of technology, such as gas microturbines, notwithstanding the fact that the intent of the original legislation was to provide resiliency during emergencies. The bill continues by providing funding for batteries and generation; however, funding for projects such as these are already in place and to include additional funding here is unnecessary, redundant, and could take funding away from the types of projects that were contemplated in the original bill. Finally, this bill eliminates the use of existing generation, which is contrary to the original intent of the legislation, which was to leverage existing distributed generation, which currently totals over 650 megawatts, and existing emergency and standby generators in service.

Thank you.

**JOINT
STANDING
COMMITTEE
HEARINGS**

**ENERGY AND
TECHNOLOGY
PART 2
356 – 721**

2016



Renewable Energy and Efficiency Business Association, Inc. c/o Murtha Cullina LLP | CityPlace I | 185 Asylum Street | Hartford, CT 06103 | 860-240-6131

TESTIMONY OF
THE RENEWABLE ENERGY AND EFFICIENCY BUSINESS ASSOCIATION, INC.
ON S.B. NO. 224, S.B. NO. 272, H.B. NO. 5242, H.B. NO. 5309 AND H.B. NO. 5427

March 1, 2016

Good afternoon Senator Doyle, Representative Reed, Senator Formica and Representative Ackert and members of the Energy & Technology Committee. My name is Paul Michaud and I am the Executive Director the Renewable Energy and Efficiency Business Association, Inc. ("REEBA"). With over 60 members, REEBA is a Connecticut business trade association that promotes renewable energy and energy efficiency in Connecticut. On behalf of REEBA, I thank you for the opportunity to offer comments on S.B. 224, S.B. 272, H.B. 5242, H.B. 5309 and H.B. 5427.

S.B. No. 224: AN ACT CONCERNING THE CAPACITY AND CRITERIA FOR CERTAIN RENEWABLE ENERGY GENERATION FACILITIES

REEBA generally supports this bill, but believes that the provision allowing the local distribution utilities to own renewable "generation" is inconsistent with the legislature's 1998 goal of electric industry restructuring and separating rate-based generation from utility electric distribution operations. REEBA, however, in no way opposes the local electric distribution utilities forming competitive affiliates that could compete in the renewable generation space on a level playing field with the renewable energy companies.

S.B. No. 272: AN ACT CONCERNING THE USE OF MICROGRID GRANTS AND LOANS FOR CERTAIN DISTRIBUTED ENERGY GENERATION

REEBA supports the use of microgrid grants and loans to help fund the generation component of microgrids. Currently, state funding can only be used to fund the design, engineering services and interconnection infrastructure. This bill calls for matching funds or low interest loans for Class I and Class III renewable energy generating projects, gas micro-turbines and energy storage systems. REEBA believes that helping to fund both the interconnection and generation infrastructure of microgrids makes good sense and is in the public interest.

H.B. No. 5242: AN ACT CONCERNING AGRICULTURAL VIRTUAL NET METERING

REEBA supports this bill. It modifies the definition of "Agricultural Customer Host" to allow the owner of farmland to lease or enter into a long-term contract for an agricultural virtual net metering project. The benefit of this bill is that it puts farmers on a level playing field regarding the development of renewable energy projects as municipalities and the state.