Economics of Solar Today

Kate Shanks

Division of Renewable Energy
Department for Energy Development & Independence
Kentucky Energy and Environment Cabinet
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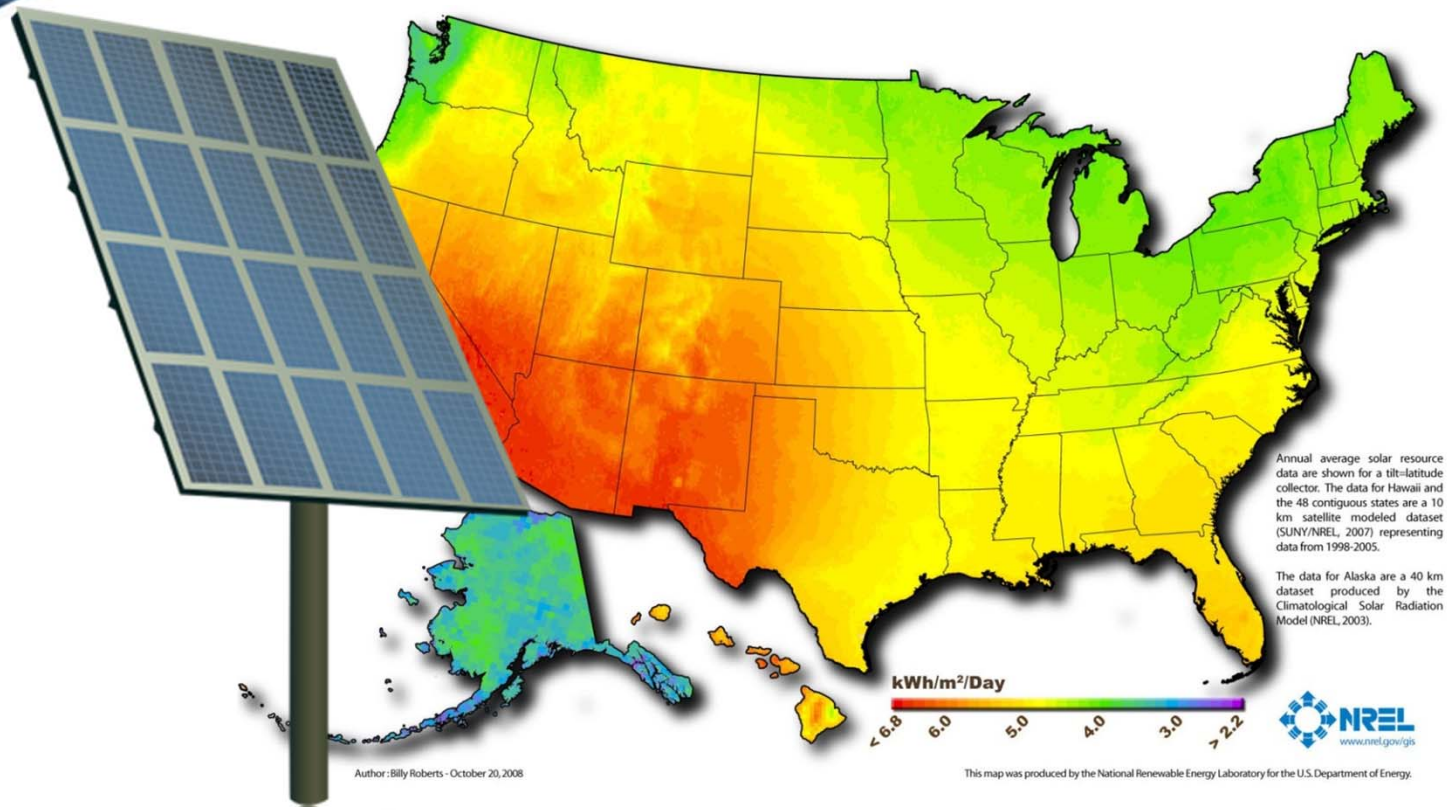
Overview

- The sun shines in Kentucky!
- The cost of solar continues to fall.
- Price per unit of solar electricity
- Get solar ready!
- Online cost calculators
- Solar policies
- Other considerations

Solar Power



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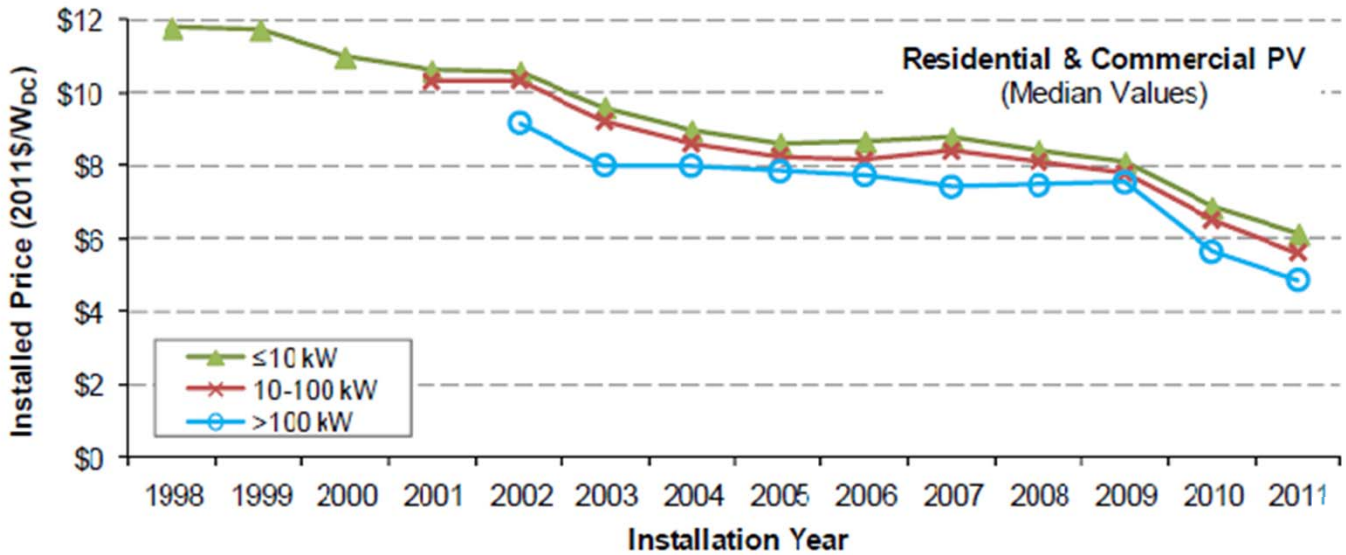
ENERGY STAR

Solar Installed Cost Falls



- The median installed prices fell by **$0.7-0.9/W** (**11-14%**) from 2010 to 2011, across the three size ranges shown.
- The prices have fallen by an average of **5-7%** annually since 1998.

300 kW Solar Array

$4/Watt

- $1.2 million
- 17% capacity factor
- 4% interest rate
- 25 year life
- Levelized Cost of Energy
  19 ¢/kWh

$3/Watt

- $900,000
- LCOE= 15 ¢/kWh

Use savings from efficiency to pay the premium on solar!

Get Solar Ready!

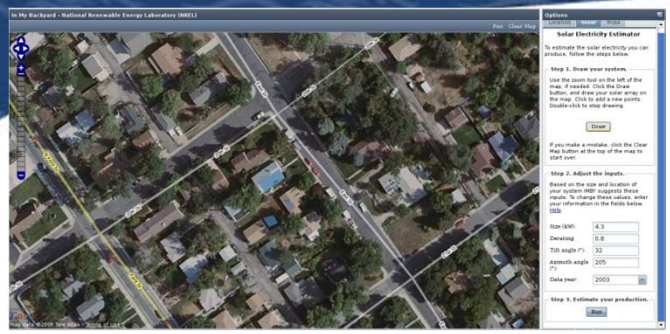
- Plan for solar at the design stage
- Building orientation
- Roof considerations
- Space/planning for wiring
- Drive down the kbtu/ft^2

Solar Ready Buildings Planning Guide
National Renewable Energy Lab

Why Does Solar Cost Less in Other States?

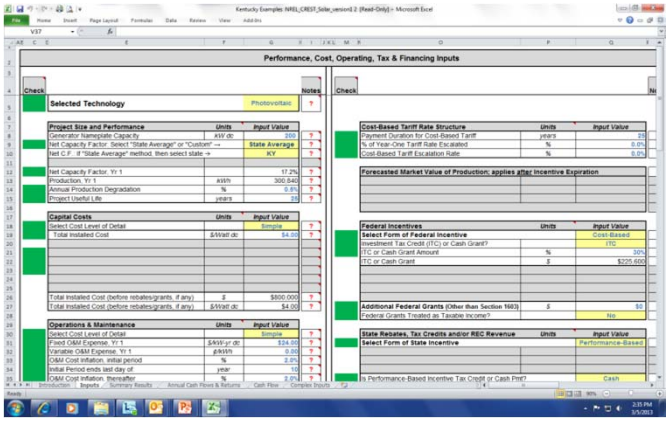
- Mature market with more competition
- Local efforts to reduce soft costs
- Incentives–state, local, utility tax credits and rebates
- Special financing models used by public entities– Power Purchase Agreement

Solar Cost Calculators



IMBY

In My Backyard, or IMBY, is a small scale PV and Wind simulation tool that provides a quick estimation of production potentials. Homeowners, business owners, and policy makers can use IMBY get a quick and easy estimate of whether PV or Wind makes sense at their location.



CREST

- Estimate the Year One cost of energy (COE) and levelized cost of energy (LCOE) for a renewable energy project.
- Apply tax credits and other incentives to reduce the cost
- Experiment with different financing costs and public vs. private ownership

Other Considerations

- Net metering and Interconnection
- Solar Renewable Electricity Credits– to sell or not to sell
- TVA-sponsored programs

Questions?

Kate Shanks
Division of Renewable Energy
Kate.Shanks@ky.gov
502-564-7192