



Governing Board Meeting

April 24, 2024

Agenda Item VIII.A

South Tahoe Public Utility District
Solar Energy Project for the
Wastewater Treatment Plant

1275 Meadow Crest Dr, South Lake Tahoe, CA

SOUTH TAHOE PUBLIC UTILITY DISTRICT

Solar Project at the Wastewater Treatment Plant

**Julie Ryan, STPUD District Engineer
Sam Bhanot, Staten Solar**

April 24, 2024

WWTP 1MW Solar Project

Introduction

- District's Renewable Energy History
- Sustainable Energy and Economic Development (SEED) Fund
 - 2019 Request for Proposals
 - Six (6) participating agencies
 - Eighteen (18) potential project sites (3 STPUD)
- Selected Partner: Staten Solar (Blue Dragon Holdings 1, LLC)
- 2022 Contract: 1 MW Solar Power Purchase Agreement

WWTP 1MW Solar Project

Environmental Benefits for the Tahoe Basin

- Locally generated green energy, supplies 1/3 of WWTP consumption
- Sets WWTP up for future battery storage, reducing reliance on diesel for emergencies
- Offsets around 562 metric tons of carbon dioxide annually
- Helps the City of South Lake Tahoe accomplish its emission reduction goals

Financial Benefits to the District and Customers

- Project site selected to maximize generation with smallest footprint / lowest impact
- Stabilizes the power costs for this portion of the power portfolio
- Guaranteed minimum production
- Expect to save community \$5M to \$10M in power costs over 28 year term

WWTP 1MW Solar Project

Project Details

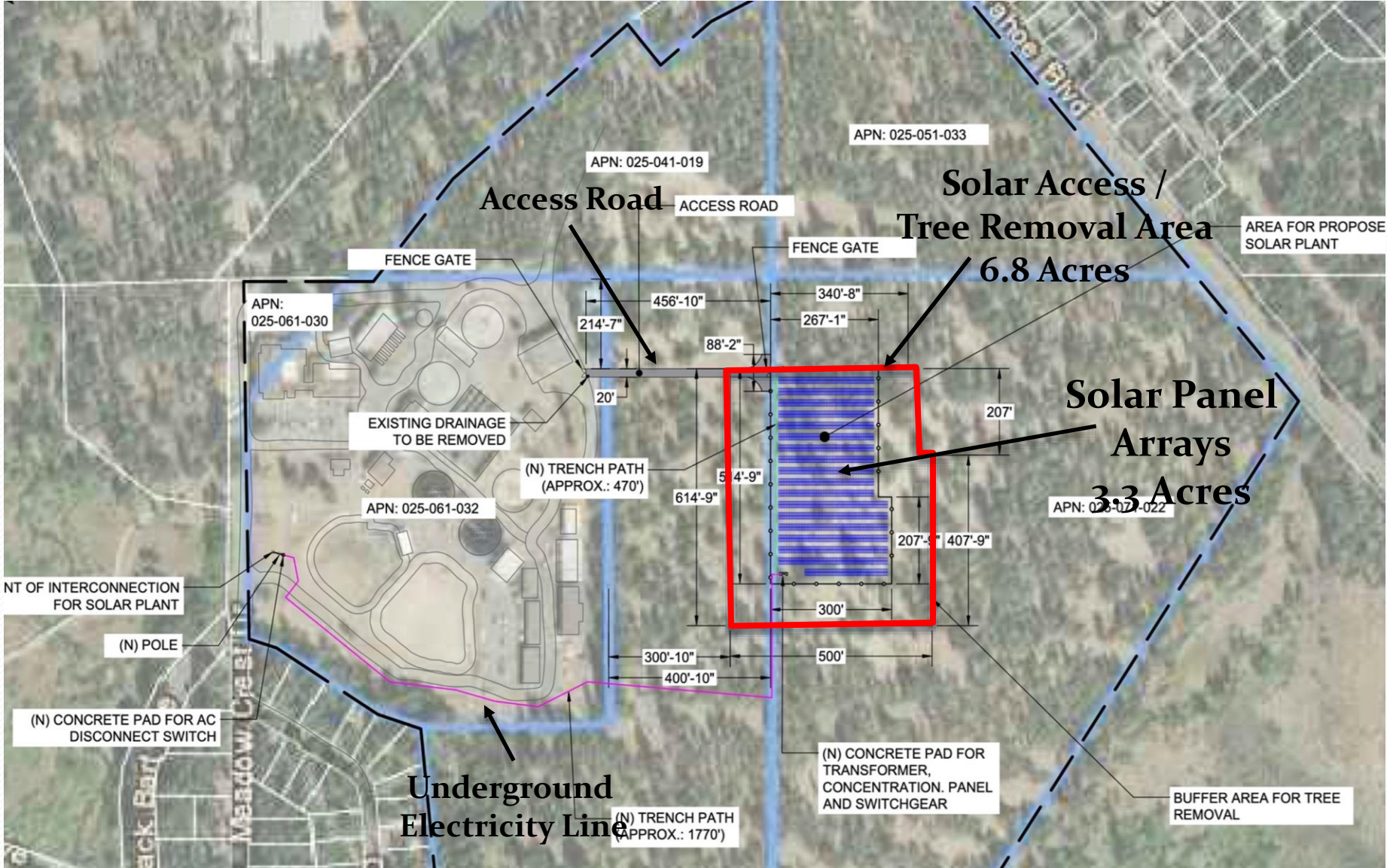
- 1 MW AC / 1.339 MW DC ground mount photovoltaic power system
- Power Generation Year 1: 1,925,050 kWh
- 3.3 Acre Solar Panel Area
- 3.5 Acre Solar Access Clearing (100' to south, east & west)



WWTP 1MW Solar Project Location



WWTP 1MW Solar Project Site Plan



WWTP 1MW Solar Project



View toward solar array facility location from Al Tahoe Blvd near entrance to City playfields

WWTP 1MW Solar Project



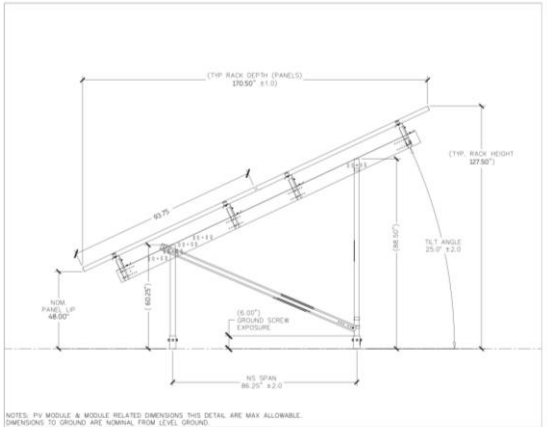
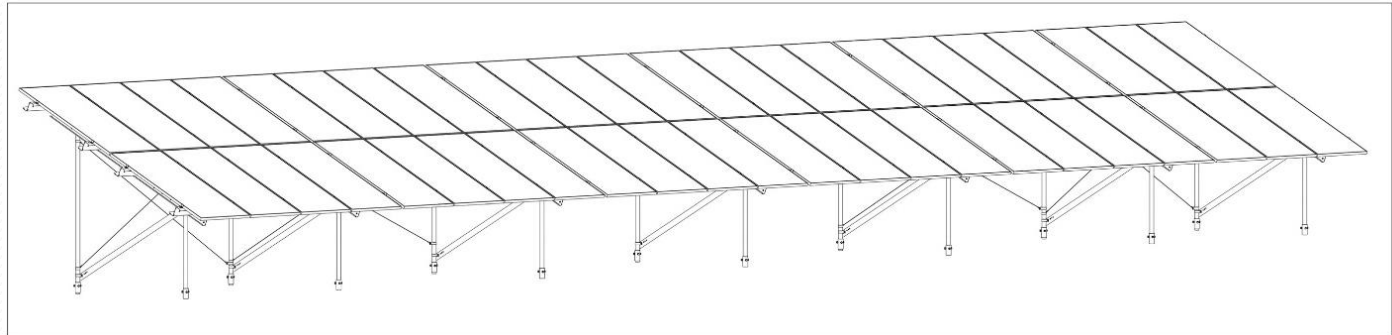
View of proposed solar array facility access roadway entrance at NE corner of WWTP

WWTP 1MW Solar Project



View of solar array facility location from proposed fence line approximately 450 feet east of WWTP

WWTP 1MW Solar Project



4 ELEVATION VIEW OF RACKING

TRPA Project Review

Governing Board Approval Required for:

- Public Service project with more than 3,500 sf of land coverage
- Substantial tree removal plan

Regional Plan Policy Guidance:

- Policy E-1.2: Development of alternative energy sources should be encouraged when such development is both technologically and environmentally feasible.

Ground-Mount Solar is new for TRPA:

- Detailed TRPA project review



THRESHOLD STANDARDS AND REGIONAL PLAN

TAHOE REGIONAL PLANNING AGENCY

|| *lake tahoe*



Implementing Climate Goals

Goals & Relevant Actions:

TRPA:

Net-Zero Carbon Emissions by 2045

- Increase renewable energy generation in the region

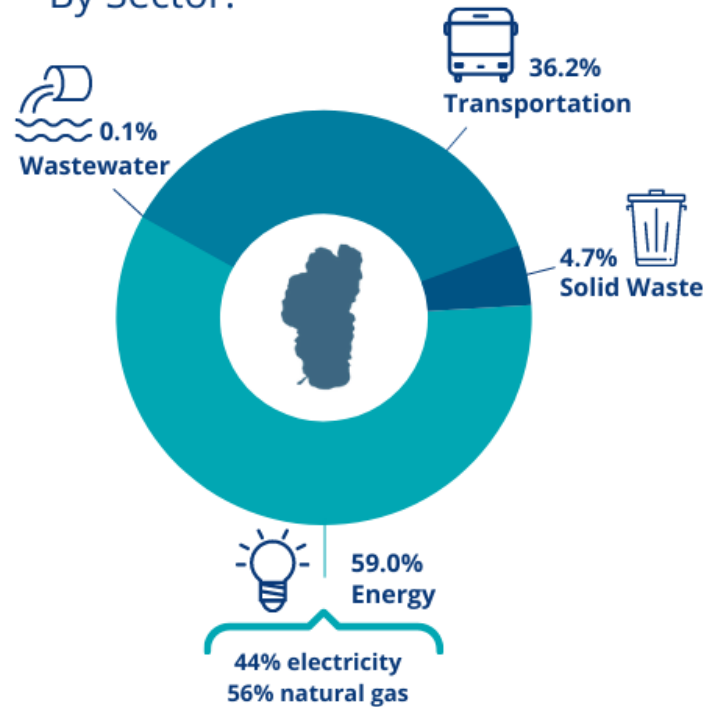
City of South Lake Tahoe:

Reduce GHG emissions to 50% below 2015 level by 2030

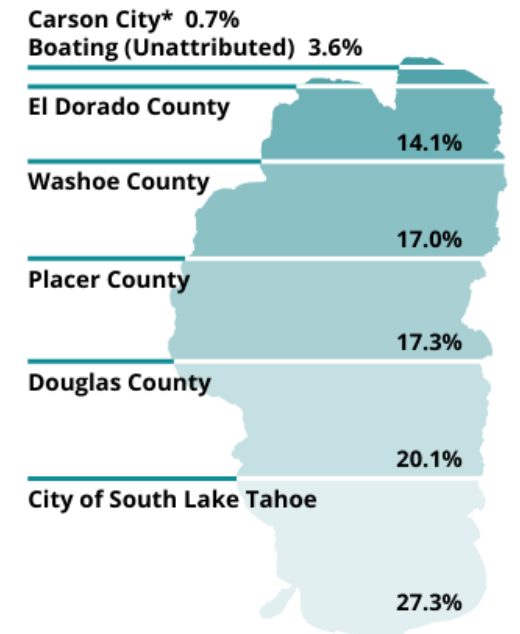
- Transition to 100% renewable electricity by 2030
- Work with the City's largest energy users, such as South Tahoe Public Utility District and ski resorts, to transition toward using renewable energy sources.

2018 EMISSIONS BREAKDOWN

By Sector:



By Jurisdiction:



*The rural portion of Carson City's emissions all come from the Transport

2018 GHG Emissions by Sector and Jurisdiction

Implementing Climate Goals

STPUD Solar Project – Environmental Benefits

- ✓ Project generates 1,925,050 kWh of electricity in year 1
 - Provides 32% of electricity demand for the Treatment Plant
 - = 0.9% of total grid electricity use in the City
 - = Average electricity use for ±223 homes in Western US

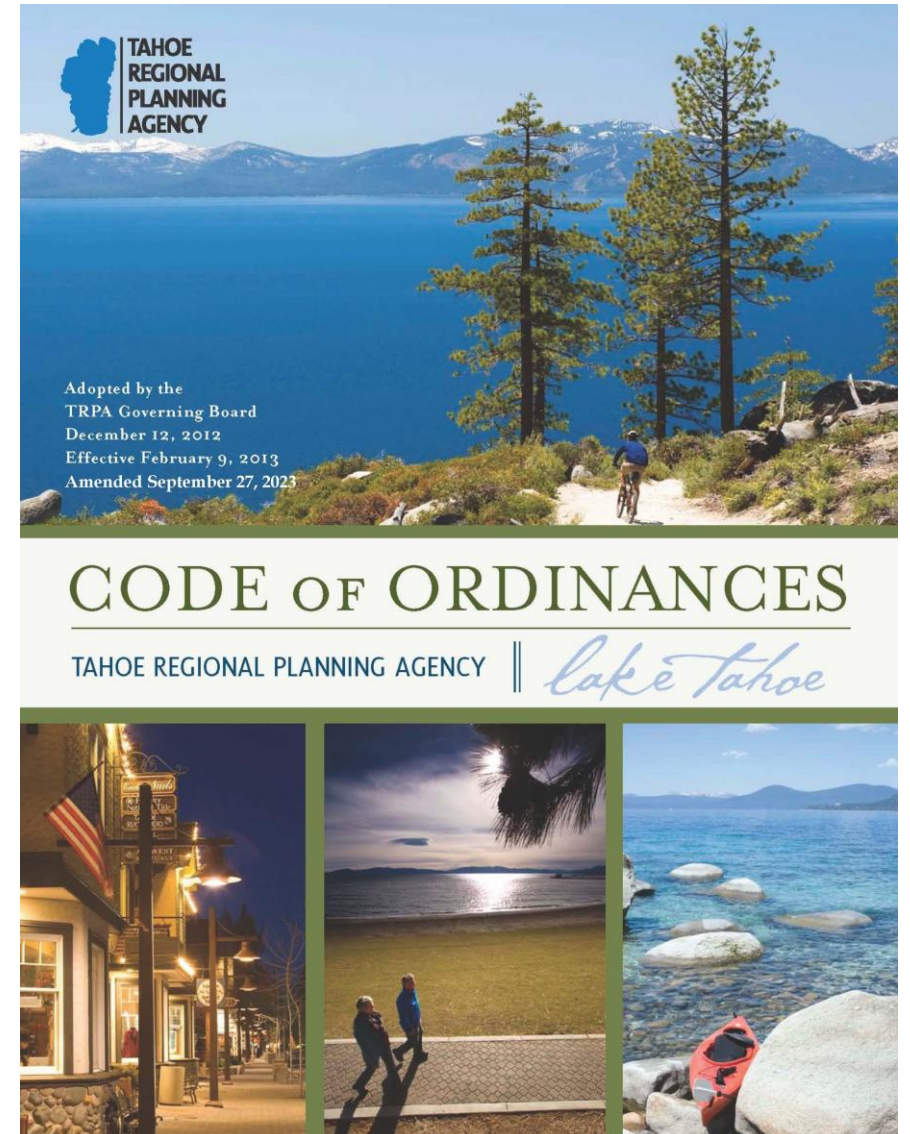
- ✓ Project offsets about 562 metric tons of CO₂e annually
 - = 0.25% of total emissions in the City

- ✓ Planned as Lake Tahoe's largest solar project and first large ground-mount system

TRPA Regional Plan and Code Compliance

Project Review Topic Areas:

- Tree Removal / Forest Impacts
- Wildlife
- Scenic Quality
- Water Quality



TRPA Regional Plan and Code Compliance

Tree Removal:

- 23 trees 30+ inches
- 108 additional trees >14 inches

Findings: Tree Removal for Solar Access:

- Trees would unreasonably impede operation
- Solar system located to minimize tree removal
- Removal to be the minimum necessary
- Tree locations: Located south of collector with $\geq 18^\circ$ vertical angle



TRPA Regional Plan and Code Compliance

✓ Scenic Quality

- Entirely surrounded by forest & topography
- Screened from all scenic shorelines, roads & rec areas.
- Screened from SEZ per local plan policy.
- Low (<6%) reflectivity panels.

✓ Wildlife

- No Special habitat
- Pre-Construction nest survey

✓ Water Quality

- Standard paving & BMPs for access road
- Wood mulch under panels
- Emergency vehicle access only to solar arrays
- Snow removal plan with no ground disturbance

Public Input

Public Participation

- STPUD Outreach and Meetings
- Property owner notices extending 300' from project area

Public Input

- Support letter from City of South Lake Tahoe
- Support letter from 15 residents
- Opposition letter from 1 resident

Staff Recommendation

- 1) Approve the required findings, including a mitigated finding of no significant effect (as set forth in Attachments A and E); and
- 2) Approve the proposed revisions to the project subject to the conditions contained in the draft permit (as shown in Attachment B).

Governing Board Meeting

April 24, 2024

AGENDA ITEM VIII – D

Public Comment



Board Discussion

Required Motions

In order to approve the proposed project revisions, the Board must make the following motions based on the staff report:

- 1) A motion to approve the required findings, including a mitigated finding of no significant effect (as set forth in Attachments A and E); and
- 2) A motion to approve the proposed revisions to the project subject to the conditions contained in the draft permit (as shown in Attachment B).