



WOODBIDGE SCHOOL DISTRICT

40 Beecher Road – South
Woodbridge, Connecticut 06525

Jonathan S. Budd, Ph.D. – Superintendent
jbudd@woodbridgeps.org

MEMORANDUM

TO: Woodbridge Board of Education Finance Committee

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

DATE: June 10, 2022

RE: June 14 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. Discussion and affirmation of the project occurred at the June 7 Facilities Committee meeting; the initiative is now being discussed by 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.



TITANGen

Solar Development Proposal

Woodbridge School District

March 7th 2022

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 HT72-1500M 450W*
PANEL QUANTITY	800
PANEL TILT	5°
PANEL AZIMUTH	22°
ROW SPACING	6.9'
INVERTER SIZE	(1) CANADIAN SOLAR 100K*
ESTIMATED ANNUAL PRODUCTION	315.9 MWh

*Preliminary equipment selection, equivalent alternative may be used in actual installation



RACKING CROSS-SECTION (NOT TO SCALE)

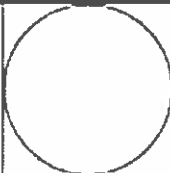


PROGRESS SET
NOT FOR CONSTRUCTION

Greenskies
 127 Washington Street
 North Haven, CT 06473
 PH - 860.398.5408
 FAX - 860.398.5423

REVISIONS		
NO.	DATE	DESCRIPTION

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



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

PV.01

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

1

- Review proposal with Woodbridge officials
- No later than 3-15-22

2

- Review solar agreement between Greenskies and Woodbridge
- No later than 4-15-22

3

- Greenskies to submit for Eversource incentives
- No later than 4-15-22

4

- Projects in engineering and design phase
- No later than 1-1-23

5

- Construction begins winter/spring 2023 (TBD)
- Construction complete summer 2023 (TBD)