

Community Choice

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California Clean Distributed Generation Coalition Annual Meeting

Sacramento

November 30, 2017



Outline

A general introduction to CCAs, including the following topics:

- What is the CCA framework?
- What market drivers are propelling their formation?
- CA phenomena, or are they propping up elsewhere?
- Are there different models? Electrical service only?
- What services are they offering?
- Where do utilities stand?

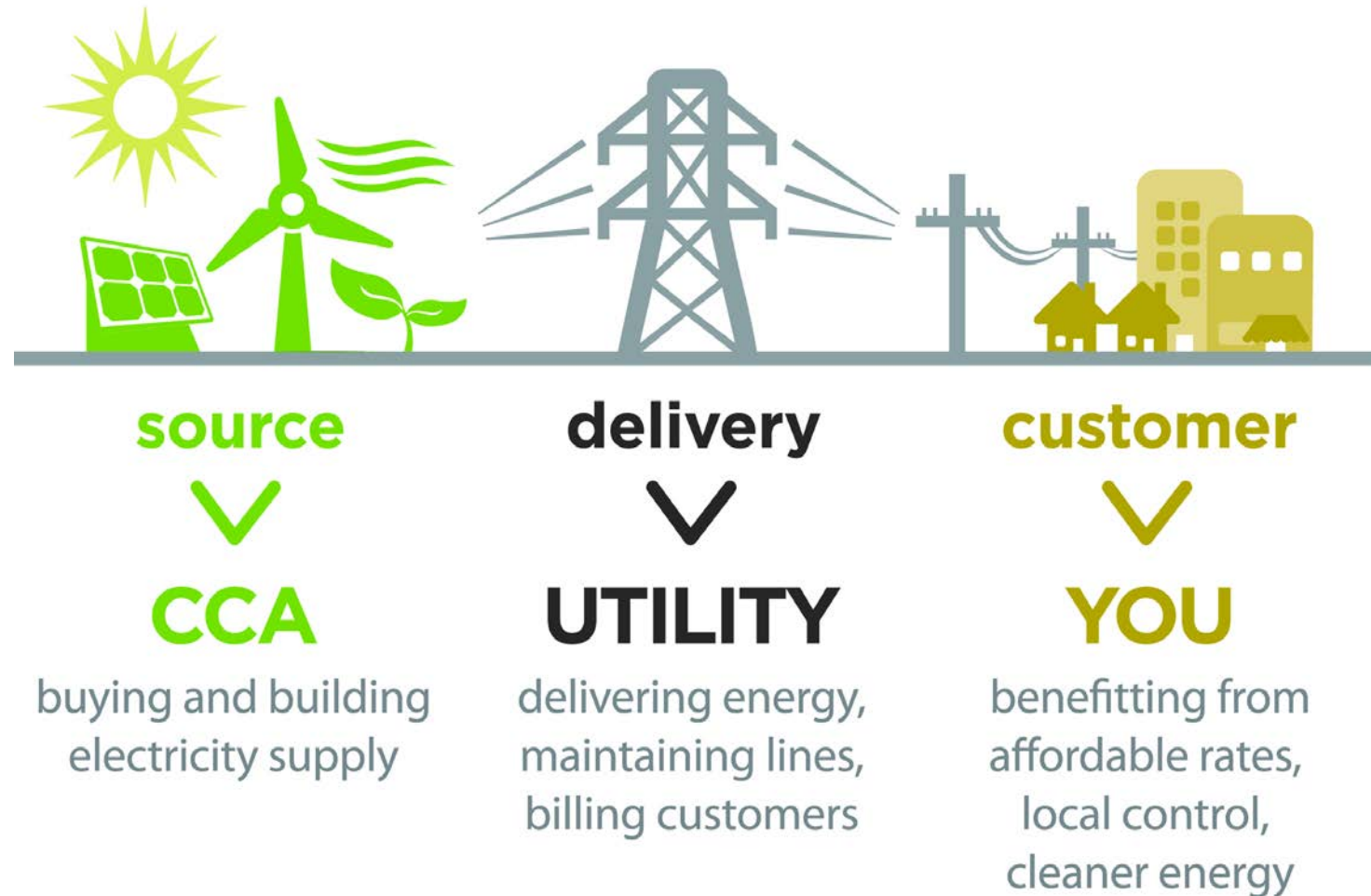


Framework

Current model is electricity generation service only.

Source: Lean Energy US

How Local Energy Aggregation Works



CCA Market Drivers

- Phase 0 (initiating). Experimental results
 - Electricity market deregulation
 - California electricity crisis
- Phase 1 (early). Unintended consequences
 - Other wholesale power market failures and regulatory lapses. (Eastern US)
 - Proposition 16 and other PG&E mishaps (northern California)
- Phase 2 (now). Energy awareness
 - Clean energy activist engagement
 - Local decarbonization advocacy
- Phase 3 (future). “Clean disruption”
 - Globally mass produced and/or portable electricity generation and storage components
 - “Smart” cities



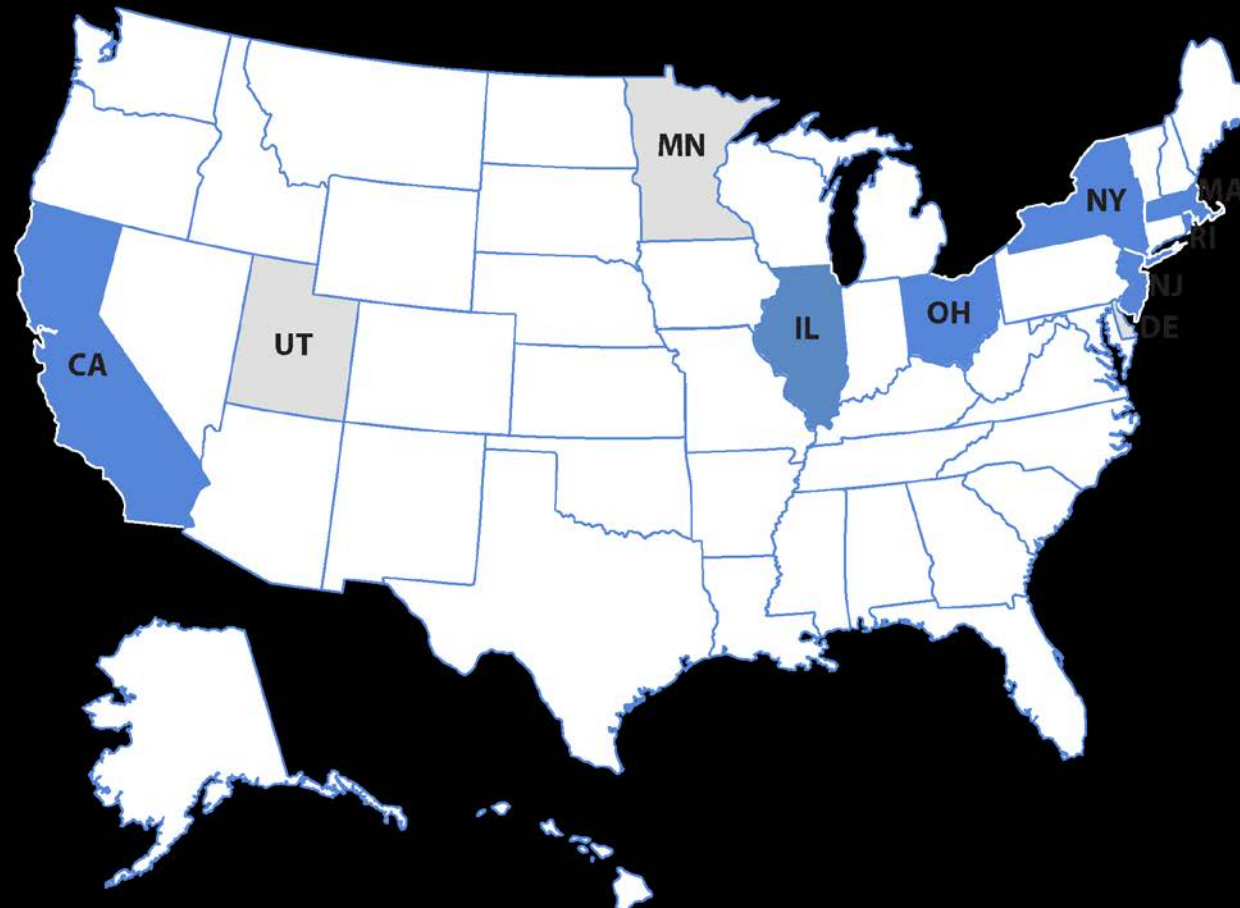
California and Elsewhere

Legal in 7 States:

- California
- Illinois
- Massachusetts
- New Jersey
- Ohio
- Rhode island
- New York

Under Consideration in:

- Utah
- Delaware
- Minnesota



California

- Orange – up and operating
- Green – 2018 launch expected
- Blue – Exploring or in Development



Models

- Mod 0 – Opportunistic outsourced wholesale electricity procurement on behalf of local jurisdictions. (Deregulated states)
- Layer 1 - Marin Clean Energy. Electricity customer engagement and locally targeted efficiency programs. (California)
- Layer 2 - Sonoma Clean Power. Decarbonization via fuel substitution and electric transportation. (CA)
- Layer 3 - Valley Clean Energy. Municipal utility industry assisted wholesale power outsourcing (and program development?) (CA)
- Layer 4? – CCA power pooling supporting local CCAs having diverse local energy opportunities and priorities. (CA)



Sample Residential Cost Comparison

Source: Marin Clean Energy

Typical Monthly Electric Charges*

PG&E (Opt Out)	MCE Light Green	MCE Deep Green
33% <small>renewable energy**</small>	55% <small>renewable energy</small>	100% <small>renewable energy**</small>
\$54.25 PG&E Electric Delivery	\$54.25 PG&E Electric Delivery	\$54.25 PG&E Electric Delivery
\$43.78 Electric Generation	\$30.26 Electric Generation	\$34.71 Electric Generation
– Additional PG&E Fees	\$13.25 Additional PG&E Fees	\$13.25 Additional PG&E Fees
\$98⁰³ <small>avg. total cost</small>	\$97⁷⁶ <small>avg. total cost</small>	\$102²¹ <small>avg. total cost</small>
OPT FOR 33% RENEWABLE	ENROLL IN 55% RENEWABLE	ENROLL IN 100% RENEWABLE

Sonoma Clean Power Programs



Also:

- Home Upgrade Programs
- Income Assistance Programs

Closing Comments

1. For cities and counties CCA is about local control.
 - Workforce and other benefits to local economies
 - Energy resilience as the key to local resilience
2. Electricity IOU's now ambivalent and pre-occupied.
 - SB 790 restricted use of rate-payer funds for marketing against CCA.
 - CPUC is more of a concern. Seeking statutory control.
3. Why should CHP community care?
 - Local flexible generation can open the window for higher penetration of on-site and community solar/wind.
 - Local preference for flexible generation that also decarbonizes



Thanks, and another favor, please.

IRESN is focused on the need for more integrative and effective technical and economic engagement between energy utilities and cities, or between CCAs and their member jurisdictions.

When you see such engagement happening or getting underway, please let us know!

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