Back to our energy future........
Prior to 2015, loss of farmland and forest land was slowing.

The years from 2010 through 2015 were unusual: gains in forest acreage equaled the losses. Before 2010, Connecticut's forests had been shrinking for three decades.
Probable Reasons for Connecticut’s Stable Forest and Farm Acreage

- 2007/8 Recession
- Stable/Declining Population
- State investment in private-land forest conservation and agricultural business
Sec. 16-245a. Renewable portfolio standards.

(a) An electric supplier and an electric distribution company providing standard service or supplier of last resort service, pursuant to section 16-244c, shall demonstrate:

(1) On and after January 1, 2006, that not less than two per cent of the total output or services of any such supplier or distribution company shall be generated from Class I renewable energy sources and an additional three per cent of the total output or services shall be from Class I or Class II renewable energy sources;

(2) On and after January 1, 2007, not less than 3.5 %;

(3) On and after January 1, 2008, not less than 5%;

(4) On and after January 1, 2009, not less than 6%;

(5) On and after January 1, 2010, not less than 7%;

(6) On and after January 1, 2011, not less than 8%;

(7) On and after January 1, 2012, not less than 9%;

(8) On and after January 1, 2013, not less than 10%;

(9) On and after January 1, 2014, not less than 11%;

(10) On and after January 1, 2015, not less than 12.5%;

(11) On and after January 1, 2016, not less than 14%;

(12) On and after January 1, 2017, not less than 15.5%;

(13) On and after January 1, 2018, not less than 17%;

(14) On and after January 1, 2019, not less than 19.5%;

(15) On and after January 1, 2020, not less than 20% of the total output or services of any such supplier or distribution company shall be generated from Class I renewable energy sources and an additional three per cent of the total output or services shall be from Class I or Class II renewable energy sources.
Solar = Good Investment?:

COUNCIL ON ENVIRONMENTAL QUALITY
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>CSC Status? / IMPACT</th>
<th>Lost forest, farm, open</th>
<th>NDDB concern</th>
<th>NDDB Status</th>
<th>NDDB Next Target Date</th>
<th>NDDB Received Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FY 2016 CSC APPLICATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Construction of a Photovoltaic System (Solar Field) at Shagbark Lumbar &amp; Farm Supply, 21 MT. Parnassus Road in East Haddam</td>
<td>(Preliminary Assessment with animals, plants and banded sunfish: DMM sent preliminary list of species for consideration)</td>
<td></td>
<td></td>
<td>Issued</td>
<td></td>
<td>9/21/</td>
</tr>
<tr>
<td>28</td>
<td>Preliminary Assessment for Construction of Solar Array For Rome at 21 Bushy Hill Road in Granby (Preliminary Assessment with Species List)</td>
<td></td>
<td></td>
<td></td>
<td>Non-Permit Process Complete</td>
<td></td>
<td>9/16/</td>
</tr>
<tr>
<td>29</td>
<td>Installation of a 3,894.24 Megawatt Solar-Based Electric Generating Facility for The Town of Rocky Hill Rocky Hill Solar PV Project) at R013 Old Forge Road in Rocky Hill</td>
<td></td>
<td></td>
<td></td>
<td>Issued</td>
<td></td>
<td>9/8/</td>
</tr>
<tr>
<td>30</td>
<td>Installation of a Solar-Based Electric Generating Facility at Connecticut Municipal Electric Energy Cooperative-Groton, 1240 Poquonnock Road in Groton</td>
<td></td>
<td></td>
<td></td>
<td>Response to Comments 11/1/2016</td>
<td></td>
<td>7/21/</td>
</tr>
<tr>
<td>31</td>
<td>Construction of Solar Array, Connecticut Municipal Electric Energy Cooperative at 82 Rogers Road, Norwich (no conflict) 2.74 MW 10.8 acres on former landfill</td>
<td></td>
<td></td>
<td>None - good use of site</td>
<td>Issued</td>
<td></td>
<td>7/17/2015</td>
</tr>
<tr>
<td>32</td>
<td>Construction of 5.02 MW Solar Facility located at 9 Stott Ave in Norwich (no conflict)</td>
<td></td>
<td></td>
<td>18 confirmed birds 1.9 acres requires cutting 3.9 acres require new soil disturbances</td>
<td>Issued</td>
<td></td>
<td>7/14/2015</td>
</tr>
</tbody>
</table>
Energy Sprawl Is the Largest Driver of Land Use Change in United States

Anne M. Trainor, Robert I. McDonald, Joseph Fargione

Published: September 8, 2016 • http://dx.doi.org/10.1371/journal.pone.0162269

Abstract

Energy production in the United States for domestic use and export is predicted to rise 27% by 2040. We quantify projected energy sprawl (new land required for energy production) in the United States through 2040. Over 200,000 km² of additional land area will be directly impacted
2016 Solar Development on Farm and Forest vs.
Average Annual Land Conservation

2016 3-STATE RFP PROPOSALS BY ENERGY TYPE (27 PROJECTS)
- Solar: 11
- Wind: 12
- Hydroelectric: 2
- Imported Wind and Hydroelectric: 1
- Fuel Cell: 1

2016 3-STATE RFP SELECTED PROJECTS BY ENERGY TYPE (11 PROJECTS)
- Solar: 9
- Wind: 2

COUNCIL ON ENVIRONMENTAL QUALITY
Location of Utility-Scale Renewable Energy Facilities, Proposed vs. Selected in 2016

2016 RFP PROPOSALS
BY STATE
(27 PROJECTS)

- Connecticut: 6
- Other States: 21

2016 SELECTED RFP PROJECTS BY STATE
(11 PROJECTS)

- Connecticut: 5
- Other States: 6

Conclusion: The 2016 project-selection process resulted in a disproportionate number of projects in Connecticut. All of the projects selected for Connecticut (unlike other states) were proposed for farmland or undeveloped land.
Energy Sprawl in Connecticut

Why Farmland and Forests are Being Developed for Electricity Production; Recommendations for Better Siting


One industry that continues to grow in Connecticut is the installation of photovoltaic equipment that converts sunlight to electricity.

Not all solar installations yield equal benefits. Solar panels on commercial rooftops, industrial lands and old landfills can be sustainable home runs. Unfortunately, Connecticut adopted laws and policies that encourage utility-scale solar photovoltaic facilities* to be developed on farmland and forest land. Connecticut was, and still is, unprepared to guide the placement of solar facilities to minimize their environmental damage.

Laws that encourage utility-scale solar facilities should remain in place but be corrected. Drawing on hindsight and five years of other agencies’ experiences, the Council on Environmental Quality (CEQ) has identified two critical deficiencies and offers three recommendations to correct them.

Two Deficiencies, Three Recommendations

Deficiency: Selection criteria for renewable energy projects value short-term price above all else. DEEP selects renewable energy projects which promise to deliver electricity at the lowest cost while effectively excluding environmental siting considerations and long-term indirect or external costs. As a result, solar facilities are directed by the market to farmland and forest land and away from previously-developed land.

Recommendation 1: The General Assembly should amend renewable-energy procurement statutes (CGS Section 16a-3j) to require DEEP to give meaningful weight to non-price factors, including impacts to agricultural land, forest, grasslands and other natural resources. (Note: The CEQ is not recommending that agricultural or forest landowners be prohibited from leasing their land to energy producers; the CEQ’s recommendations are aimed at changing the manner in which state agencies steer projects to particular sites.)
PA 17-218 Is the law (CGS 16-50k(a)) that requires review by DEEP and DOA

Section 1. (NEW) (Effective July 1, 2017)

- "Core forest" means **unfragmented** forest land that is three hundred feet or greater from the boundary between forest land and nonforest land;
- "prime farmland" means land that meets the criteria for prime farmland as described in 7 CFR 657.

the Siting Council shall approve by declaratory ruling (A) the construction of a facility solely for the purpose of generating electricity, ... as long as (ii) the council does not find a substantial adverse environmental effect, and for a

- **solar photovoltaic facility**
- with a capacity of **two or more megawatts**;
- That is located on prime farmland or forestland
- **excluding any such facility that was selected** by the DEEP in any solicitation issued prior to July 1, 2017,

It requires

- **Department of Agriculture represents**, in writing, to the Siting Council that such project will not materially affect the status of such land as prime farmland, or
- **DEEP represents**, in writing, to the Siting Council that such project will not materially affect the status of such land as core forest.
Number of CSC Solar Siting Proposals Received

![Bar chart showing the number of proposals approved and denied from 2013 to 2019.]

- Proposals Approved
- Proposals Denied

COUNCIL ON ENVIRONMENTAL QUALITY
Exempt & Non-exempt PV Projects Proposed Since July 1, 2017

Capacity (AC MW)

Exempt Projects & Non-exempt Projects

COUNCIL ON ENVIRONMENTAL QUALITY
## PROJECTS <2MW in 2019:

<table>
<thead>
<tr>
<th>CSC Petition #</th>
<th>MW</th>
<th>Acres</th>
<th>Impact:</th>
<th>Farmland</th>
<th>Forest</th>
<th>Habitat</th>
<th>Describe</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1352</td>
<td>19.6</td>
<td>131 of 162</td>
<td>yes</td>
<td>yes</td>
<td>farm soils/bat habitat</td>
<td>19-Apr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1354</td>
<td>1.98</td>
<td>16 of 25 total</td>
<td>Denied</td>
<td>yes</td>
<td>yes</td>
<td>possible listed species</td>
<td>19-May</td>
<td></td>
</tr>
<tr>
<td>1367</td>
<td>1.986</td>
<td>8.7 of 30 total</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>Prime &amp; Important Farm or/and/Bette/ box turtle</td>
<td>19-Apr</td>
<td></td>
</tr>
<tr>
<td>1378</td>
<td>5</td>
<td>16.5</td>
<td>Minimal</td>
<td></td>
<td></td>
<td></td>
<td>amount of acreage equivalent to the area disturbed throughout the farm property for current and future agricultural purposes. Additionally, it promotes consideration of at least two “dual use agricultural activities” on the site, such as native pollinator habitat enhancement, agriculture, suitable crop cultivation, and small livestock grazing, among others</td>
<td>19-Aug</td>
</tr>
<tr>
<td>1380</td>
<td>1.992</td>
<td>9.86 of 24.42</td>
<td>No</td>
<td>No</td>
<td>Possible</td>
<td>In Gravel pit 1NDCC issue - survey needed</td>
<td>19-Oct</td>
<td></td>
</tr>
<tr>
<td>1385</td>
<td>1.95</td>
<td>12.87 of 120</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>in an Important Bird Area</td>
<td>19-Oct</td>
<td></td>
</tr>
</tbody>
</table>
PA 17-218 Is the law (CGS 16-50k(a)) that requires review by DEEP and DOA

Section 1. (NEW) (Effective July 1, 2017) For purposes of sections 1 and 2 of this act and section 16-50k of the general statutes, as amended by this act: (1) "Core forest" means unfragmented forest land that is three hundred feet or greater from the boundary between forest land and nonforest land, as determined by the Commissioner of Energy and Environmental Protection; and (2) "prime farmland" means land that meets the criteria for prime farmland as described in 7 CFR 657.

Notwithstanding the provisions of this chapter or title 16a, the council shall, in the exercise of its jurisdiction over the siting of generating facilities, approve by declaratory ruling (A) the construction of a facility solely for the purpose of generating electricity, ... unless the council finds a substantial adverse environmental effect, ...as long as: (such] (i) Such project meets air and water quality standards of the Department of Energy and Environmental Protection, (ii) the council does not find a substantial adverse environmental effect, and (iii) for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland, excluding any such facility that was selected by the Department of Energy and Environmental Protection in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j, the Department of Agriculture represents, in writing, to the council that such project will not materially affect the status of such land as prime farmland or the Department of Energy and Environmental Protection represents, in writing, to the council that such project will not materially affect the status of such land as core forest.