



The Benefits of Solar Energy

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SEIA – Who We Are



- **National trade association for solar**
- **Federal level**
 - Represent the industry
 - in Washington
- **State level**
 - Orchestrate activities
 - in the states
 - 14 state SEIA chapters
- **Over 700 companies employing 20,000**
- **All technologies, all sectors**



Benefits of Solar

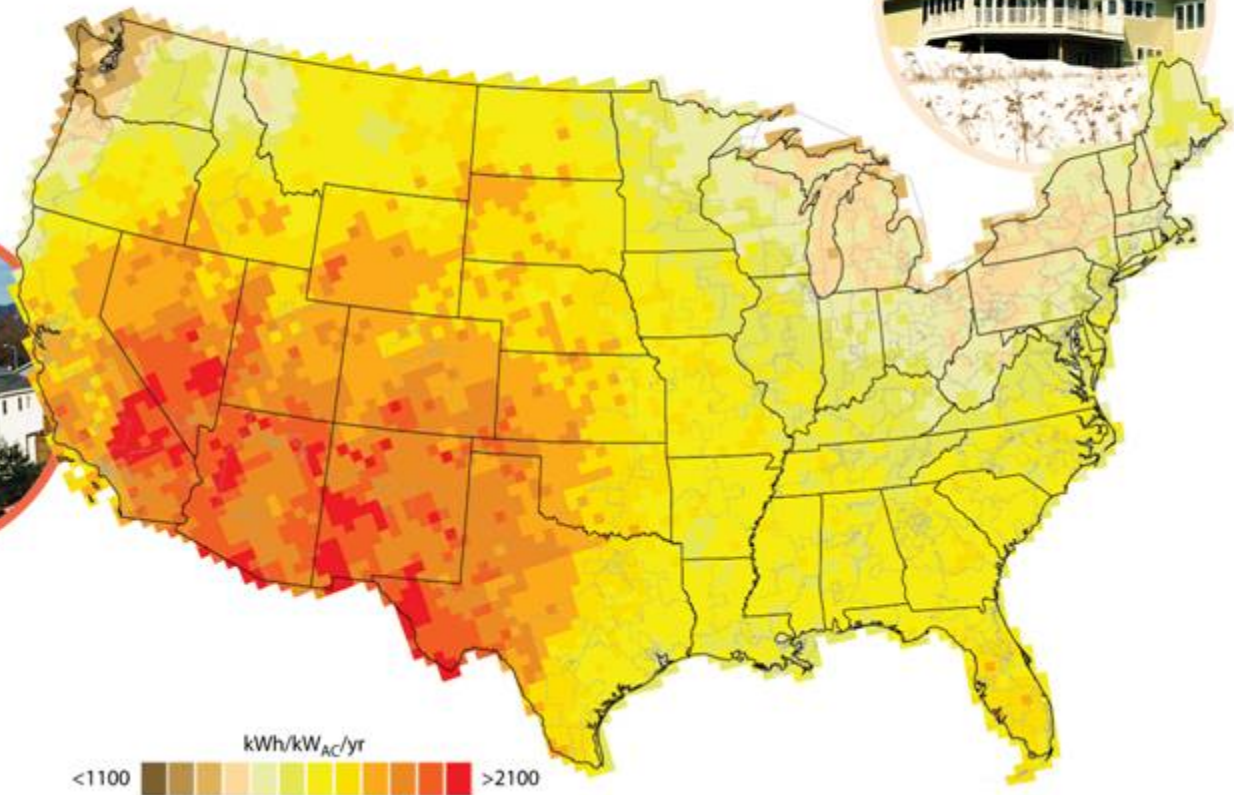


- **Cleanest form of energy**
- **Displaces natural gas**
- **Addresses peak power demand**
- **Improves electricity reliability**
- **Saves the consumer money**
- **Creates economic growth**



Solar Power's Future For Every American

*The Sun Shines in Every Community
and Congressional District*

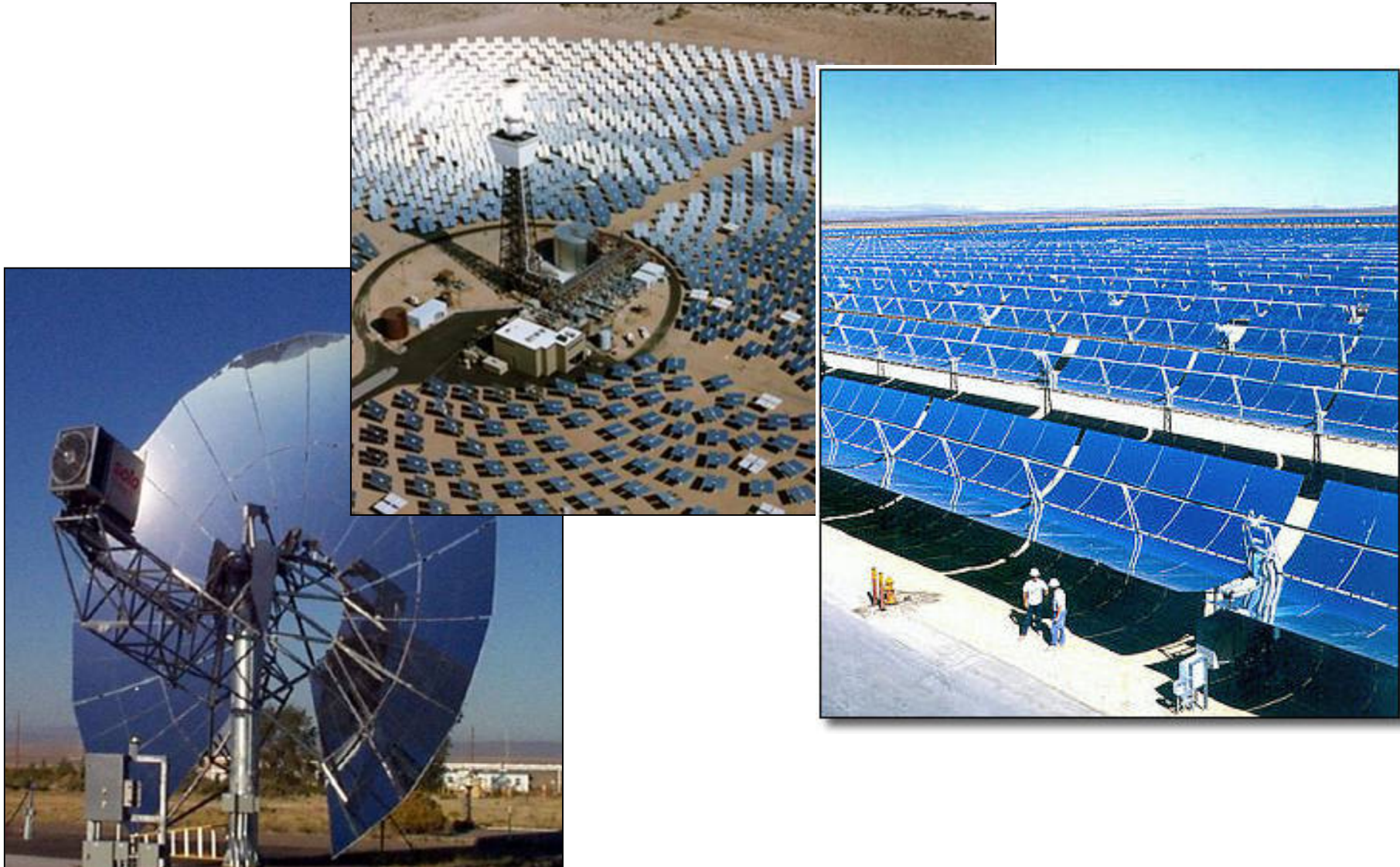


Clean Energy

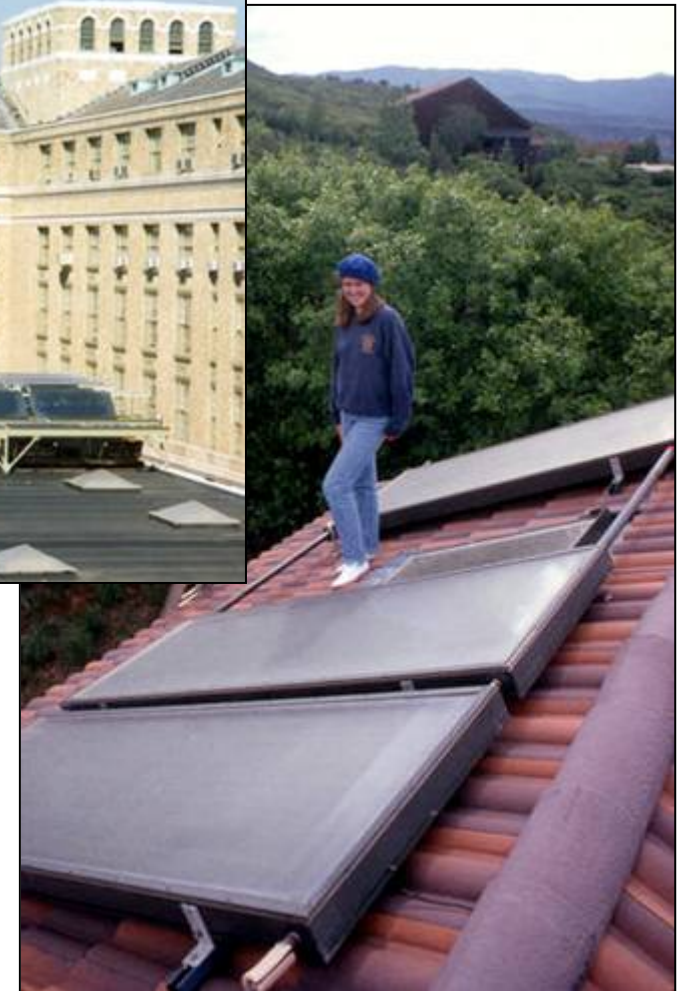


- **No Air Pollution**
- **No Water Pollution**
- **No Noise Pollution**
- **No Solid Waste**
- **No Radiation Risk**
- **No Transmission Lines**
- **No Cooling Water**

Concentrating Solar Power



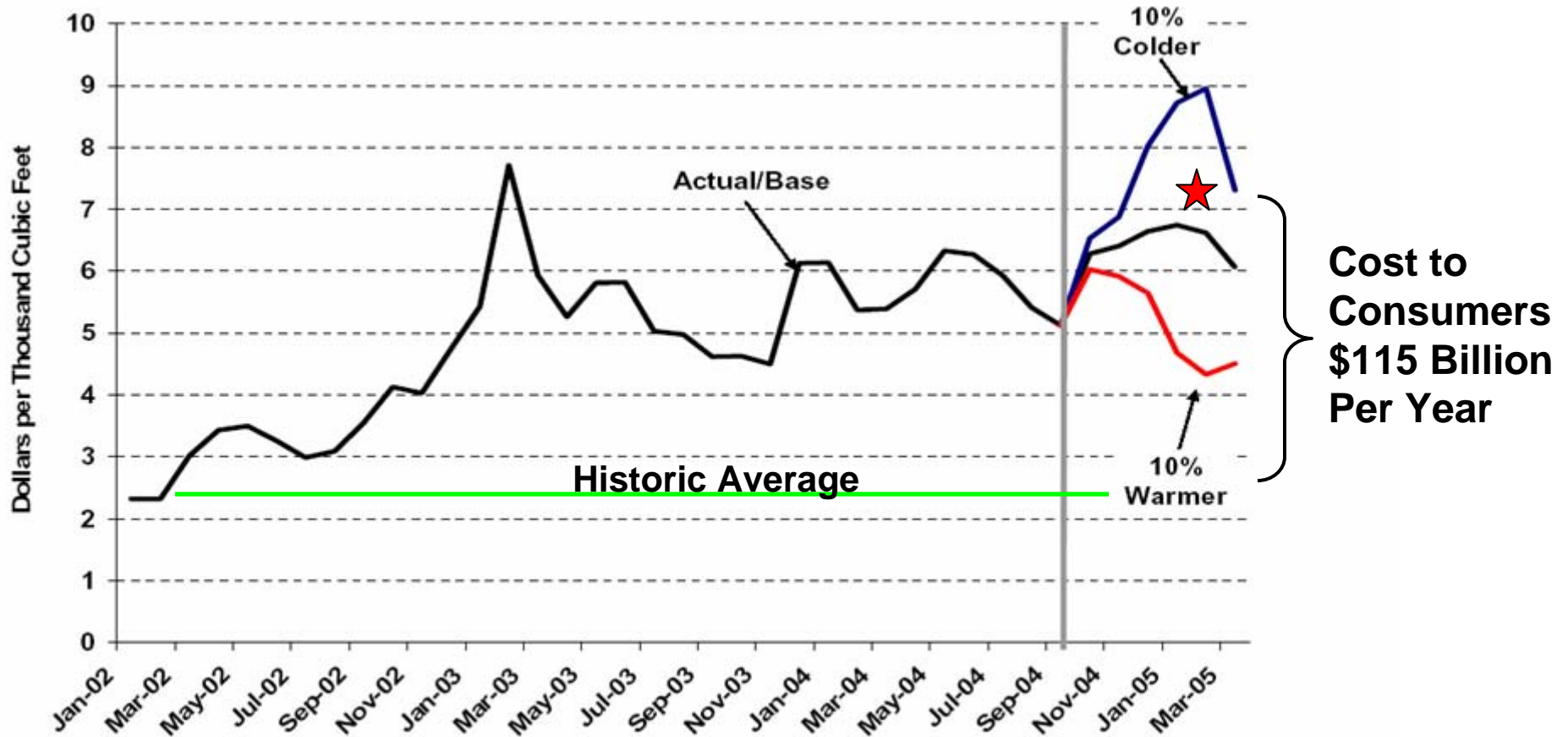
Solar Water Heating



Photovoltaics



Natural Gas Prices are Restricting our Economy



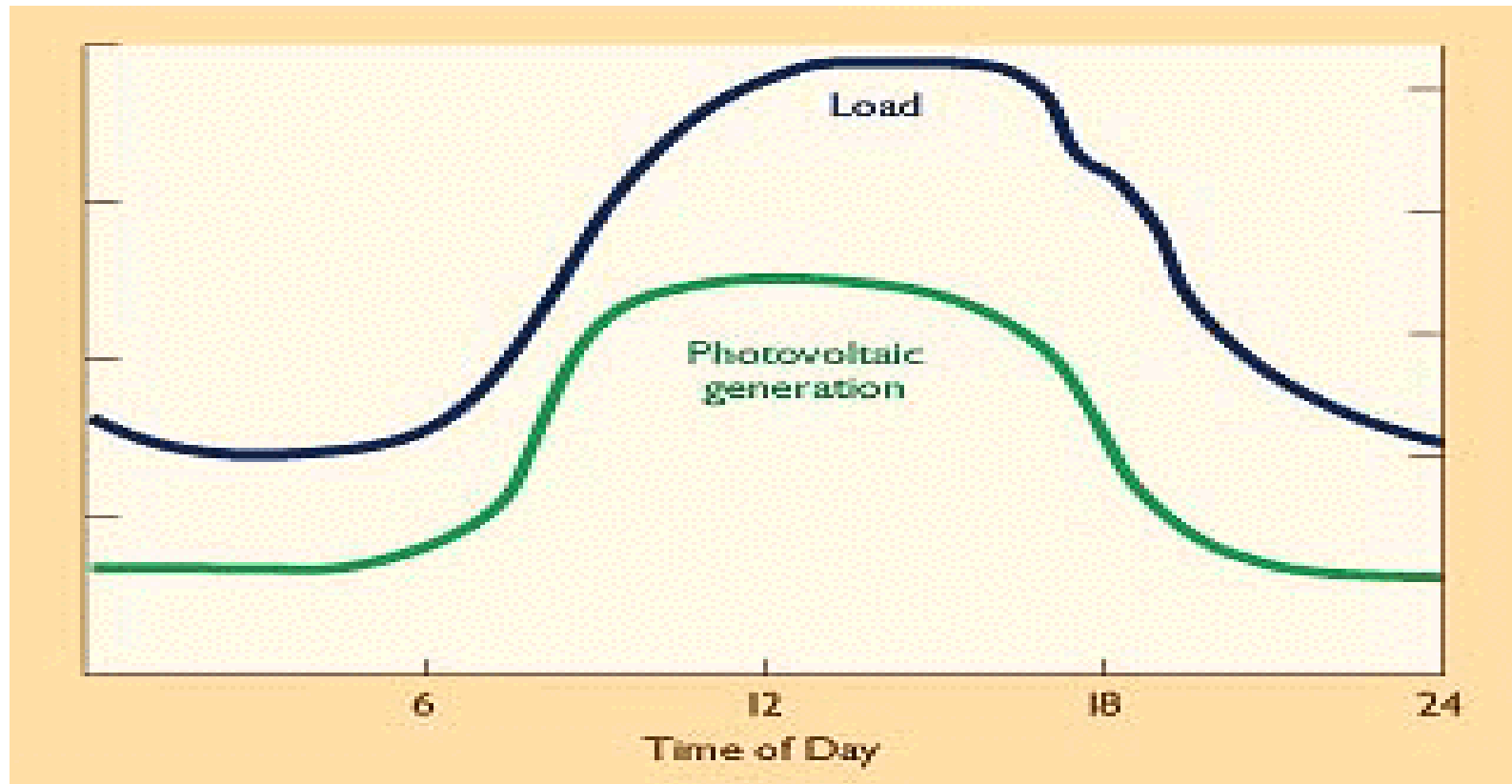
(Energy Information Administration/Short-Term Energy Outlook -- October 2004)

Solar Displaces Natural Gas



- **Solar water heating**
 - Decrease home natural gas use by up to 70%
- **Photovoltaics**
 - Displace the need for inefficient natural gas or diesel peaking units
- **CSP facilities**
 - Replace need for intermediate and peaking natural gas units
- **Replace more than half of new LNG in 5 years**
- **Save the consumer over \$64 billion over 20 years**

Solar Energy Addresses Peak Power Demand



Utility load and PV output versus time of day.

http://www.nrel.gov/ncpv/documents/pv_util.html

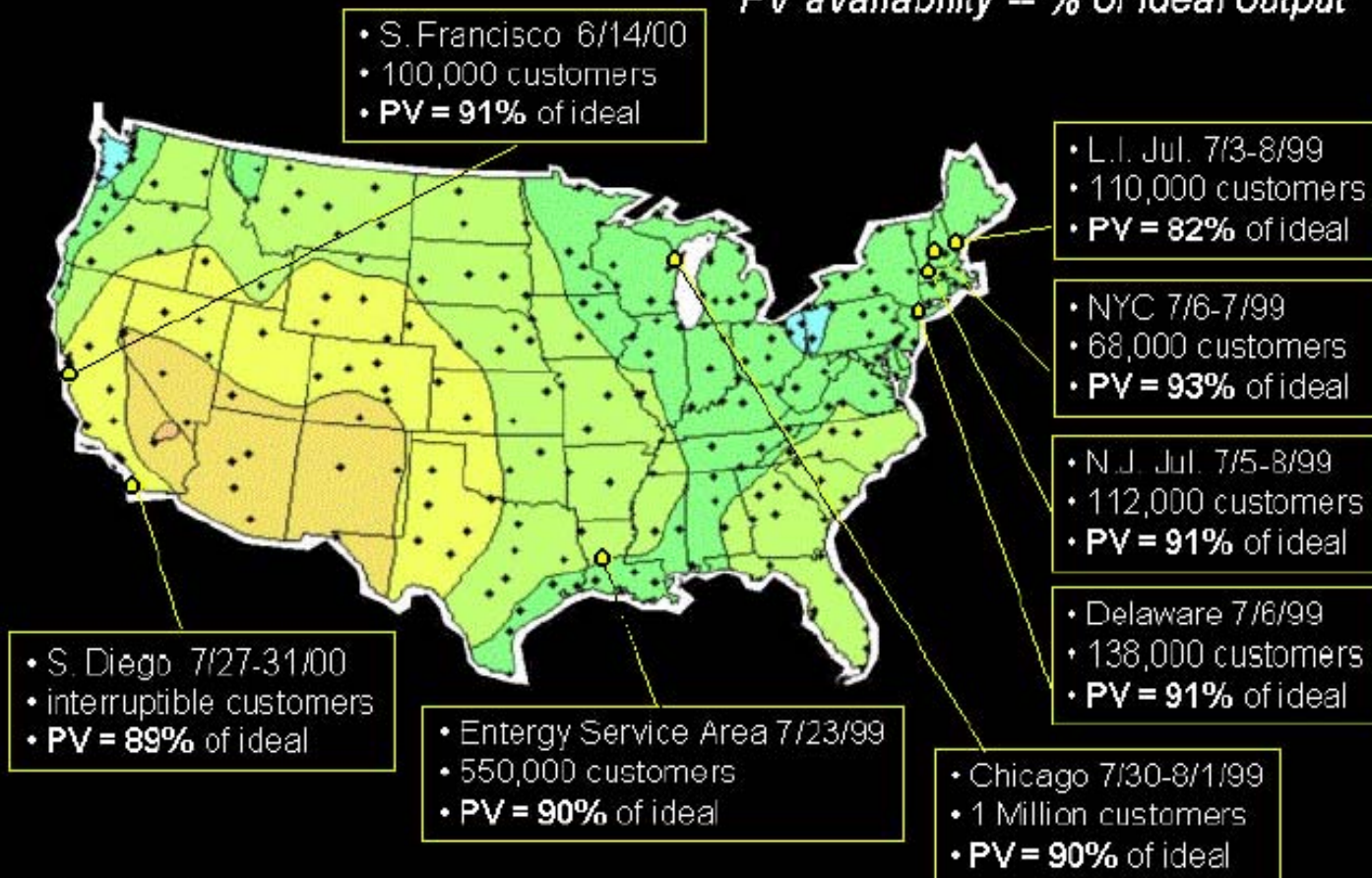
Solar Improves Electricity Reliability



MAJOR 1999-2000 OUTAGES

Perez, Letendre & Herig ASRC / GMC / NREL

PV availability – % of ideal output



Perez et al., ASRC

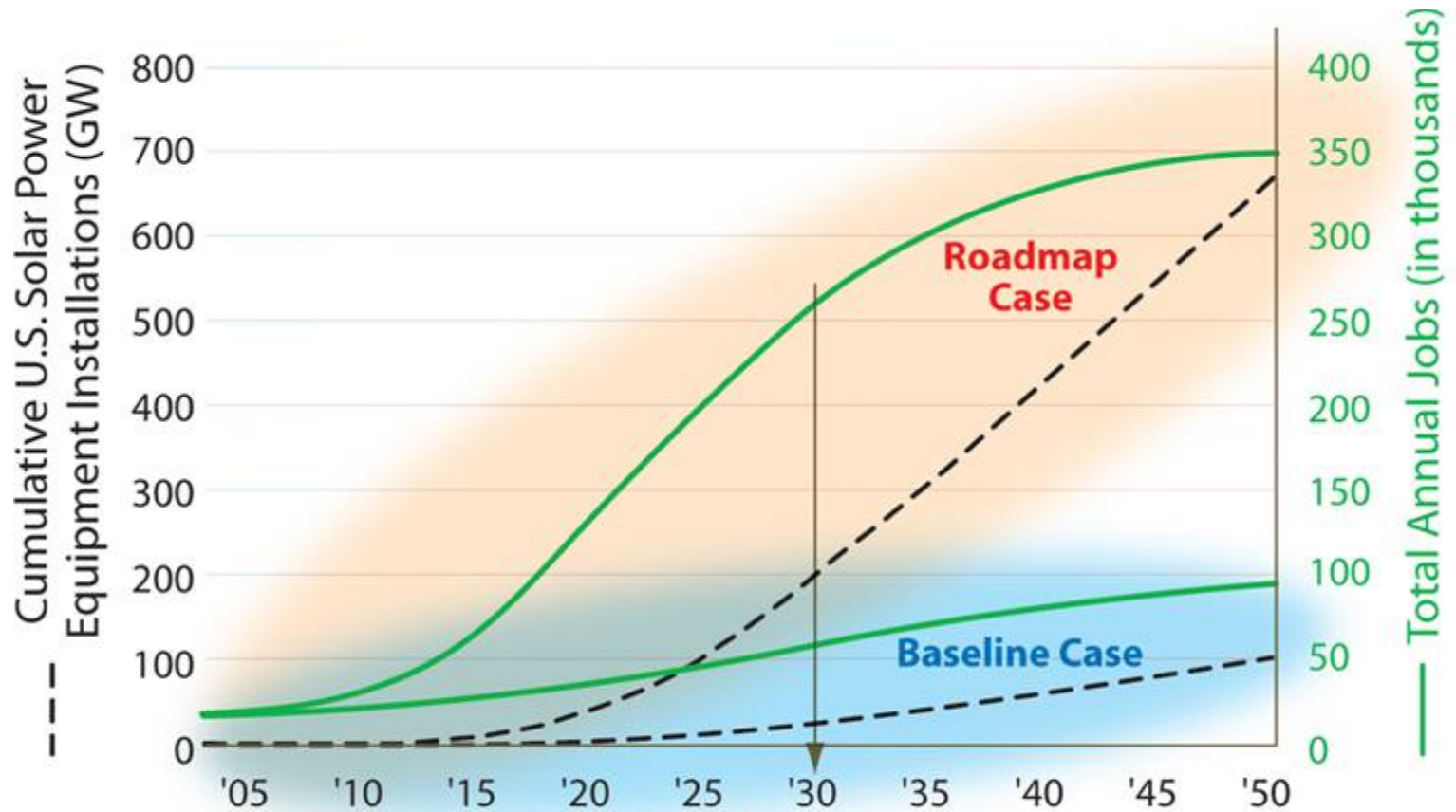
Solar Energy Saves Consumers Money



California - savings per kWh

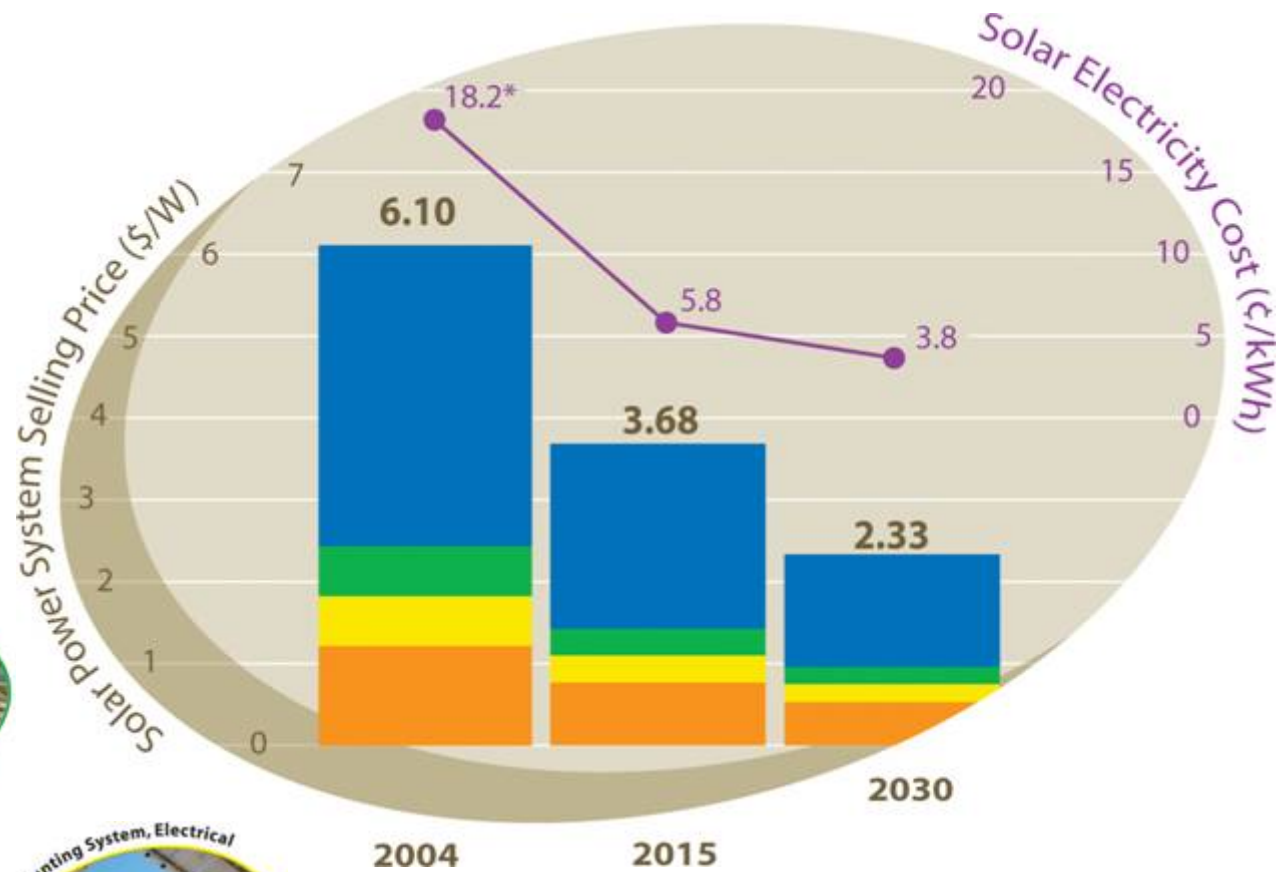
Reduced peak demand	7.3 - 11.9 cents
Lessening consumption of NG	5.6 - 7.5 cents
Avoiding environmental damage	3.3 cents
Improved grid efficiency	0.7 - 2.6 cents
Avoiding T&D upgrades	4.5 - 10 cents
Total	<hr/> 23 - 35 cents

Solar Power Creates Economic Growth



"Our Solar Power Future," SEIA

Solar Power Creates Economic Growth



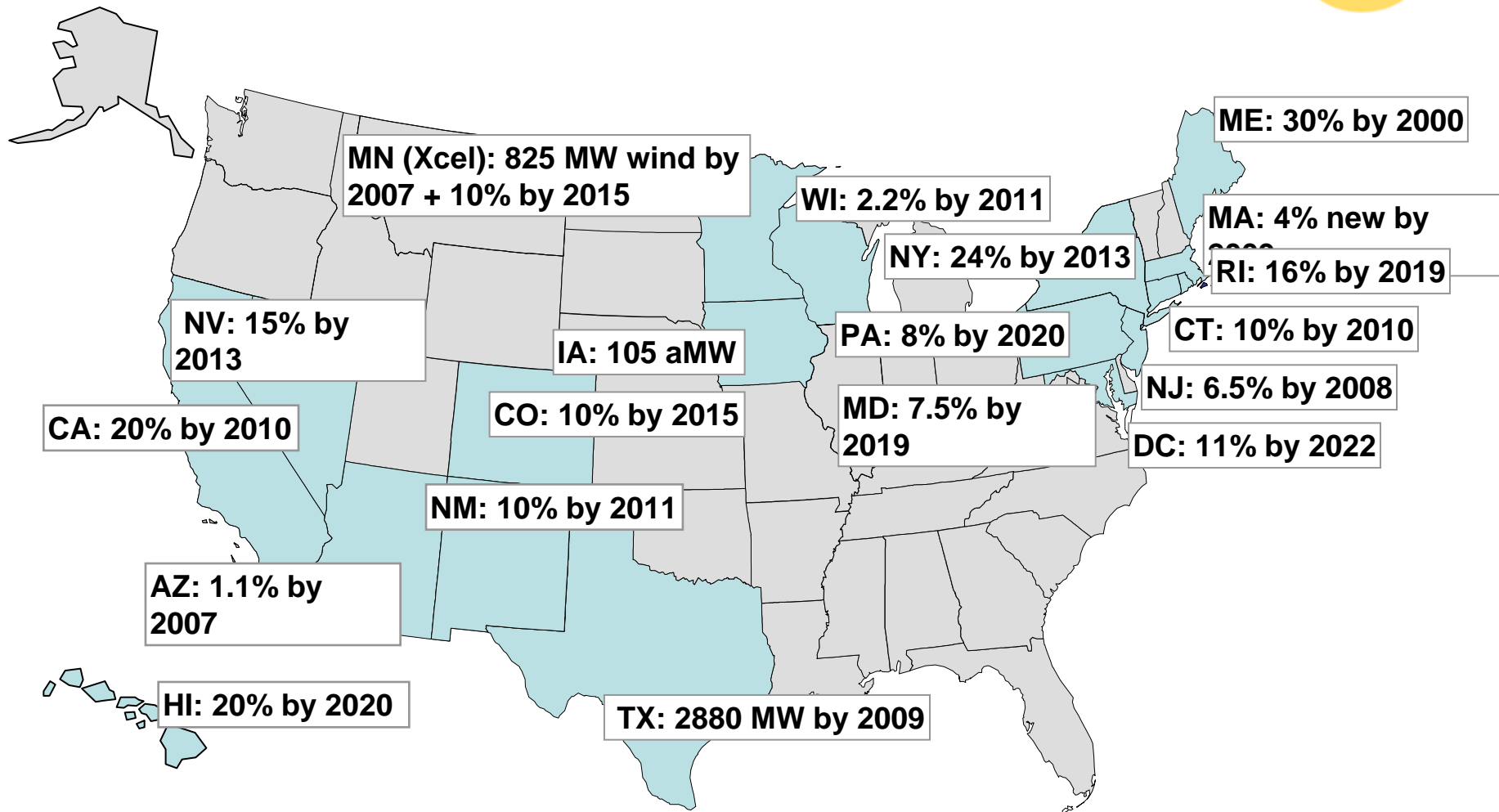
"Our Solar Power Future," SEIA

Washington Perspective

- **States are Defining the “New Energy Policy”**
- **Natural Gas Bill**
- **Energy Bill**
- **Climate Legislation**
- **Energy Security**
- **Presidential Emphasis:**
 - Innovation
 - Ownership
 - Opportunity
 - Security

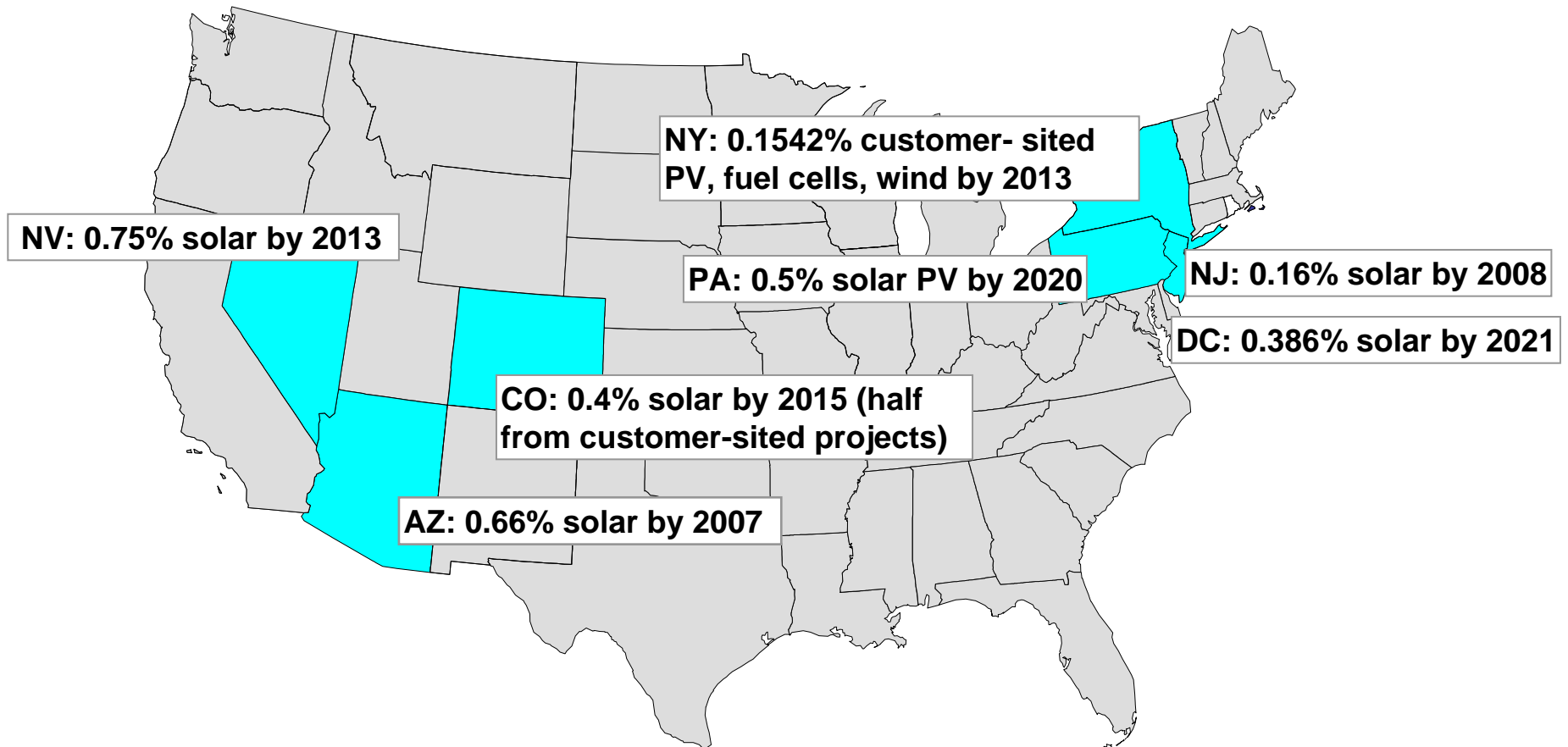


Existing State RPS Requirements: 18 States and Washington D.C.



Source: Ryan Wiser, LBNL, 2005

Solar Set-Asides: 6 States and Washington, D.C.



Source: Ryan Wiser, LBNL, 2005