

AzRISE MISSION: to enable multi-disciplinary research, development and practical implementation of solar energy solutions to meet our energy needs by creating innovative collaborations in research, economic and public policy analysis and education/outreach.

Economics of Solar-Powered Water Desalination

Rapid population growth in Arizona will increase the demand for water and put pressure on the state's water resources. Water desalination could be used to augment the water supply available to Arizona in the future. Water desalination can be used to treat brackish groundwater and sea water to provide potable water.

The cost of water from the desalination process exceeds that of traditional water treatment and delivery systems. The largest single cost component of water desalination is energy.

The goal of this study is to evaluate whether solar power can be used in water desalination plants to reduce the cost of energy used in the process.

This study will look for ways to improve the economic viability of solar water desalination systems through improvements in:

- efficiency,
- technological design,
- operations,
- water throughput,
- salinity management,
- other factors



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Arizona Solar Energy and Economics Outlook

Arizona has many unique renewable energy attributes, but solar energy is the only option available in sufficient quantity to make a difference in helping secure our energy independence and protecting our environment. This is happening at the same time that the State is facing an unprecedented population growth and associated electricity load growth. It is clear that, if handled properly, this need for solar energy and the large solar flux received throughout the State can not only help mitigate the adverse effect of our population explosion and its associated high demand for energy but bring prosperity and economic growth and ensure Arizona's competitiveness in the future.

As opportunities develop it is imperative to have the proper incentives and public policies in place immediately to move Arizona toward a leadership position in fostering solar energy research, development, manufacturing and deployment for the benefit of the people and the economy of the State.

Economic Study and Policy Recommendations for presentation at the Arizona Leadership Summit on Solar Energy and Economics:

The goal of the **Solar Energy Economic Study** is to examine the economic costs, benefits, risks and impacts of the deployment of solar energy in Arizona and the impacts of that deployment on the economy and environment of Arizona.

Arizona Policy Briefings

- Integrated Resource Planning
- Land Designation for Solar Development
- Utility Sector Incentives
- Quality Jobs through Renewable Industries
- Storage and Transmission for Renewables
- Research and Development Incentives

Economic Study:
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George Frisvold, Ag and Resource Economics, UA

Policy Briefings:
Dave Berry, Western Resources Advocates
Wayne Shirley, Regulatory Assistance Project
Amanda Ormond, Ormond Group
John Madocks, General Plasma Inc.
Barry Broome, Greater Phoenix Economic Council
Tom Hansen
 Eller School of Management, UA Interns:
Lon Huber, Benjamin Lyons, Jordan Lillie, Ruchika Agrawal

Arizona Leadership Summit on Solar Energy and Economics

The Summit on Solar Energy and Economics will provide a forum for regional and national leaders to collaboratively build strategies that can strengthen Arizona's national and global solar presence

Featuring policy recommendations, economic research, an expert panel and strategic implementation plan for solar energy in Arizona.

January 8 – 9, 2009



Southern Arizona Solar Energy Development Conference

Governmental decision-makers in Southern Arizona cities, counties, towns and tribes came together to discuss and create economic development and policy strategy to advance solar energy in Arizona.

June 30, 2008

Sponsored by Congresswoman Giffords in partnership with the Arizona Research Institute for Solar Energy (AzRISE)



The University of Arizona
The University of Nevada



Arizona Research Institute for Solar Energy