

Solar Tower Fire Protection

CONSERVAL SYSTEMS INC., BUFFALO NY

Project Summary

Solar Power Tower produces power from solar thermal updraft and wind downdraft and can also act as a firebreak for vulnerable communities susceptible to wild fires

Project will expand upon current work and patents to complete the development of the technology with a focus on the turbine design which receives air from two directions, solar updraft and wind downdraft. Fire protection methods likely to include water suppression systems and designs to attract and store lightning energy, responsible for half of wild fires in remote areas.

GO phase will complete a demonstration of the first solar tower fire protection system in USA.



Key Personnel/Organizations

- Conserval Systems and SolarWall inventor, John Hollick
- Bill Stein, Project Manager for demonstration at Tech Parks
- Professor Dogan Eryener, SolarWall Turkey and Trakya University, built first two prototypes, inventor of HET
- Conserval's existing supply chain for SolarWall components
- University of Arizona Center for Innovation
- Klamath National Forest in California
- Sandia or NREL to perform CDF on system and turbines

Key Milestones & Deliverables

- SET: Complete design for 200 kW prototype demonstration project
Include wildfire mitigation design
- GO: Commence construction at suitable fire prone areas

Project Impact

SolarWall Power Tower generates power 24 hours a day with towers 100 feet tall

Scalable from 100 kW to many MW at costs competitive with PV systems

New PV farms can be built to recover thermal energy to increase capacity and operate continuously without battery storage

First technology to provide renewable energy and protect vulnerable communities from advancing wild fires