

## Case Study: Town of Woodstock, CT

In January of 2016, the town of Woodstock signed a contract with BeFree Solar to install a 1 MW solar array on its landfill. This was the culmination of a process that began in 2014, though in another sense the story began in 2010. In that year, Woodstock received an award from the U.S. EPA for its decision to purchase 100% of its electricity from a clean energy supplier. Using an option open to all residential and commercial ratepayers, Woodstock decided to purchase its electricity from a clean energy supplier, with Eversource continuing to deliver the electricity. In this way, Woodstock became the first town in Connecticut to purchase all of its electricity from a clean energy provider.



### Woodstock's 1MW Solar Brownfield Installation | by BeFree Solar

By 2014 the town was ready to take a bigger step, one that would provide the town with substantially more locally produced renewable energy, while saving the town a lot of money in the process. The contract for the 1 MW solar array was a power purchase agreement (PPA) in which BeFree agreed to build and maintain the solar array and the town agreed to purchase electricity from BeFree at a set price of \$0.093/kwh (9.3¢). This price was locked in, with no inflationary cost increases for 20 years. The town had been paying a total of \$0.16/kWh (generation plus transmission charges).

In addition, through a virtual net metering (VNM) agreement with Eversource, Woodstock would earn (have credited to its account) \$0.14 per kWh for the electricity flowing into the grid from the solar field. This income, offset by the \$0.093/kwh it pays for electricity, would earn the town nearly \$0.05/kWh for each kilowatt hour the solar array generates and will amount to roughly \$1.4million in payments to the town over 20 years.

The virtual net metering arrangement was established under a State of Connecticut program whereby a municipality may create a renewable energy generation source in one location and credit the electricity produced to the accounts of town buildings at other locations. Currently, about 25 towns participate in virtual net metering, though as of this writing in March, 2017, the program is capped and no new towns can enroll.

The chair of the Green Energy Committee was the catalyst for the 2010, 100% clean energy initiative, which began with research into alternative generation suppliers that could save the town money. By 2014, the town could look to the success of this program and small solar installations on five buildings when the Committee proposed taking advantage of the state's virtual net metering program. According to the town's current First Selectman, it was easy for town government, including the school board to get behind this ambitious proposal. One thing

that helped the town feel comfortable moving ahead was finding a law firm experienced in renewable energy projects to help with the request for proposals and subsequent contracts.

<b>Woodstock</b>	
<b>Population</b>	7,964 (2010)
<b>Energy Efficiency</b>	The town and school board have steadily sought to increase the efficiency of facilities, mostly in the area of lighting. They continue to work with the Green Bank.
<b>Renewable energy project(s)</b>	A 1 megawatt solar array located on the town's landfill, plus 4 smaller arrays (9 kWh each) on town buildings.
<b>Own or Power Purchase Agreement (PPA)</b>	PPA
<b>If PPA, price per kWh</b>	\$09.3/kWh, with the town expected to use approximately 1.5 million kWhs annually. Town had been paying approximately \$0.16/kWh
<b>Virtual net metering (VNM)</b>	Yes
<ul style="list-style-type: none"> <li>Beneficial accounts</li> </ul>	Highway department (2.70%), WPCA (1.30%), Middle School (60.10%), Elementary School (25.80%) and Town Hall (10.10%)
<ul style="list-style-type: none"> <li>Income from VNM</li> </ul>	\$1.4million is expected to be earned by the town over 20 years (based on a formula reflecting \$0.14/kWh paid by Eversource to the town and output of approximately 1.5 million kWh per year).
<b>Geothermal or Heat Pumps</b>	No
<b>Solar carport(s)</b>	No
<b>% Municipal Electricity from Renewables</b>	100%
<b>Annual or cumulative savings</b>	\$2.4 million over 20 years
<b>Solar contractor(s)</b>	BeFree Solar
<b>For more information</b>	Jim Stratos, Chair of Woodstock Green Team 860-928-6054, <a href="mailto:jim@woodstockctgreenteam.org">jim@woodstockctgreenteam.org</a>

**Sources and Links:**

[Woodstock's solar panels are up and running!](#)

[Welcome to Woodstock CT Green Energy](#)

[Woodstock Solar Press Release](#)

[Building Clean Energy in the Nutmeg State](#)

Peter Millman, March 2017

[peter.millman7@gmail.com](mailto:peter.millman7@gmail.com)