

Renewables: The True Costs

Cost Analysis at IRENA

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Renewable Energy can provide:



01 Secure supplies

02 Reliable service

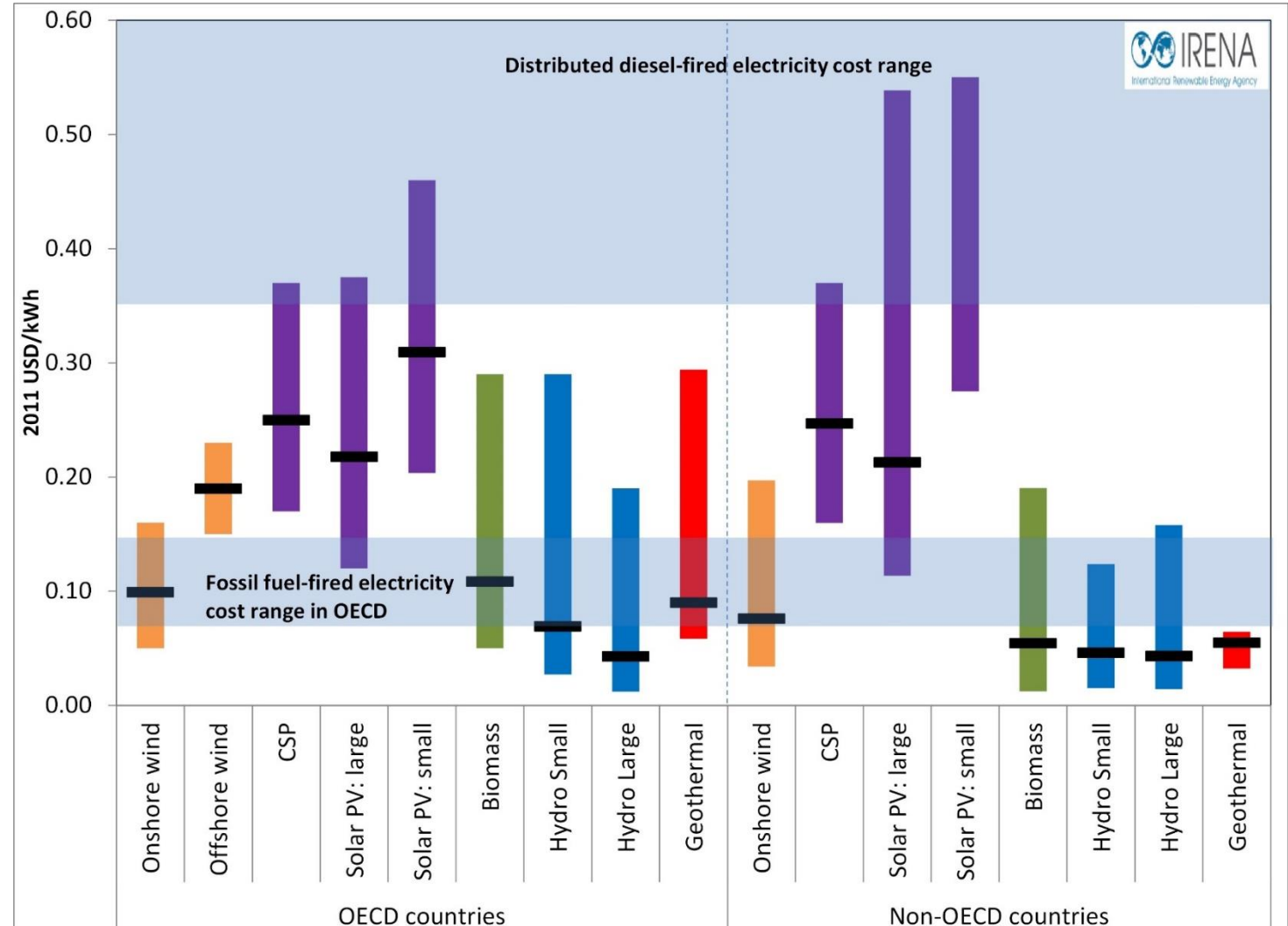
03 Energy access

04 Affordably

Highlights

What do the costs of 9000 utility-scale and over 200k small-scale RE projects look like?

Renewable power generation is increasingly competitive



Wind power



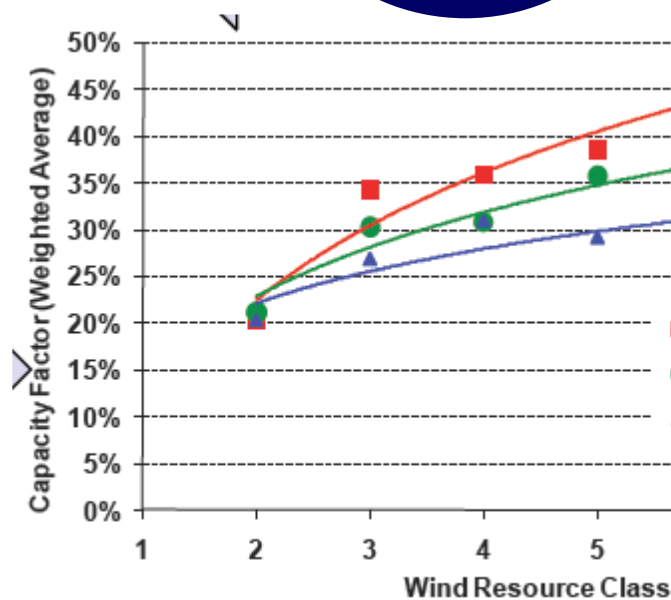
Higher
capacity
factors from
improved
technology



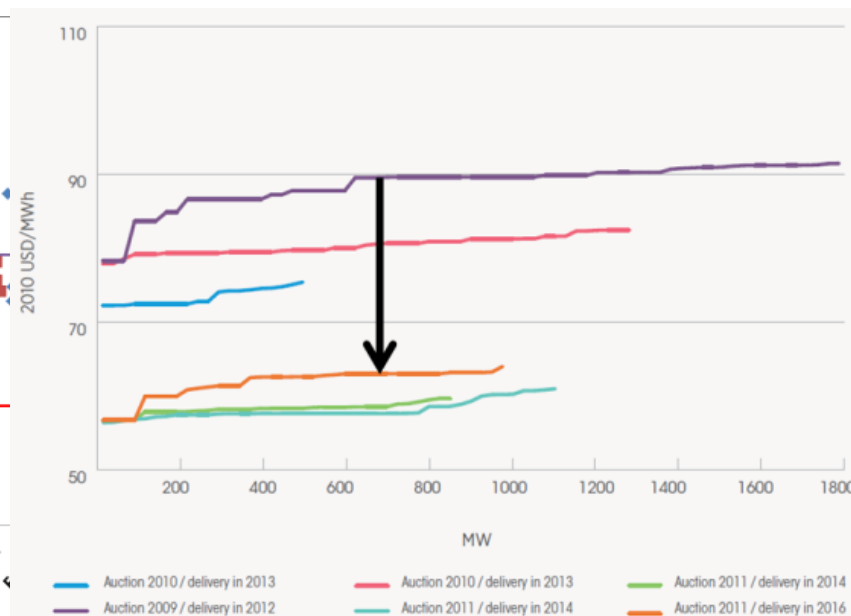
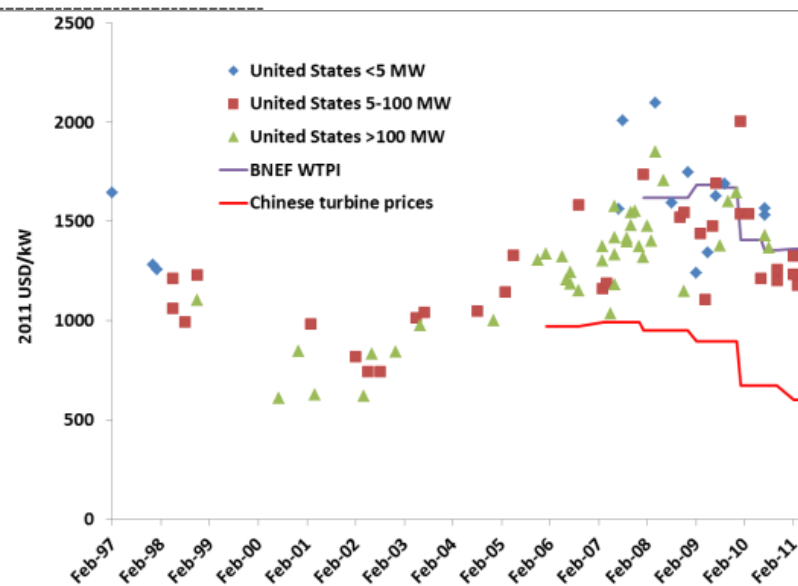
Wind
turbine
cost
reductions



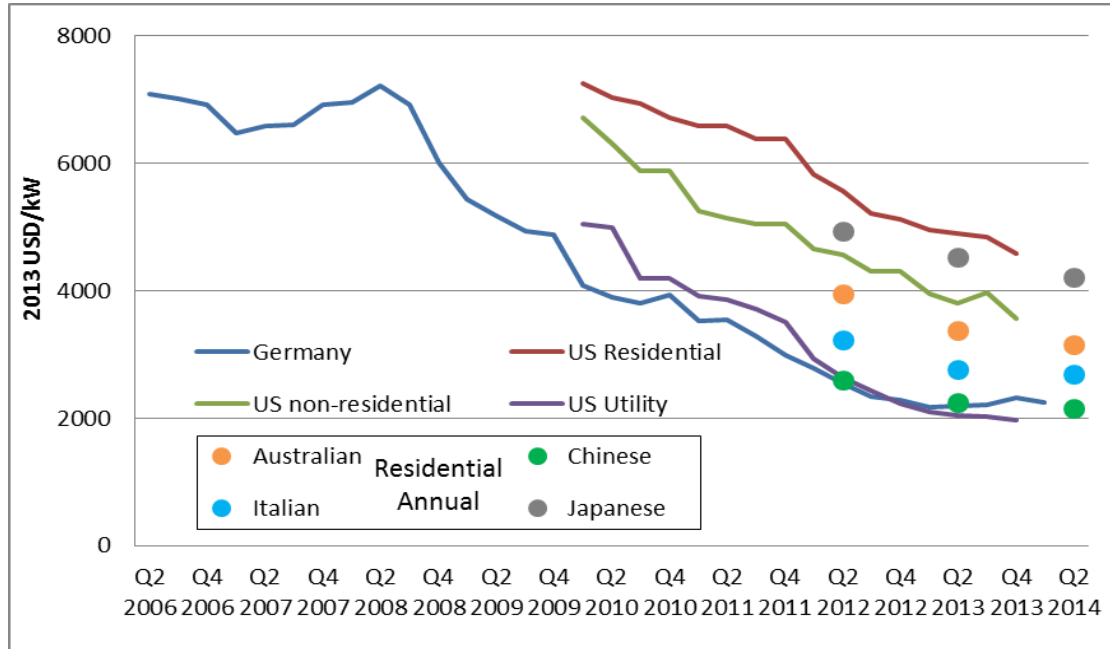
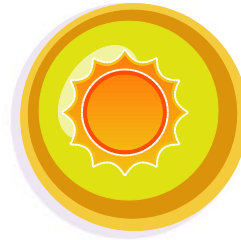
LCOEs
are
falling



Source: Lawrence Berkeley National Laboratory

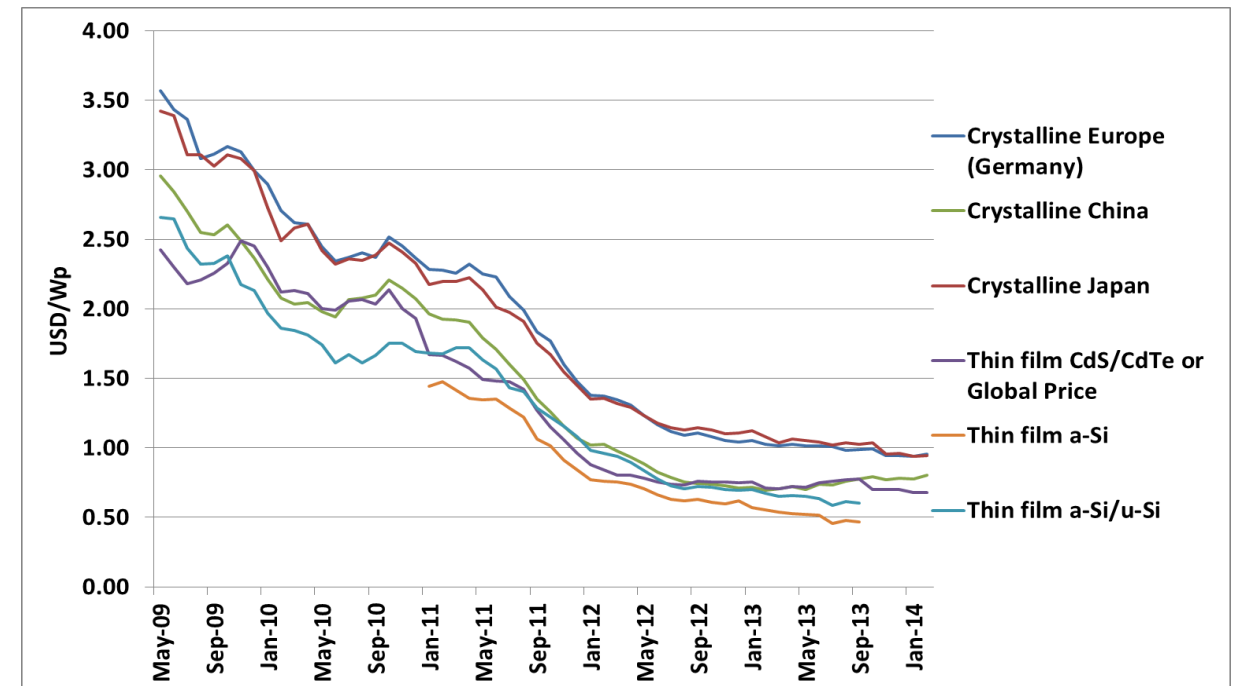


Solar PV Trends



Module price declines pause as industry attempts to improve margins

BoS costs now hold key to large-scale future cost reductions: continued declines, for how long?



PV Parity Indicators: Tracking Our Future



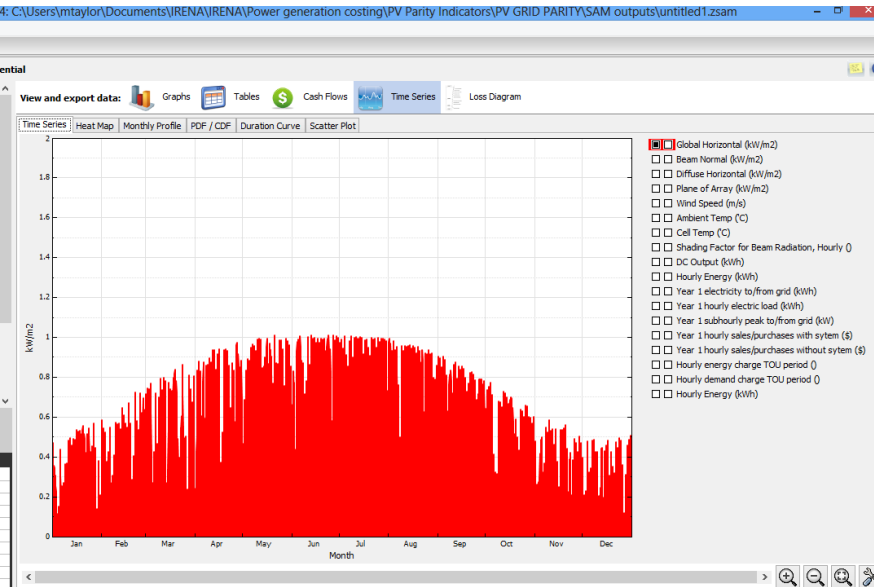
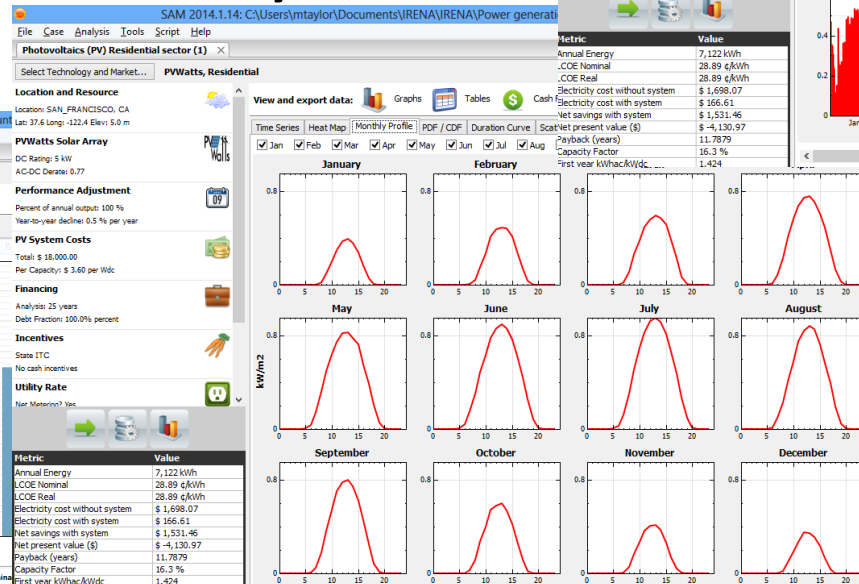
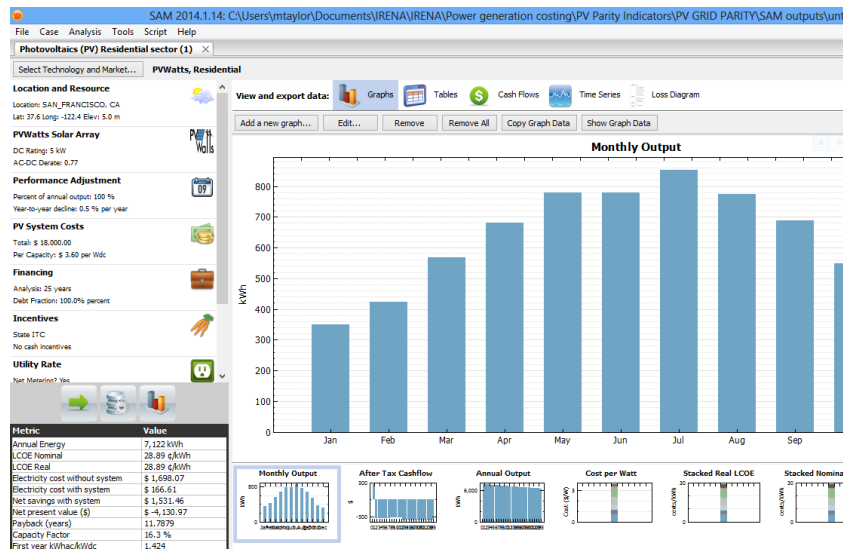
- Tracks quarterly competitiveness
- Indicators, not actual costs
- Target audience are policy makers and thought leaders
- Start with North America
- Can lead to more detailed analysis
- Supports other IRENA activities



PV Parity Indicators: Methodology



- Require detailed assumptions & analysis
- Simple metrics
- LCOE vs Effective Electricity Rate/Value

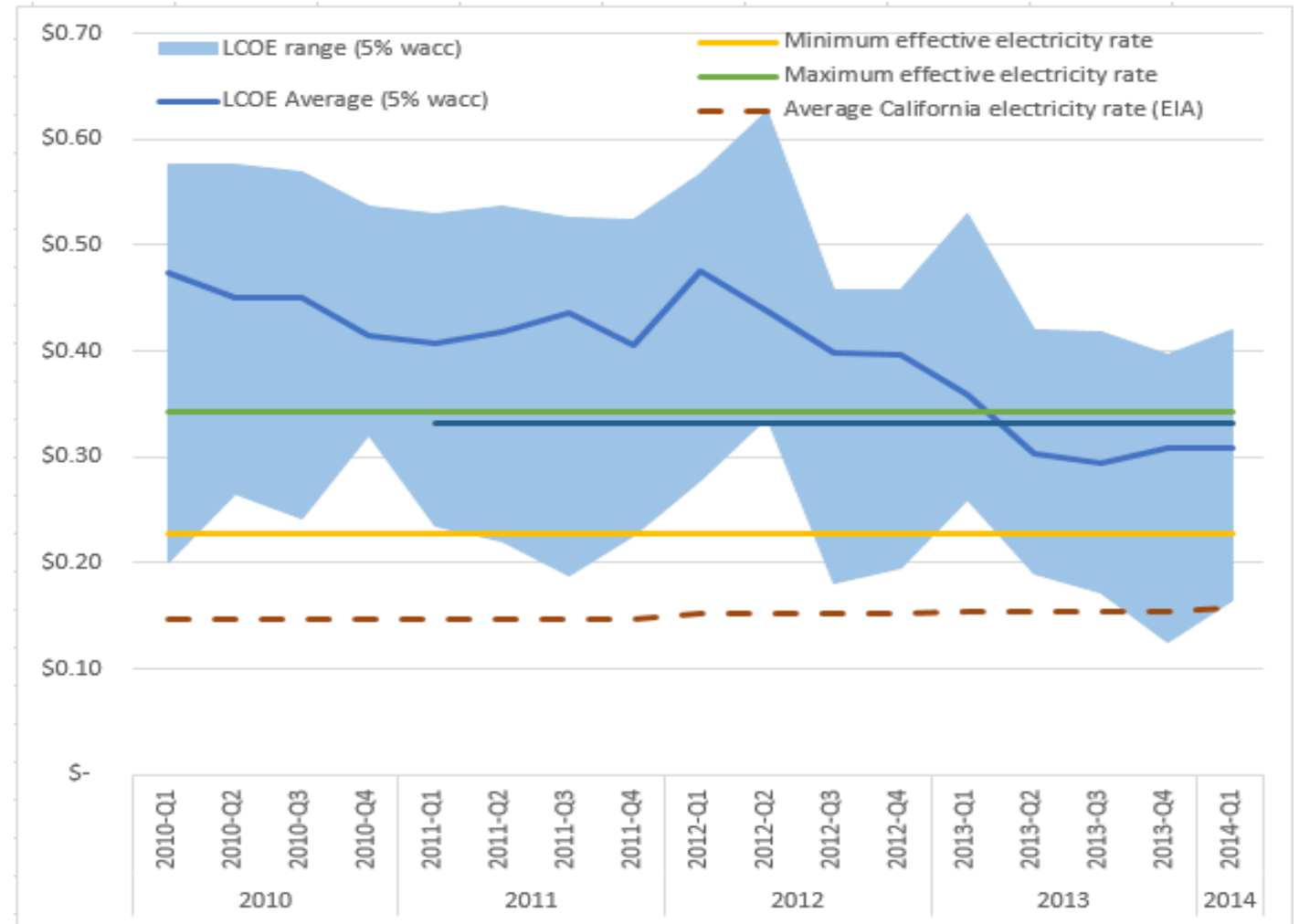


Residential PV Parity: San Francisco



Detailed analysis
yields significant
insights...

The average view
can be very
misleading...



IRENA now has



A world class database

Cutting edge analysis

Transparent, verifiable data

Global coverage

A dynamic new web portal

The True Costs: webpages for your work

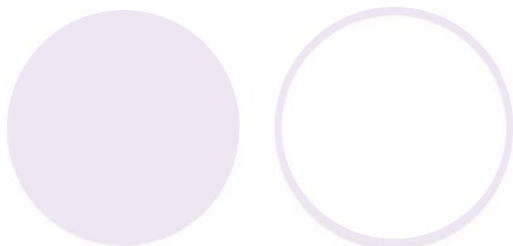
New dedicated
costing pages...

...with all our
costing publications
for free...

...charts, Alliance
news, events, and
more.

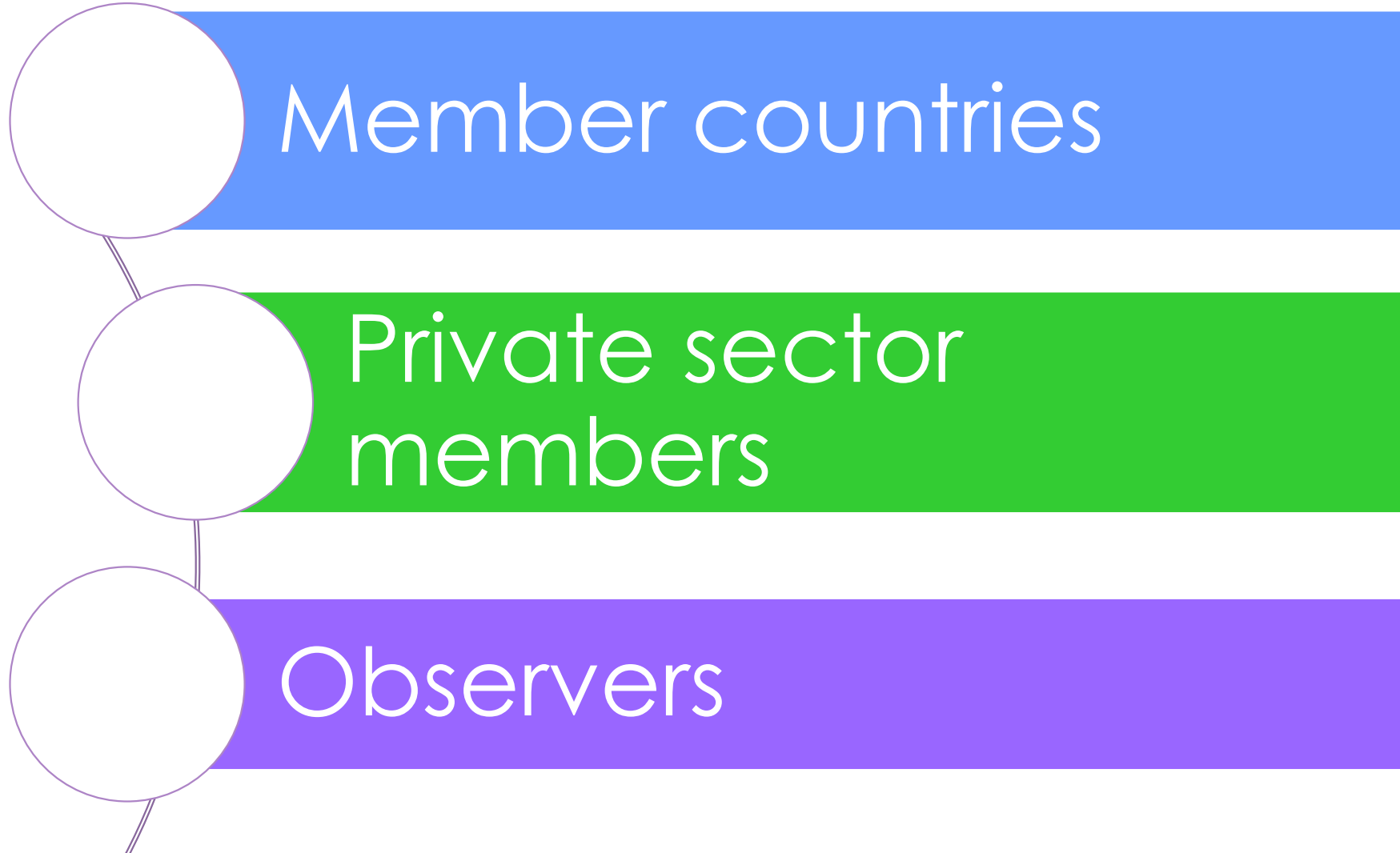


The screenshot displays the IRENA COSTS website, which is dedicated to renewable energy costs, technologies, and markets. The main navigation menu includes Home, About Costing, IRENA Renewable Costing Alliance, Technology Costs, Publications, Presentations, Charts, and Events. The 'Power generation summary charts' page is shown, featuring several charts and graphs illustrating the Levelized Cost of Electricity (LCOE) for various renewable power generation technologies. The charts include data for typical capital cost ranges, typical LCOE and weighted average cost ranges for electricity generation, and typical LCOE range and weighted averages by region. The website also features a search bar, a contact link, and a footer with social media icons and a copyright notice for 2014 IRENA.



IRENA Renewable COSTING ALLIANCE

Alliance structure



What's next?



Stationary applications

Power generation update



PV Parity Indicators

Integration technologies



Renewables are
increasingly competitive
...but more needs to be
done

IRENA is part of the solution

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www.irena.org/costs