



# SIERRA CLUB

**Connecticut Chapter**  
**P.O. Box 270595**  
**West Hartford, Connecticut 06127**  
connecticut.sierraclub.org

March 4, 2021

Dear Senator Needleman, Representative Arconti, Senator Winfield, Representative Allie-Brennan, Senator Formica, Representative Ferraro and members of the Energy and Technology Committee,

On behalf of the Sierra Club and our more than 40,000 members and supporters in Connecticut, thank you for the opportunity to testify on several bills before you today.

The Sierra Club is committed to solving the climate crisis with just and equitable solutions that will result in a healthy world for everyone. Here in Connecticut, we are feeling the climate and health impacts of pollution from fossil fuel combustion. Last summer, the Hartford area broke a 37-year-old record for the most days in a year reaching temperatures of 90 °F or above<sup>1</sup>, and six of the hottest years have been since 2005.<sup>2</sup>

In recognition of the need to address climate-destroying greenhouse gases, the General Assembly passed the Global Warming Solutions Act (GWSA) mandating a reduction of greenhouse gas emissions below 2001 levels by 45% by 2030 and 80% by 2050. Connecticut must now focus on critically needed strategies to meet the decarbonization requirements of the GWSA.

With that context in mind, Sierra Club Connecticut offers this testimony.

## **Senate Bill 882 An Act Concerning Climate Change Mitigation and Home Energy Affordability**

Sierra Club supports SB 882 with an amendment to address all electricity generation in Connecticut in the 100% zero-carbon target.

At first blush, (a)(3) appears to be an effort to align Senate Bill 882 with Governor Lamont's Executive Order No. 3 goal to achieve "... a 100% zero carbon target for the electric sector by 2040."

However, Senate Bill 882 differs from Executive Order No. 3 in one very important aspect: it only limits carbon emissions from "electricity supplied to electric customers in the state." Effectively, SB 882 would allow Connecticut to increase electric sector CO<sub>2</sub> emissions from fossil fuel power plants as long as Connecticut exports the electricity to other states. By only covering the electricity supplied to electricity customers, Connecticut could technically achieve the 100% goal in 2040 while still having 54 fossil fuel power plants running in the state as we do right now.<sup>3</sup> That number could be higher if the yet-to-be constructed Killingly power plant moves forward.

Connecticut's economy-wide GHG emissions in 2017 were 40.6 million metric tons (MMT) of carbon dioxide equivalent (CO<sub>2</sub>e)<sup>4</sup>, with 9.3 million metric tons coming from the electric sector.<sup>5</sup>

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<sup>1</sup> <https://apnews.com/article/bf5e58a5e83e689d920bb18438071412>

<sup>2</sup> <https://www.ncdc.noaa.gov/cag/>

<sup>3</sup> <https://portal.ct.gov/-/media/DEEP/energy/IRP/2020-IRP/2020-CT-DEEP-Draft-Integrated-Resources-Plan-in-Accordance-with-CGS-16a-3a.pdf>

<sup>4</sup> [https://portal.ct.gov/-/media/DEEP/climatechange/2017\\_GHG\\_Inventory/2017\\_GHG\\_Inventory.pdf](https://portal.ct.gov/-/media/DEEP/climatechange/2017_GHG_Inventory/2017_GHG_Inventory.pdf)

<sup>5</sup> [https://portal.ct.gov/-/media/DEEP/climatechange/2017\\_GHG\\_Inventory/2017\\_GHG\\_Inventory.pdf](https://portal.ct.gov/-/media/DEEP/climatechange/2017_GHG_Inventory/2017_GHG_Inventory.pdf)

**Phone: (860) 578-4750 -- Email: [Connecticut.chapter@sierraclub.org](mailto:Connecticut.chapter@sierraclub.org)**

With the Millstone nuclear facility scheduled to close before 2040, now is the time to mobilize resources to achieve Governor Lamont's 100% carbon emission free electric sector goal by 2040 by ramping up renewables.

The Sierra Club urges modification such as the following:

(A)(3) Not later than January 1, 2040, to a level of zero per cent from electricity generated in the state and/or supplied to electric customers in the state;

Consistent with the above, Connecticut should also codify a restriction on any new fossil fuel power plants. Given our stated goals to decarbonize the electric sector, it simply makes no sense to continue development of obsolete, counterproductive electricity generation methods that are inconsistent with Connecticut's carbon reduction goals.

Sierra Club Connecticut supports provisions in the bill to procure demand response and to provide buyers and renters with data on the energy consumption of a property so that they can make an informed decision about the costs associated with the property. This is one strategy to encourage energy efficiency, but it is important to note that it is critically important that Connecticut also take action to fund energy efficiency and clean energy programs and remove barriers that prevent residents, especially low income residents, from these programs. Without support and remediation of barriers, low income households will not be able to enjoy the benefits of our energy efficiency programs.

Sierra Club Connecticut urges passage of Senate Bill 882 with the suggested amendment.

### **House Bill 6524 An Act Concerning the Solicitation of New Fuel Cell Electricity Generation Projects**

The Sierra Club opposes House Bill 6524 in its current form.

It is critical to recognize that different fuel cell technologies produce very different amounts of greenhouse gases. For example, a fuel cell vehicle using hydrogen generated from fossil gas will still emit about 45% as much CO<sub>2</sub> as a gasoline powered vehicle, while a fuel cell using hydrogen generated from solar or wind energy will eliminate nearly all CO<sub>2</sub> emissions.

The science is clear, at every stage in its life cycle, gas releases dangerous air pollution that contributes to smog, and is a potent contributor to climate change. Leaks occur from wells, from pipelines, from meters, and from equipment and appliances. According to a study published by the National Academy of Sciences, methane leakage can as much as double the climate effect of gas.

House Bill 6524 makes no distinction between the relative environmental impact of different types of fuel cells but rather treats them as a monolithic product without distinction. Section 1.(a) provides the following criteria for fuel cell selection:

(a) Each electric distribution company shall solicit proposals to acquire new fuel cell electricity generation projects that began operation on or after July 1, 2021. All such projects shall be selected utilizing a competitive process that gives preference to fuel cell electricity generation projects manufactured in the state and sited on brownfields, as defined in section 32-760, or landfills...

Just as all internal combustion engine technologies do not emit equivalent amounts of greenhouse gasses, not all fuel cell technologies have equivalent environmental attributes. The Sierra Club opposes

the bill unless it is amended to only use renewable sources, and not fossil gas, as a fuel stock. We suggest Section 1.(a) be modified to mandate renewable fuel cell technologies such as solar and wind.

These resources provide additional information:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7280957/>

[https://www.energy.gov/sites/prod/files/2016/06/f32/fcto\\_myredd\\_fuel\\_cells\\_0.pdf](https://www.energy.gov/sites/prod/files/2016/06/f32/fcto_myredd_fuel_cells_0.pdf)

<https://www.mdpi.com/1996-1073/12/23/4593/pdf>

### **Senate Bill 952 An Act Concerning Certain Solar Energy Projects**

Sierra Club Connecticut supports Senate Bill 952. Senate Bill 952 would dramatically increase the availability and deployment of much-needed energy storage in Connecticut, a vital complement to independent distributed energy generation, an effective way to increase the resilience of the grid, and an important way to boost local job growth.

There is tremendous benefit in storage now, but current market structures do not fully value or support it. A robust program storage program will be needed here in Connecticut to help overcome existing impediments to commercial development of large-scale storage systems. Some examples from other states:

- Following legislation enacted in 2010, California state regulators devised a deployment target of 1,325 MW of additional energy storage by 2020. According to the state's utility commission,<sup>6</sup> that target is being met, with 506 MW of new storage operational and an additional 1,027 MW under contract. Additionally, a pipeline of over 24,000 MW storage interconnection requests are pending, and an estimated 16,000 people now work in California's energy storage industry.<sup>7</sup>
- Following legislation enacted in 2017, New York state regulators devised a deployment target of 3,000 MW of additional energy storage by 2030. According to the first annual *State of Storage*<sup>8</sup> report, New York counts 706 MW of storage under contract with an additional 9,779 MW of interconnection requests. 32 MW of new storage has started operations, and an estimated 1,200 people now work<sup>9</sup> in New York's growing energy storage industry.

The Sierra Club would also like to emphasize the importance of ensuring that energy storage remains available to all citizens and businesses in the state. In the past, we have seen a few large actors use up all subsidies that are paid for by individual households and businesses. We recommend that the Legislature further strengthen the below to ensure that ratepayers protected under Section 2.(a) enjoy not only derivative benefits, but direct access to behind the meter incentives that they pay for in every electric bill:

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<sup>6</sup> <https://www.cpuc.ca.gov/General.aspx?id=3462>

<sup>7</sup> <https://e2.org/reports/clean-jobs-california-2019/>

<sup>8</sup> <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7bEE291D9C-F169-4B37-97EB-7182C5F062BF%7d>

<sup>9</sup> <https://e2.org/reports/clean-jobs-new-york-2019/>

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*Section 2. (c)(1) providing positive net present value to all ratepayers, or a subset of ratepayers paying for the benefits that accrue to that subset of ratepayers;*

With respect to Section 10, the Sierra Club urges that any proposed expedited permitting process for solar arrays sited on farmland ensure that full environmental impact of such projects be required and that there be no compromise of environmental impact evaluation as currently required under Connecticut Law.

**House Bill 6527 An Act Increasing the Total Output of Class III Sources**

Sierra Club opposes House Bill 6527 as it is contradictory to the goal of 100% zero-carbon electricity by 2040.

Thank you for consideration of our testimony.

Sincerely,

Samantha Dynowski, State Director  
Sierra Club Connecticut