



RAP[®]

Energy solutions
for a changing world

PURPA Then, Now, and Next

EUCI Renewable Procurement Conference

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Principal

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The Regulatory Assistance Project (RAP)[®]

Introducing RAP and Carl

- RAP is a non-profit organization providing technical and educational assistance to government officials on energy and environmental issues. RAP staff have extensive utility regulatory experience. RAP work is supported by US DOE, US EPA, and foundations.
- Carl Linvill is a Principal with RAP's US Program. He was an academic economist, Utility Commissioner, Energy Office Director, and consultant prior to joining RAP.

Agenda

1. Then

- a) Why was PURPA created in 1978?
- b) How was it implemented?

2. Now

- a) What's different today?
- b) What's the same?

3. Next

- a) Is it relevant? Why?

Why Was PURPA Created?

1. Address excess dependence on oil
2. Promote conservation and efficiency
3. Support competition
4. Leverage private investment to avoid public investment

How It Was Implemented & Why

1. Long term (20 year), standard offer contracts, because ...
 - a) Barriers to NUG entry
 - b) Avoid long term utility investment
 - c) Enable finance-able projects
2. Avoided cost was usually an avoided utility proxy project

System Needs Are Different Today

1. System needs are different
 - a) Load growth is flat
 - b) Retirement of baseload is significant
 - c) Renewable energy is growing

Markets Have Made Some Progress

2. Markets have progressed (but aren't mature)
 - a) Access to markets in some places
 - b) Market design a work in progress (sometimes wrong capabilities compensated, and compensation not commensurate with value)

Open Access Has Made Some Progress

1. Access to T and D has improved but is not mature
 - a) Order 890, Order 1000 have taken strides – greater transparency, better planning processes but still a work in progress
 - b) Access on distribution system is in its infancy

And What People Want Is Different: RE

QUESTION: Do you think that as a country, the United States should put more emphasis, less emphasis or about the same emphasis as it does now on producing domestic energy from each of the following sources?

GALLUP Poll March 5-8, 2015

	% REPUBLICANS	% INDEPENDENTS	% DEMOCRATS
Solar power	70	83	82
Wind	63	69	81
Natural gas	66	52	49
Oil	60	38	28
Nuclear power	47	34	24
Coal	40	24	22

And People Want Other Stuff ...

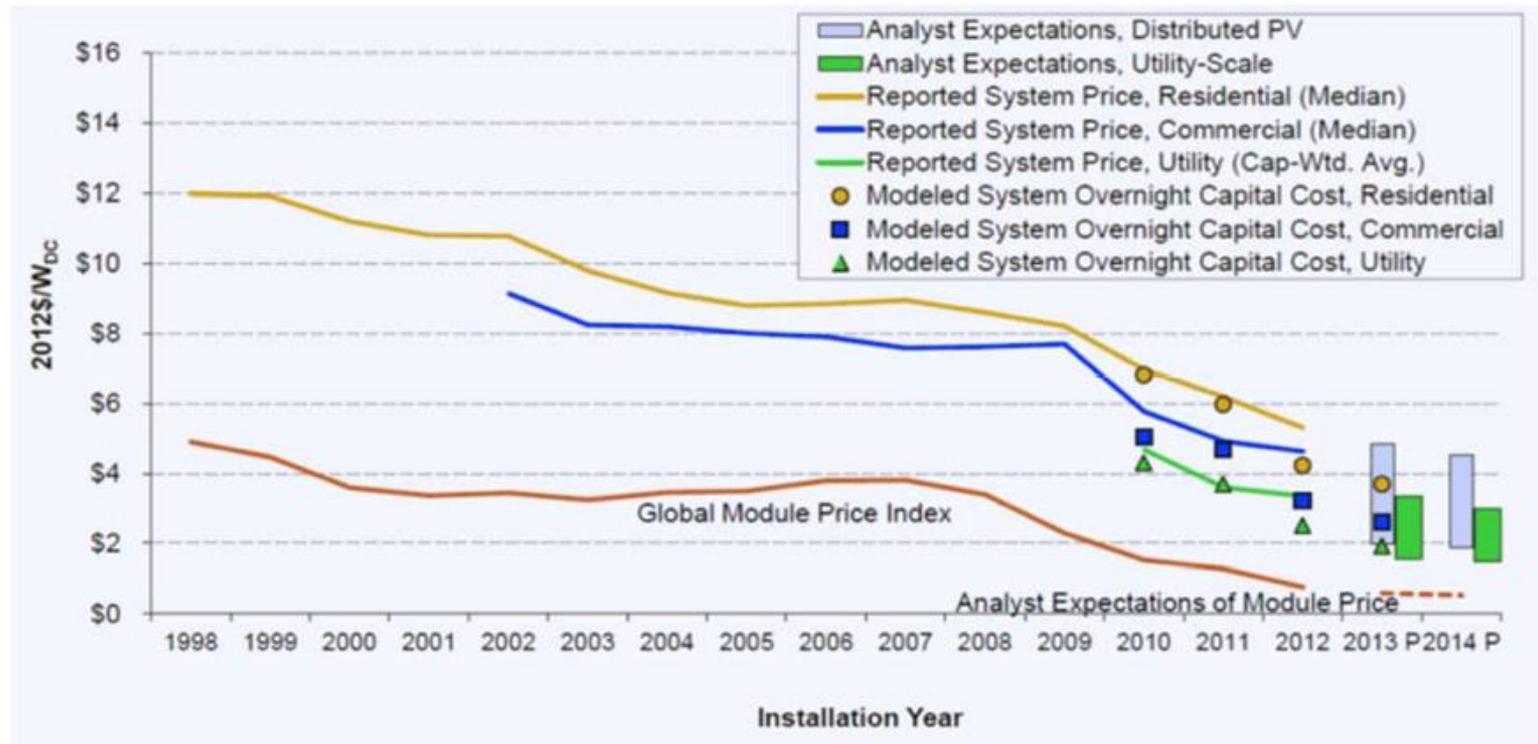
- To secure prices over the years
- To do their part in reducing emissions
- To adopt cool technologies (EV, PV, etc)
- To contribute to a community effort
- To establish a sense of independence
- Pure economics (if price is favorable)

And They Want it in Different Ways

- A behind the meter system
- A shared local system
- A community portfolio
- A remote grid scale system

And Technology Is Different

1. Cost of renewable technologies down



Source: Feldman et al. (2013)

Including System Technologies

2. Ability of system information, communication, and control technologies up
 - a) Regional sharing on the rise
 - b) DER expansion on the rise
 - c) DRP on the rise

So What Is the Same?

1. The need to ensure a fair playing field for non-utility projects
2. The need to evolve the infrastructure to facilitate what people want
3. The need to leverage competition
4. The need to leverage private financing

PURPA Is One Vehicle That Can Help ...

1. Enable consumer surplus (i.e., getting people what they want)
2. Leverage private investment
3. Provide competitive pressure
4. Evolve the physical, financial, and regulatory infrastructure
5. Meet policy goals (Governors' Accord)

Accord Commitments and Principles

Diversify with Renewables

“Technologies that capture solar, wind, hydroelectric and geothermal power have become viable and cost-effective to integrate into our states’ energy portfolios.”

Diversify with Energy Efficiency and Conservation

“Promoting energy savings through efficiency and conservation programs is the fastest, most reliable and often cheapest way to meet our energy needs.”

Modernize the Infrastructure

“Modern distribution and transmission grids are required to give consumers more control over their own energy use, increase electricity reliability, and integrate more renewable energy and energy efficiency technologies into our energy systems.”

Encourage Clean Transportation

“Supporting automakers’ and fueling companies’ market expansion for these new vehicles and fuels expands consumer choice, lessens dependence on petroleum and reduces pollution.”

Plan for the Transition

“These state-by-state approaches enable each state to meet benchmarks it sets for itself in areas such as energy diversification, reduced energy waste, improved air and water, and economic performance.”

Principles

1. Diversify into clean energy and efficiency
2. Promote cost effectiveness
3. Promote reliability and resilience
4. Support innovative American companies
5. Empower and engage customers
6. Encourage American energy independence and competitiveness
7. Work with other states

About RAP

The Regulatory Assistance Project (RAP) is a global, non-profit team of experts that focuses on the long-term economic and environmental sustainability of the power sector. RAP has deep expertise in regulatory and market policies that:

- Promote economic efficiency
- Protect the environment
- Ensure system reliability
- Allocate system benefits fairly among all consumers

Learn more about RAP at www.raonline.org

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