

Solar Thermal Power Tower

CONSERVAL SYSTEMS INC., BUFFALO NY

Project Summary

Solar Thermal Power Tower is a revolutionary concept which combines the best features of multiple renewable technologies into one Hybrid Energy Tower (HET)

Project will expand upon current developments and patents to complete the HET development of HET which includes SolarWall transpired solar air collectors, solar updraft tower, wind downdraft tower, Venturi or diffuser chamber for turbines, PCM thermal storage and integration of PV thermal and recovery of PV heat in PCM storage

GO phase will complete a demonstration of the first HET in USA at Tech Parks Arizona



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
- Tech Parks Arizona
- Neal Energy, Perrysburg, Ohio. PCM thermal storage
- Sandia to perform CDF on system and turbines

Key Milestones & Deliverables

READY:	Finalize turbine design and supplier Select supplier for chimney Finalize agreement with Tucson Electric Power to purchase power
SET:	Complete design for 500 kW prototype demonstration project
GO:	Commence construction at Tech Parks Arizona

Project Impact

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

Scalable from 500 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

Including wind with solar increases night energy production and allows wind energy production closer to urban areas

