



WOODBIDGE SCHOOL DISTRICT

40 Beecher Road – South
Woodbridge, Connecticut 06525

Jonathan S. Budd, Ph.D. – Superintendent

MEMORANDUM

TO: Woodbridge Board of Education Facilities Committee

FROM: Jonathan S. Budd, Ph.D., Superintendent

DATE: June 2, 2022

RE: June 7 Special Meeting:
Update on BRS Capital Needs: Solar Initiative

Please find attached information from Richard Huot, Interim Director of Business Services & Operations, in relation to a proposed solar initiative to reduce energy consumption at Beecher Road School. Following discussion at the June 7 Facilities Committee meeting, the initiative will also be discussed at a June meeting of the Board's Finance Committee, for ultimate proposed approval by the Board of Education at its June Regular Meeting.

To: Jonathan Budd, PhD, Superintendent
From: Richard Huot, Interim Director of Finance and Operations
Re: Solar Initiative
Date: May 8, 2022
CC: Facilities and Finance Committees

Titan Energy, a firm the Town and Board of Education has used for several years to reduce energy consumption, has proposed Woodbridge apply for a solar installation to augment that which has already been installed. Their proposal and energy savings calculation is attached. And am recommending the application be brought forward to the Facilities and Finance Committees for their review and the Board of Education's ultimate approval.

Per Stage 3 of the suggested project timeline (copy attached), I have submitted an initial application through Titan to Greenskies Clean Energy. The proposal has significant advantages:

1. It is a power purchase agreement which means there is no investment, but provides for the purchase per kWh at \$0.0403 cents. We are currently paying through UI for delivery and generation \$0.2263/kWh.
2. Given the output of the proposed new solar array, that is a total savings of \$71,488 annually. This is a different amount than shown in the proposal because the proposal does not take into account the savings in the cost of generation.
3. With the completion of this project, nearly all of the electric usage at Beecher Road School will be provided by renewal energy.
4. The new solar panels would not be installed until the roof replacement project is completed, which will likely be the summer of 2023.

In my experience, this proposal is very exciting as the lowest cost per kWh experienced was \$0.08, and the savings can be accrued without negatively impacting instruction.

Let me know if there is any other information you would like provided on this topic.

The logo for TITANen, with 'TITAN' in blue and 'en' in green, where the 'e' is a stylized green circle with a white dot.

TITANen

Solar Development Proposal

Woodbridge School District

March 7th 2022

The logo for TITAN ENERGY, with 'TITAN' in blue, 'ENERGY' in white, and a white arrow pointing right. Below it is the tagline 'Creative energy solutions' in white.

TITAN ENERGY
Creative energy solutions

Onsite Generation Consulting

STEP 1



**Utility Bill
Review**

Discovering project feasibility requires a thorough review of utility data to guide all future action

STEP 2



Building Audit

Each facility is unique, so we take the time to uncover every important detail before a proposal is created for the client

STEP 3



Proposal Delivery

Whether it's one proposal or many, we walk our clients through the options that best suit their energy management needs

STEP 4



**Project
Implementation**

The road from proposal to finished product can have many twists and turns; we'll be your guide along the way

STEP 5



**Measurement
& Verification**

Peace of mind comes from knowing your project is performing as intended, once commissioned we provide reports on production and savings

Project Overview

- The Town of Woodbridge and Titan Energy have worked together since 2009 on issues related to energy management and procurement.
- Titan has identified a very attractive solar project for the Beecher Road School and contacted Greenskies to obtain pricing for this project opportunity.
- Greenskies has put together the attached design and pricing for the Town and Board of Education's consideration.
- Greenskies and Titan have co-developed a number of municipal solar projects, including Region 15.
- The current incentive mechanism for this project, called the Non-Residential Energy Solutions (NRES) program, is currently accepting applications until **March 14th**.

SYSTEM INFORMATION	
SYSTEM SIZE (DC)	270 kW
SYSTEM SIZE (AC)	200 kW
PANEL SIZE	450W MT72-1506A 450WP
PANEL QUANTITY	600
PANEL TILT	5°
PANEL AZIMUTH	27°
ROW SPACING	6.9'
INVERTER SIZE	(1) CANADIAN SOLAR 100K
ESTIMATED ANNUAL PRODUCTION	315.9 MWh

*Necessary equipment selection, equipment attributes may be used in actual installation



RACKING CROSS-SECTION
(NOT TO SCALE)



PROGRESS SET
NOT FOR CONSTRUCTION

PV.01

BATCH NO	PROPOSAL
DRAWN BY	ZS
SCALE	AS NOTED
DATE	23 FEB 2022

PROPOSED SITE PLAN
BEECHER ROAD ELEMENTARY SCHOOL
PV SOLAR ARRAY
40 BEECHER RD
WOODBIDGE, CT 06525

REVISIONS

NO.	DATE	DESCRIPTION

Greenskies
177 Washington Street
North Haven, CT 06473
PH - 860.398.6409
FAX - 860.398.6423

SOLAR SAVINGS DASHBOARD

Year	Solar production	Eversource \$/kWh	Solar \$/kWh	Annual Savings	Total Savings
1	315,898	\$.1450	\$.0403	\$33,074.52	\$33,075
2	314,319	\$.1479	\$.0403	\$33,820.67	\$66,895
3	312,747	\$.1509	\$.0403	\$34,576.67	\$101,472
4	311,183	\$.1539	\$.0403	\$35,342.68	\$136,815
5	309,627	\$.1570	\$.0403	\$36,118.85	\$172,933
6	308,079	\$.1601	\$.0403	\$36,905.33	\$209,839
7	306,539	\$.1633	\$.0403	\$37,702.29	\$247,541
8	305,006	\$.1666	\$.0403	\$38,509.89	\$286,051
9	303,481	\$.1699	\$.0403	\$39,328.29	\$325,379
10	301,964	\$.1733	\$.0403	\$40,157.66	\$365,537
11	300,454	\$.1768	\$.0403	\$40,998.18	\$406,535
12	298,952	\$.1803	\$.0403	\$41,850.01	\$448,385
13	297,457	\$.1839	\$.0403	\$42,713.32	\$491,098
14	295,969	\$.1876	\$.0403	\$43,588.30	\$534,687
15	294,490	\$.1913	\$.0403	\$44,475.13	\$579,162
16	293,017	\$.1952	\$.0403	\$45,373.98	\$624,536
17	291,552	\$.1991	\$.0403	\$46,285.04	\$670,821
18	290,094	\$.2030	\$.0403	\$47,208.50	\$718,029
19	288,644	\$.2071	\$.0403	\$48,144.56	\$766,174
20	287,201	\$.2112	\$.0403	\$49,093.39	\$815,267
Total	6,026,672				\$815,267

270 kW DC
Rooftop Solar System

315,898
Kilowatt-hours

\$33,075
Year-1 Savings

\$815,267
Cumulative Savings

