

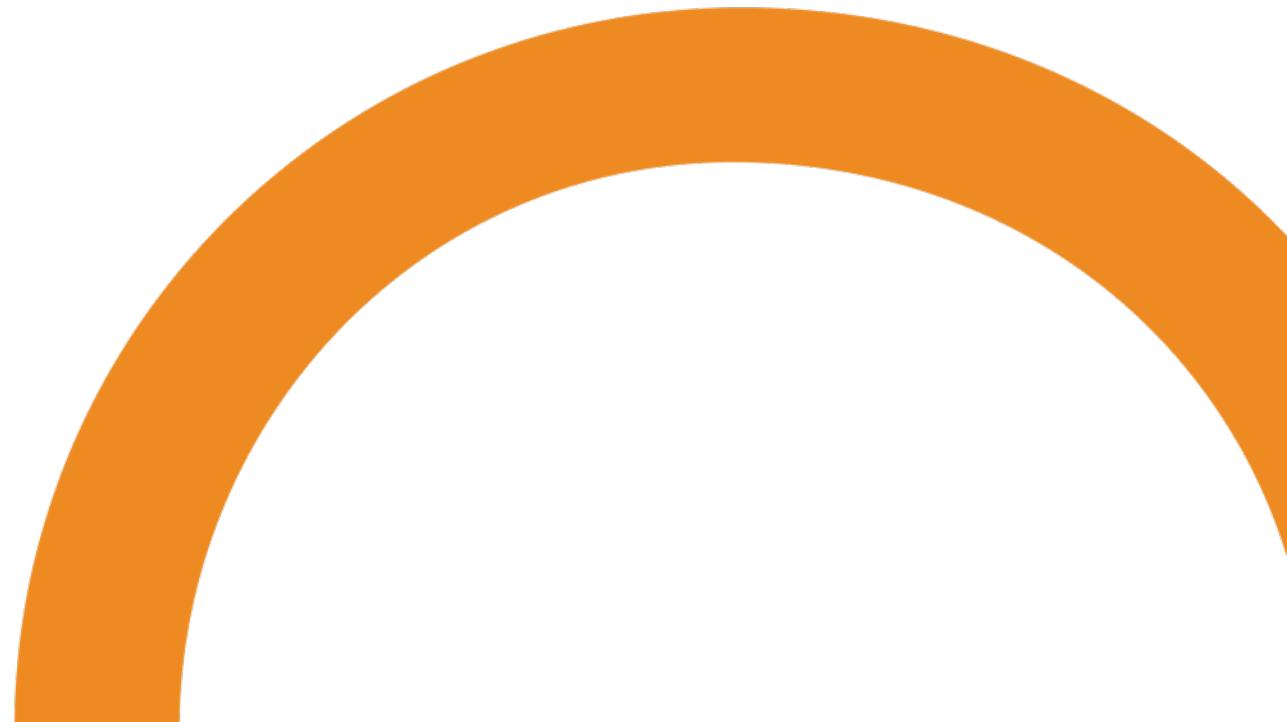
SUNPOWER®

MARCH 15, 2021

# Town of Nantucket Municipal Solar Procurement Overview



Seth Sakamoto  
SunPower Project Developer



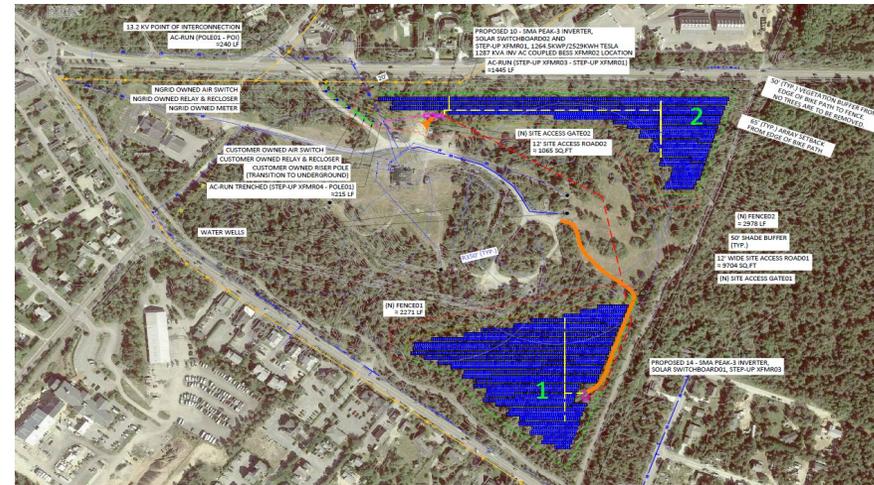
# Municipal Solar Procurement: SunPower Award

- **August 9, 2019:** The Town of Nantucket issued a Request for Proposal (RFP) for the development of municipal solar projects at a variety of Town facilities and properties across all departments
- **On January 31, 2020:** SunPower was selected as the “most advantageous” bidder, by an inter-department municipal evaluation committee, taking into consideration both the technical and pricing proposals.
- Two public projects currently in development for construction in 2021: A small (grant-funded) 95KW roof-mounted system at the **Surfside Wastewater Treatment Plant** and a larger, 4.7MW ground-mounted solar farm at the **Wannacomet Water Company** property, located on 1 Milestone Road.

## 103.84 kW Solar Array: Surfside WWTP



## 4.7MW Solar Array: Wannacomet Water Co. “Wyer’s Valley”



## SURFSIDE WWTP SOLAR PROJECT

# Project Details & Economic Benefits

Solar Project Details	
System Size	103.84 kW DC
Expected Production	148,894 kWh
% Electricity Offset (kWh)	5.7%
Solar Module Type	SunPower A440
Historic District Commission	Approved
Project Completion Date (Estimated)	Fall 2021
MA DEP Grant	\$200,000
Purchase Price (after MA DEP Grant)	\$59,111
<b>Year 1 Savings</b>	<b>\$28,911</b>
<b>Total 25 Year Savings</b>	<b>\$770,588</b>
<b>Payback Period</b>	<b>2 Years</b>



## WANNACOMET WATER COMPANY: WYER'S VALLEY SOLAR PROJECT

# Project Details & Economic Benefits

Solar Project Details	
System Size	4.7 MW DC
Product Type	Ground Fixed Tilt
Solar Module Type	SunPower E435
Energy Storage	Tesla (1.265 MW/2.529 MWH)
Historic District Commission	Approved
Project Start Date (Estimated)	Q4 2021
Project Completion Date (Estimated)	Q3 2022
Wannacomet Water Energy Savings (Year 1)	\$164,000
Energy Savings for Other Municipal Accts (Year 1)	\$91,475
Tax Revenue (PILOT) (Year 1)	\$37,265
<b>Year 1 Savings</b>	<b>\$292,740</b>
<b>Total 20 Year Savings</b>	<b>\$5,756,389</b>



# WANNACOMET WATER COMPANY: WYER'S VALLEY SOLAR PROJECT

## Site Plan



VICINITY MAP:  
 LATITUDE: 41.2686°  
 LONGITUDE: -70.0814°

- LEGEND:
- PROPOSED EQUIPMENT PAD
  - PROPOSED POINT OF INTERCONNECTION
  - AC CONDUITS (SSB-POI)
  - AC CONDUITS (SPB-SSR)
  - DC CONDUITS (CB-INV)
  - EXISTING OVERHEAD RUN
  - NEW OVERHEAD RUN

**SUNPOWER**

144 HARBORWAY SOUTH  
 RICHMOND, CA 94804 USA  
 (916) 840-8880

ENGINEER'S STAMP

TOWN OF NANTUCKET  
 1 MILESTONE RD.

ARRAY LAYOUT

REVISIONS

DATE	ISS	CB
09-20-20	01	01
09-23-20	02	01
09-23-20	03	01
10-02-20	04	01
10-02-20	05	01
10-02-20	06	01
10-02-20	07	01
10-02-20	08	01
10-02-20	09	01
10-02-20	10	01
10-02-20	11	01
10-02-20	12	01
10-02-20	13	01
10-02-20	14	01
10-02-20	15	01
10-02-20	16	01
10-02-20	17	01
10-02-20	18	01
10-02-20	19	01
10-02-20	20	01
10-02-20	21	01
10-02-20	22	01
10-02-20	23	01
10-02-20	24	01
10-02-20	25	01
10-02-20	26	01
10-02-20	27	01
10-02-20	28	01
10-02-20	29	01
10-02-20	30	01

1 MILESTONE RD.  
 NANTUCKET, MA 02554



# Project Benefits: Sustainability & Resiliency

- **Reduce** dependence on **imported power** from the mainland
- Improve **local grid reliability and resiliency** in the heart of the island (optimal interconnection location)
- “Solar + Storage” to **reduce summer peak-load** to defer the need for costly/disruptive third-undersea delivery cable
- Project will generate **46% of the Town’s annual kWh consumption and 117 million kWh of clean energy over 20 years.**
- Offset **4,230 metric tons of greenhouse gas emissions**, helping to reduce island’s carbon footprint and mitigate the harmful effects of climate change and elevated sea levels.

## Greenhouse Gas Emissions



## CO2 Emissions



## Carbon Sequestration



# Project Milestones- Wannacomet Water

## Items completed in 2020:

### Local Approvals:

- ✓ Procurement Award
- ✓ HDC Approval
- ✓ Select Board Approval
- ✓ Water Company Approval
- ✓ Contract Execution

## Items to be completed in 2021:

### State Approvals:

- Natural Heritage Endangered Species Program (NHESP)
- MA Environmental Policy Act (MEPA)
- MA Department of Env. Protection (MassDEP)

### National Grid:

- Interconnection
- SMART Incentives

**Expected Start of Construction:** Q4 2021

**Expected Commercial Operation:** Q3 2022



# Next Steps

SunPower is working with the Town and the Water Company to manage and mitigate the following key risks to the project:

## **Environmental Impact**

- NHESP determined in late Dec 2020 that the project will result in a “Take”, requiring mitigation
- A Town owned property at 211 Cliff Rd has been identified as the parcel which will provide require mitigation
- SunPower/Town/Water Company/NHESP collaborating to finalize the Conservation Management Permit for 211 Cliff Rd.

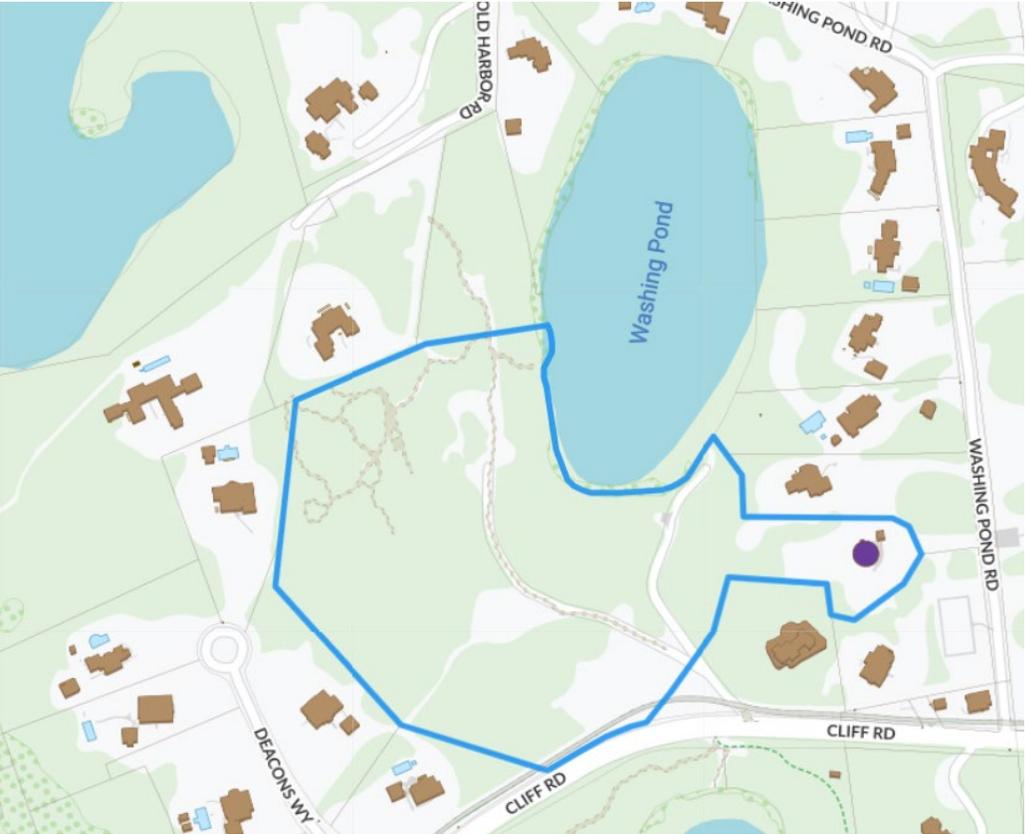
## **Module Toxicity**

- SunPower is working with a MassDEP accredited testing laboratory to test the solar modules to be used for the project for hazardous materials including PFAS

## **Utility Interconnection**

- National Grid is continuing to evaluate the impact of the project on the local distribution and transmission system to determine if any grid upgrades would be required

# 211 Cliff Rd. Vicinity Map



# Additional Project Information

[www.nantucket-ma.gov/solarfarm](http://www.nantucket-ma.gov/solarfarm) (Listed under the Wannacomet Water Company Department)

## Contact Us:

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THANK YOU

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our world is powered

