100% Solar Powered Trans-critical Water Desalination

Project team: Epiphany Solar Water Systems, LLC

Jim Dietz PE - TwoPoint Solutions, Inc. Dr. David Snyder – Penn State University Dr. Marc Hodes – TPT, LLC Dr. Georgios Karamanis – TPT, LLC Tasman GeoSciences, Inc. (Customer) Sandia National Laboratories

Project Goals:

- Design Solar Powered (CSP+PV), 500 gal/day, ZLD, Trans-Critical Water Desalination Prototype
- Prove economic viability for providing clean drinking water
- Commercialize technology with mass-produced modular systems
- Create a lifesaving technology that transforms the water desalination industry

Technical Approach and Next Steps:

- Create detailed design documents that include technical analysis, component selection, BOM, CapEx & OpEx
- Build and test proof-of-concept crystallizer
- Test prototype unit at Sandia
- Optimize size, configuration and materials
- Develop techno-economic analysis and update design



Trans-critical Desalination Crystallizer



TASMA

GEOSCIENC

