

COLORADO LEADS THE WAY TO COMMUNITY SOLAR

NASUCA Mid-Year Meeting
Distributed Energy Resources Committee Panel
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COLORADO HISTORY OF SHARED SOLAR

- 2009 - first shared solar system came online
 - United Power
 - Rural electric co-op serving 67,000
 - First utility to create a solar garden with 48 panels
 - Added 48 more panels in 2010
- Gov. Bill Ritter signed law in 2010 creating community solar power systems throughout state [C.R.S. 40-2-127](#)
 - First state with legislation <http://www.solargardens.org/legislation-news-2/colorado-community-solar-gardens-act/>
 - Implemented in 2012
 - Basically created community solar industry
 - Required community solar for IOUs which allowed innovative business models
 - Set-aside for low income customers is 5%
 - Many states have since used Colorado's legislation as a model
- Recent legislative action
 - Eliminated a geographic restriction
 - Subscriber must be in county in which community solar garden is located OR ADJACENT COUNTY



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COLORADO HISTORY OF SHARED SOLAR

- Xcel Energy (Colorado's largest IOU) in 2012 and 2013
 - Over 40 projects built or in development; now generating about 28MW
 - Systems range from 500 kW to 2 MW
 - Incentives through Solar*Rewards Program
 - Capacity currently limited to 30 MW
- At least 12 Colorado utilities have sponsored projects
- Colorado co-ops and municipals have been leaders as well, completing projects even before law was passed
 - Multiple Colorado co-ops have gone on to build second or even third projects
- A 1 MW project can typically serve 200-300 customers, meaning thousands of Coloradans have community solar now

STATE-WIDE MARKET

- 30% renewables by 2020 - statutory standard
- Community solar industry says market for their product is 7 times that of rooftop solar <http://www.utilitydive.com/news/utility-buy-in-fuels-a-boom-in-colorado-community-solar/391501/>
- Colorado PUC called for expansion of community solar capacity in 2015/2016 renewable energy plans
- Two main community solar providers
 - Clean Energy Collective (CEC)
 - Customers purchase panels; CEC maintains
 - Sunshare
 - Customers can pay up-front for panels or per kWh used over time
 - 20-year contract
- Colorado community solar companies have grown quickly with the market, creating jobs and expanding nationwide
- Customers get all the subsidies
 - 30% Federal tax credit (for now)
 - Utility incentive (approved by PUC)



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PENDING ISSUES

- **Capacity**
 - Initial cap of 6 MW set by legislature for first 3 years
 - Xcel (largest IOU) now has 30 MW cap set by PUC
 - Unless capacity is limited, will not have competitive market
- **Incentives**
 - Competitive bids now down to close to zero
- **Subsidies**
 - Net metering
- **Net metering credit**
 - Now at full retail rate
 - Under PUC review
 - Other states:
 - 44 states have basic net metering
 - 17 states have aggregate net metering
 - 11 states have virtual net metering
 - Utility incentives
- **Restrictions**
 - Geographic
 - Size of community solar garden



WHERE DO WE GO FROM HERE?

- Expansion of programs
 - NREL estimates <http://www.nrel.gov/docs/fy15osti/63892.pdf> (April 2015)
 - At least 49% of US households and 48% of businesses do not have solar-suitable rooftops
 - Many say number should be as high as 75%
 - By 2020, shared solar could represent 32% to 49% of distributed solar market
 - Cumulative growth: from 5.5 GW in 2015 to 11 GW in 2020
 - Represents \$8.2 to \$16.3 billion in investment
- <http://www.solarelectricpower.org/media/214973/Community-Solar-Report-Executive-Summary-ver3.pdf> (September 2014)



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