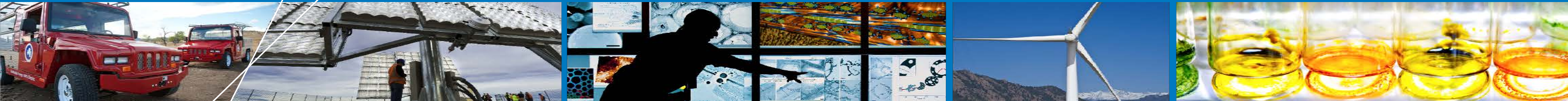


# Community Solar: Status, Trends, Legal, and Financial Issues



**Eric O'Shaughnessy**

**March 9<sup>th</sup>, 2016**

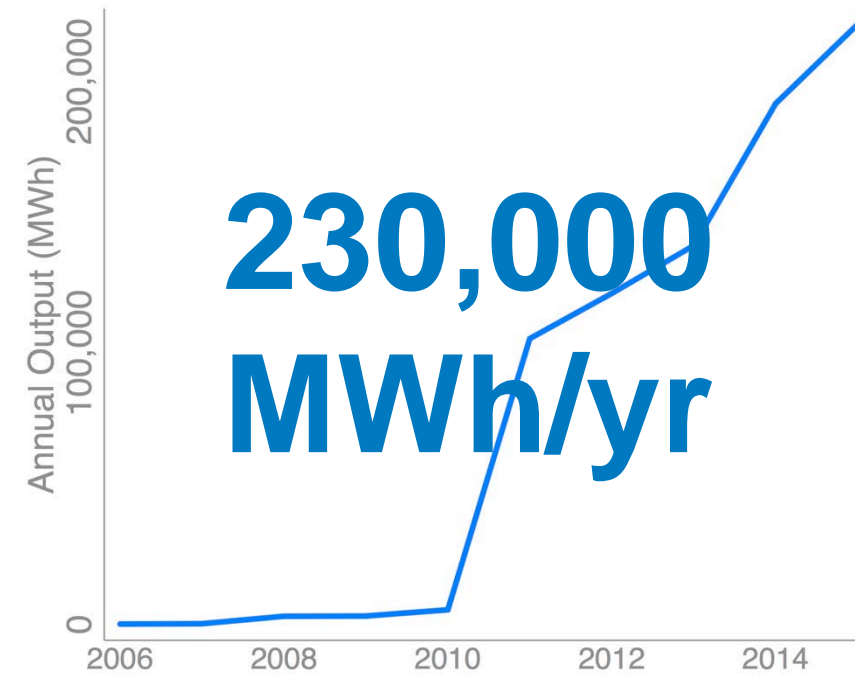
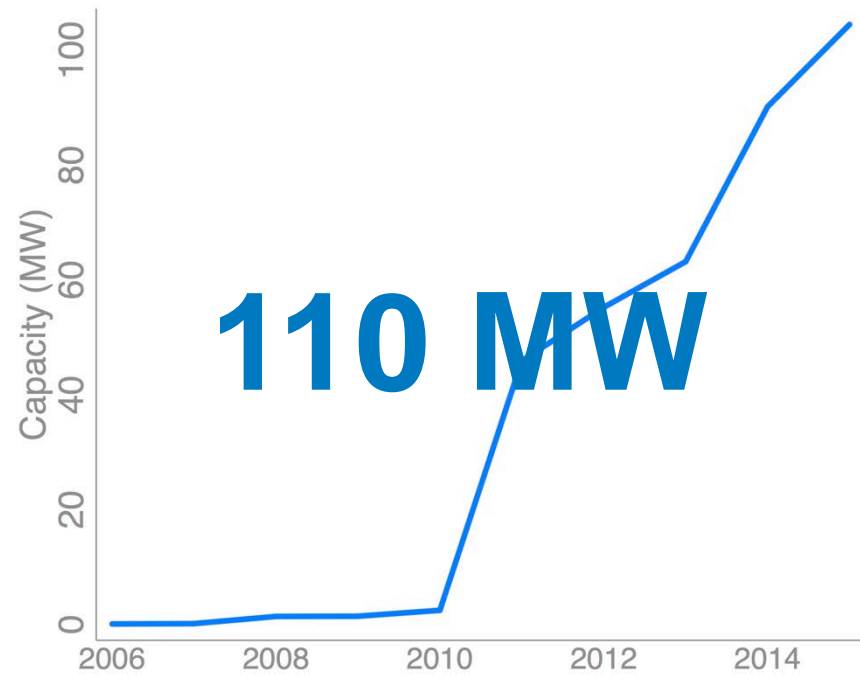
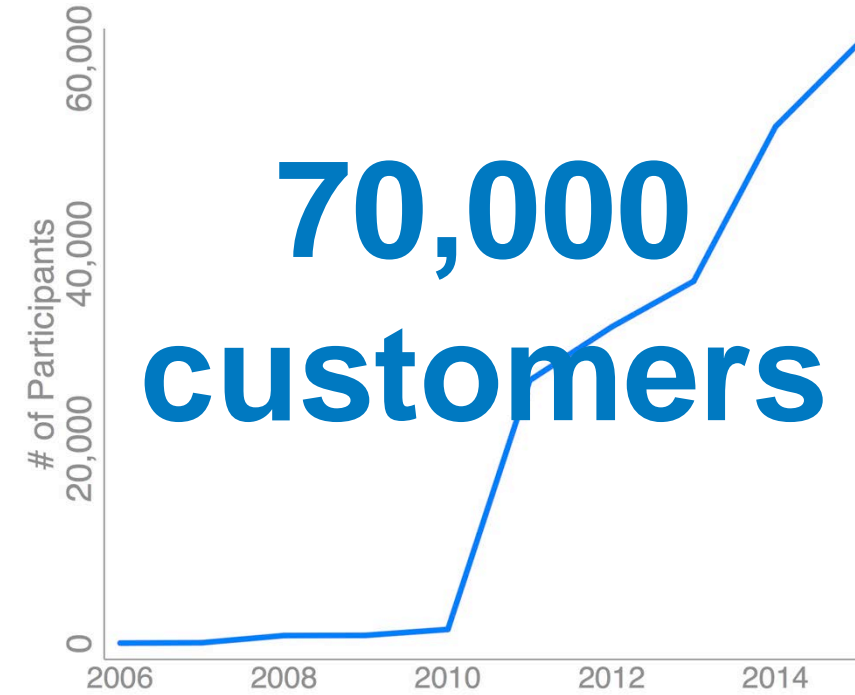
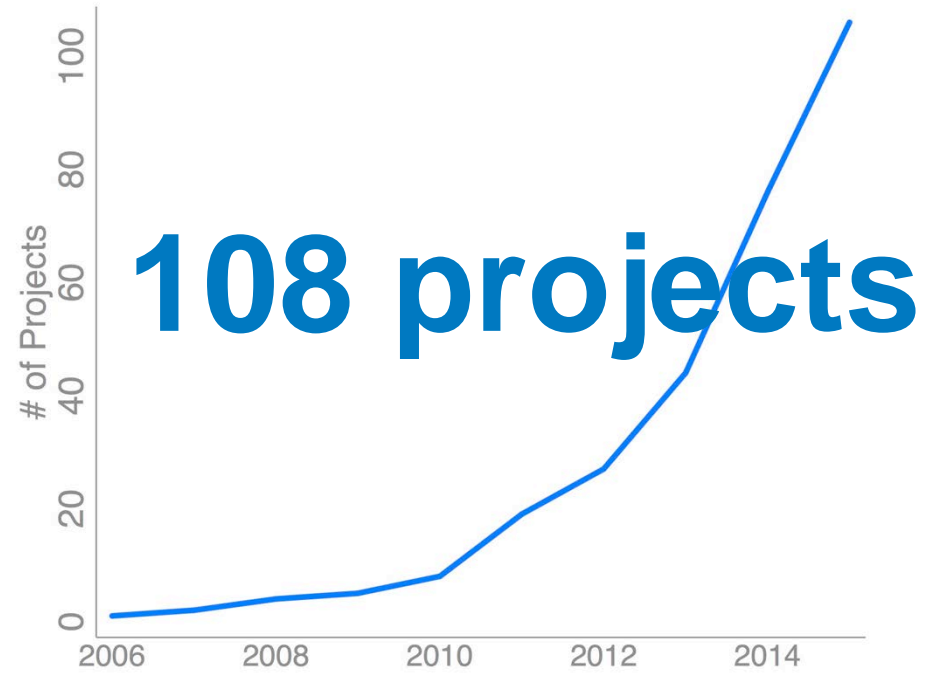
**Presentation for the EPA Green Power  
Partnership: An Introduction to  
Community Solar Programs**

# Outline

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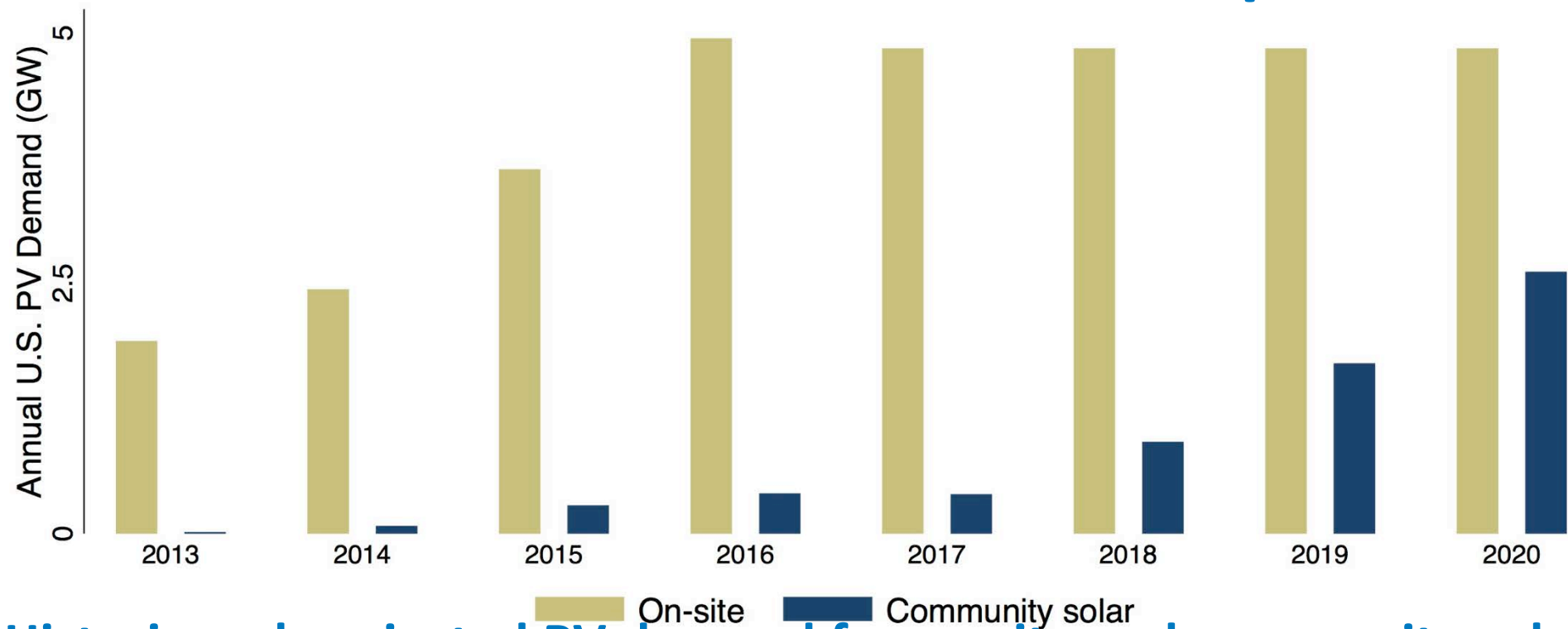
- **Key numbers**
- **Trends**
- **NREL Community Solar Guide Overview**
- **Legal/financial issues**

# Community Solar: Key Numbers



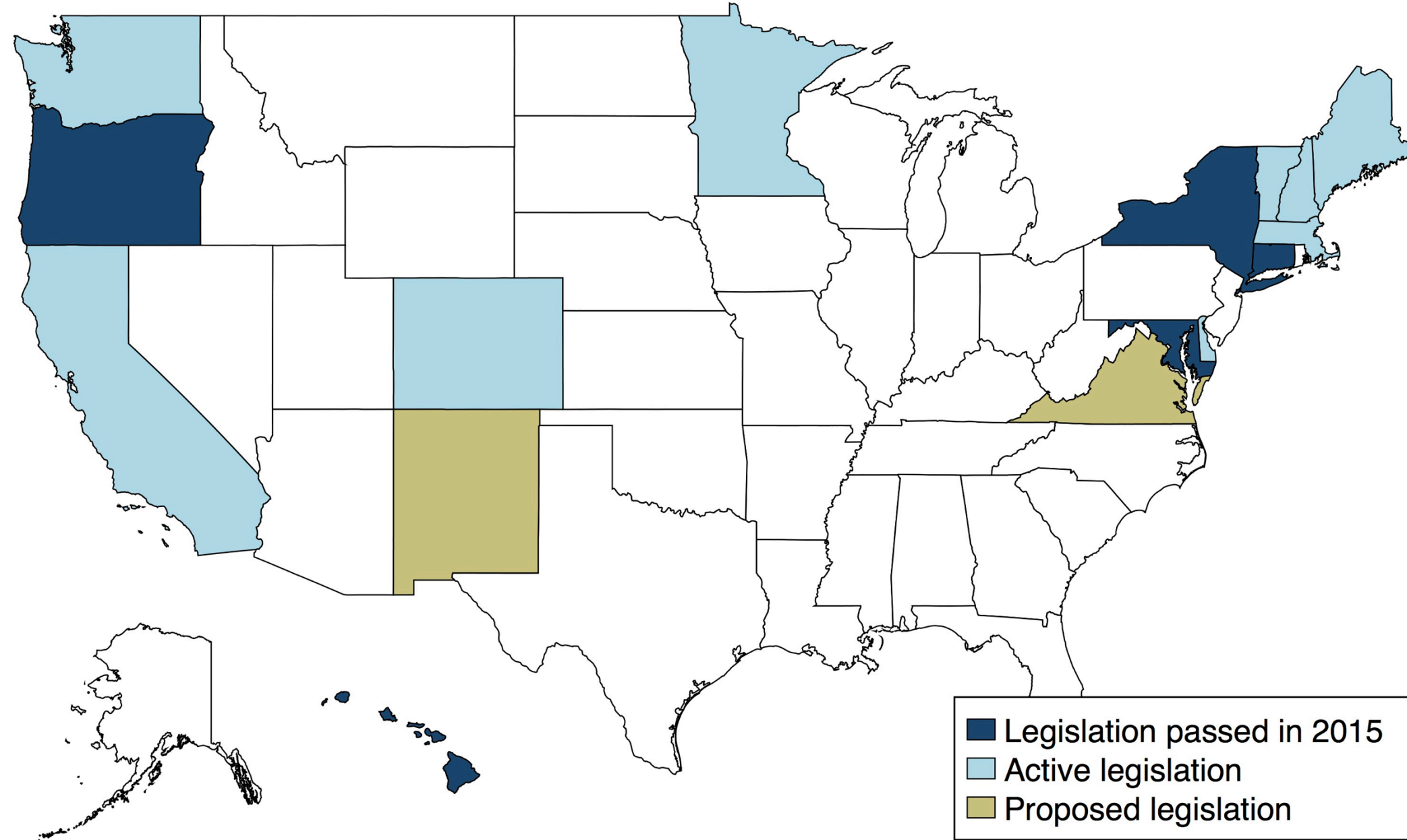
# Community Solar in Context

- Currently less than 1% of U.S. solar PV capacity
- Great potential: could represent half of new U.S. PV market by 2020
- Potential to reach underserved markets: about half of prospective PV customers can't install rooftop solar



Historic and projected PV demand for on-site and community solar

# Community Solar Enabling Legislation

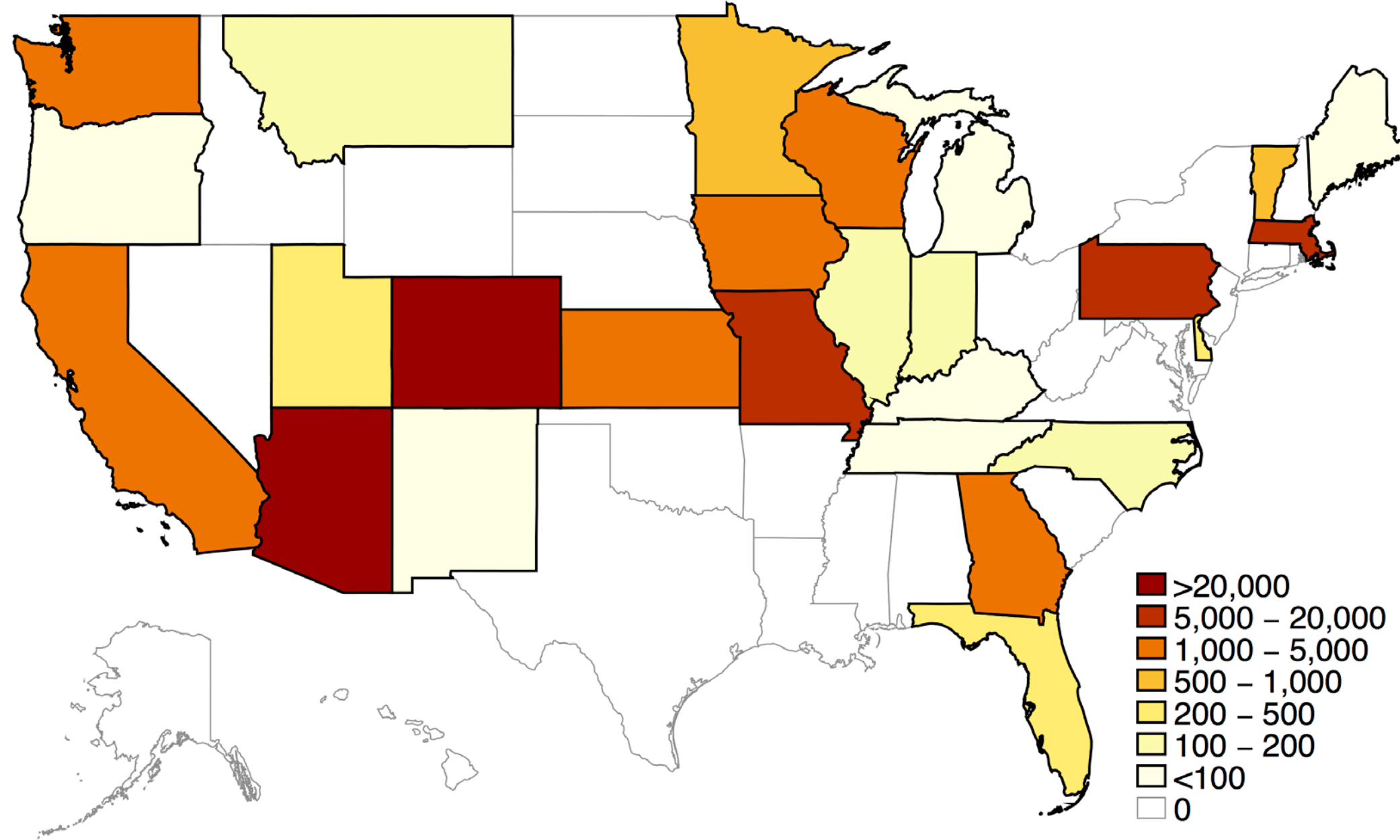


States with Active or Proposed Community Solar Legislation

## Primary policies

- **Virtual net metering:** Net metering credits offset load of subscribers
- **Group billing:** Project output is netted against group bill for all subscribers

# Community Solar Installed Capacity



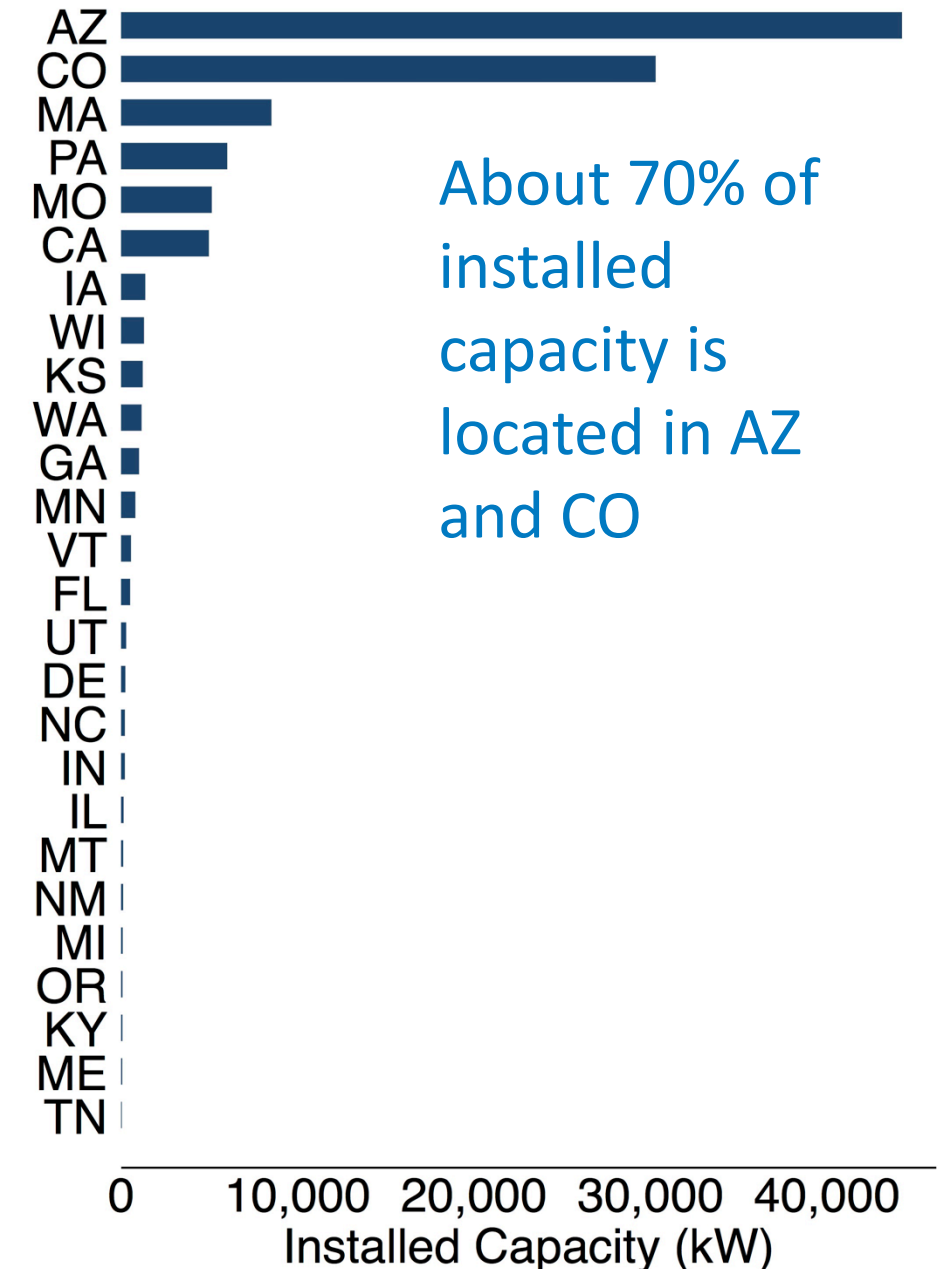
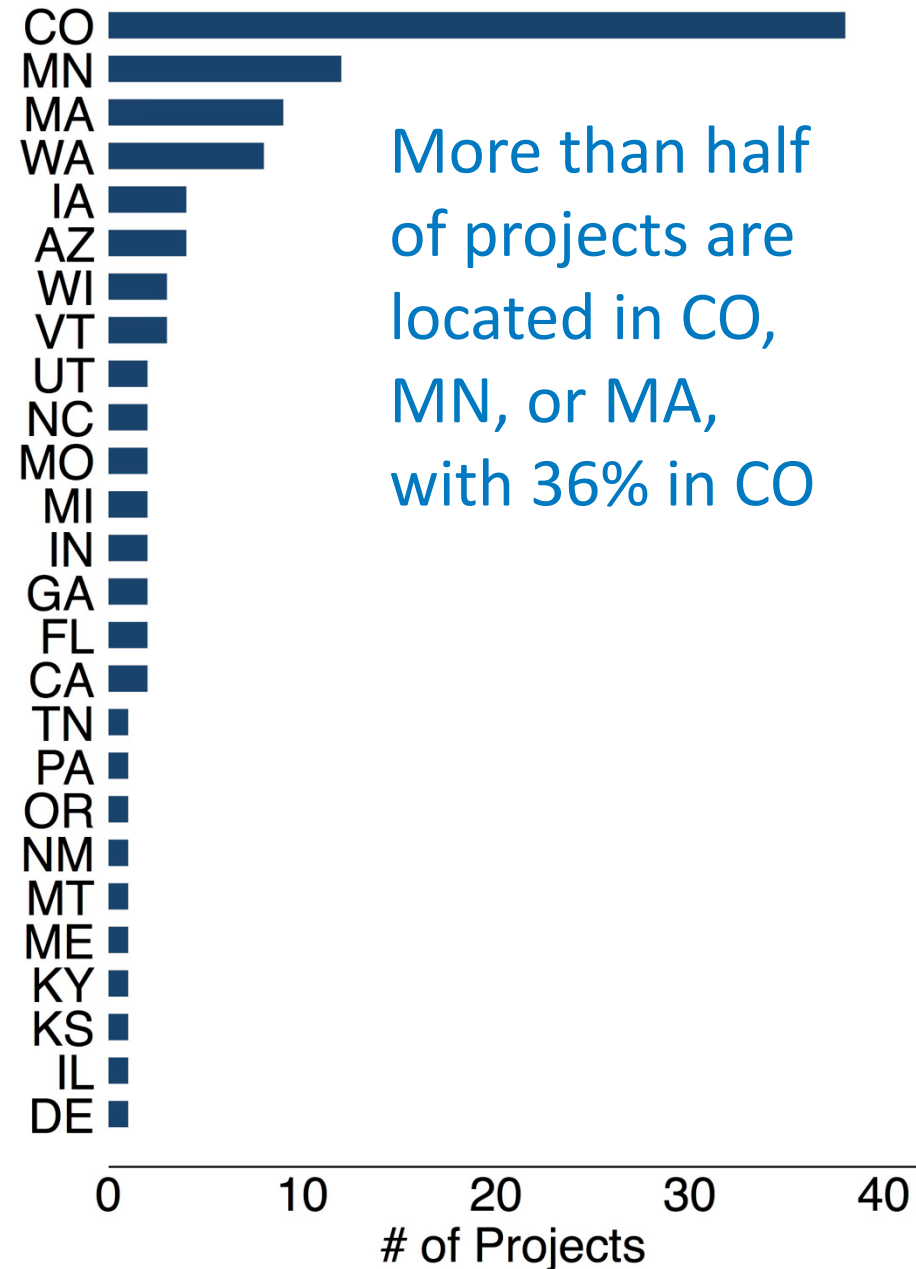
Installed Community Solar Capacity (kW) by State

Enabling legislation has facilitated community solar expansion, most notably in Colorado and Massachusetts, but has not been a prerequisite for project development

26 states now have at least one project

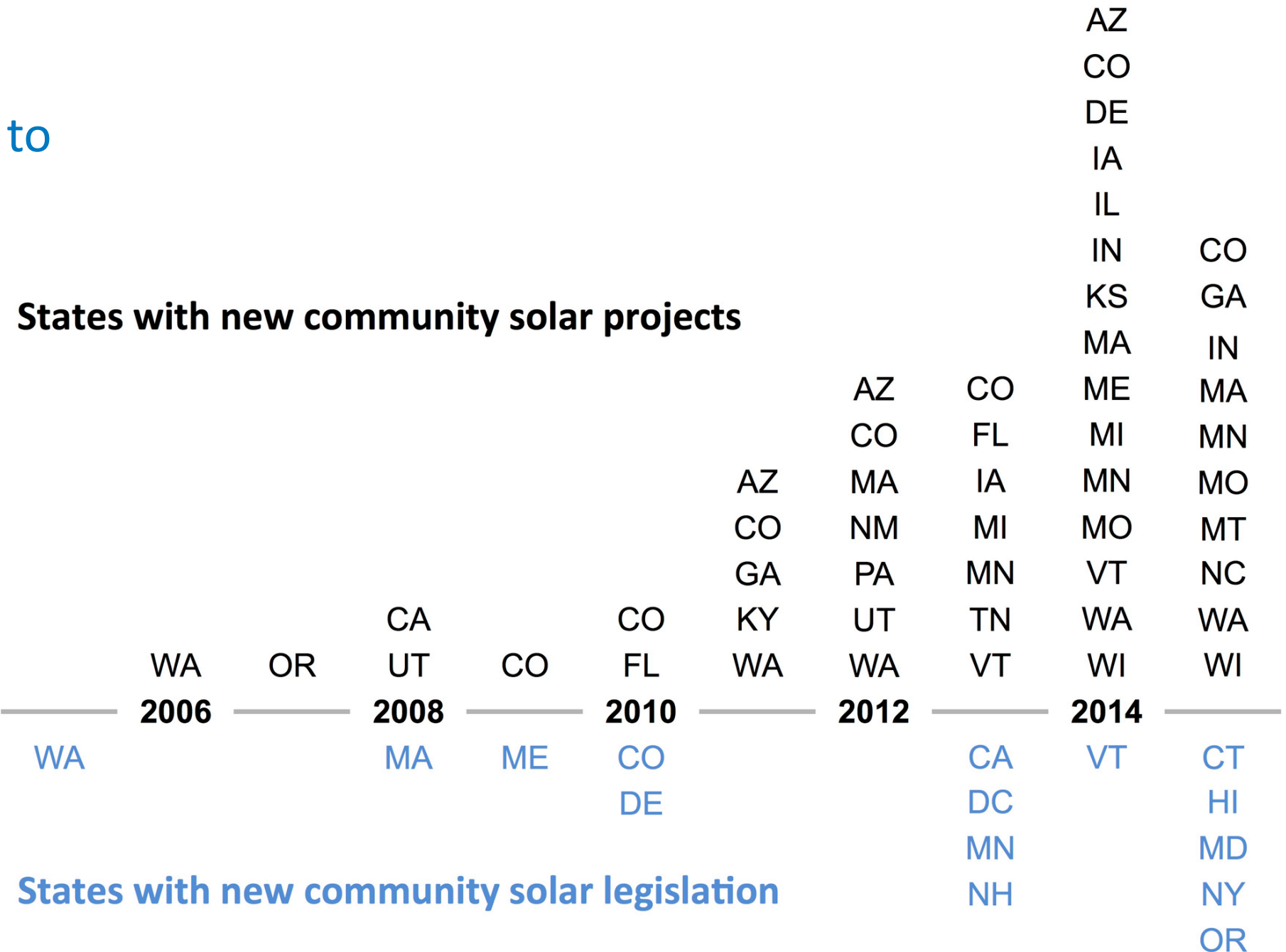
# State Leaders

- A few states have led community solar's early expansion, especially Colorado
- Recent policy changes in California and Minnesota could propel these two states to the forefront of community solar



# The Geographic Expansion of Community Solar

10 years after the first project, community solar has expanded to 26 states







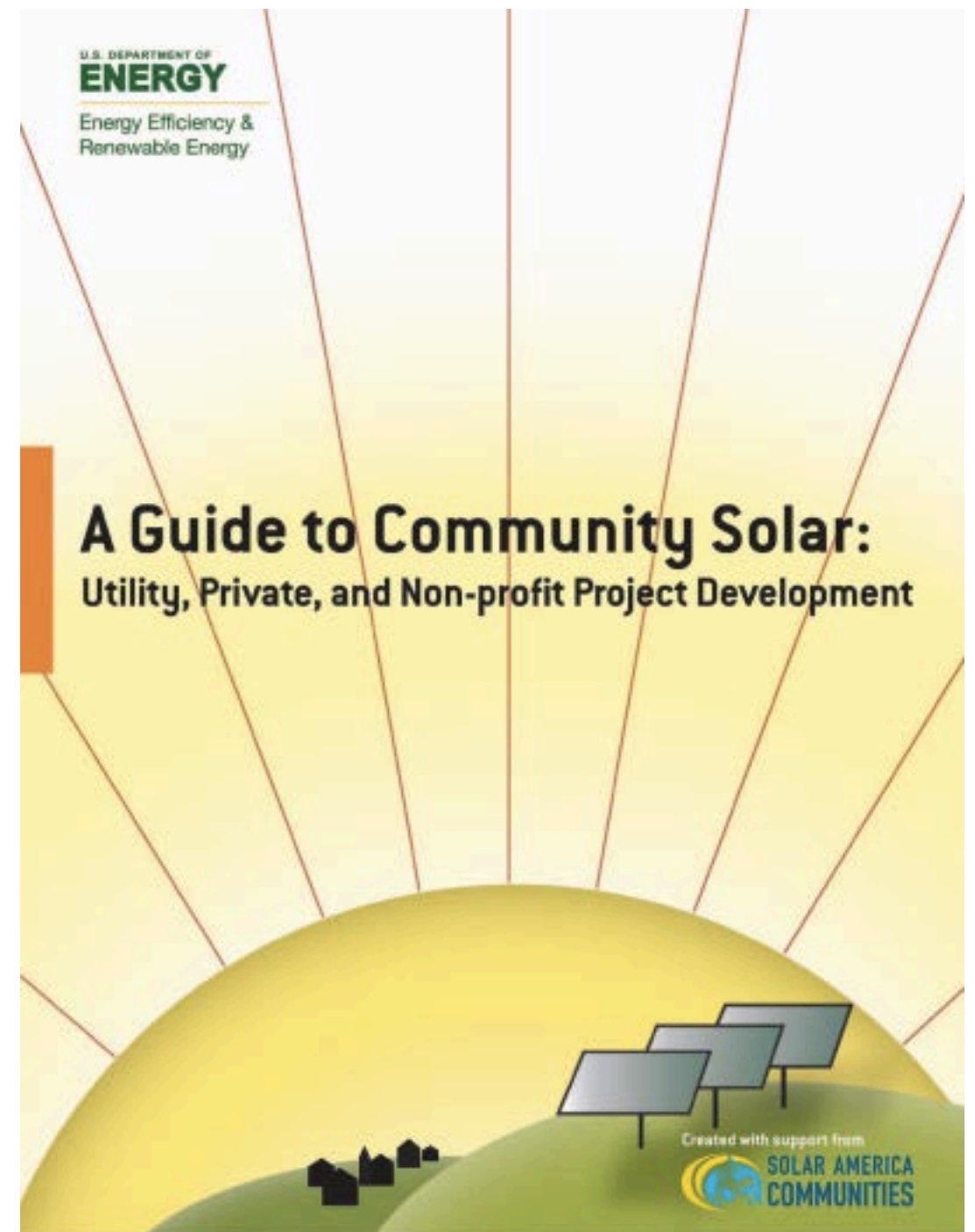
# Data and Figure Sources

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- **NREL “Status and Trends” Report:**  
<http://www.nrel.gov/docs/fy16osti/65252.pdf>
- **NREL “Shared Solar” Report:**  
<http://www.nrel.gov/docs/fy15osti/63892.pdf>
- **Community Solar Hub:**  
<https://www.communitysolarhub.com/projects>
- **SEPA, Community Solar Program Design Models (2015).**
- **IREC, Shared Renewables Catalog (2014).**

# NREL Guide to Community Solar

- **“A Guide to Community Solar” is one of several NREL community solar resources**
- **The Guide covers different project models, policy, legal, and financial issues**



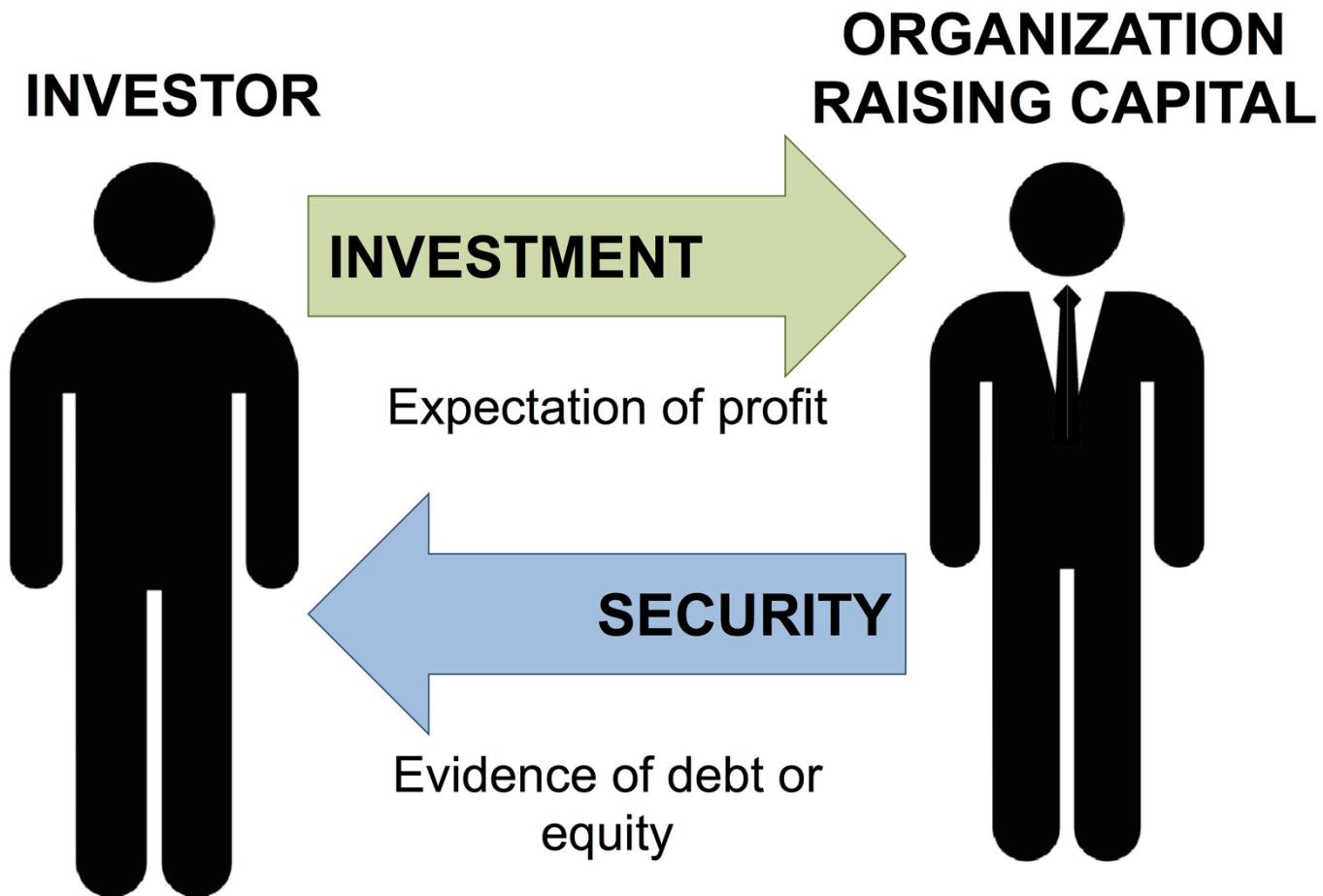
# Comparison of Community Solar Models

	Utility	Special Purpose Entity	Nonprofit
<b>Owned By</b>	Utility or third party	SPE members	Nonprofit
<b>Financed By</b>	Utility, grants, ratepayer subscriptions	Member investments, grants, incentives	Memberships, donor contributions, grants
<b>Hosted By</b>	Utility or third party	Third party	Nonprofit
<b>Subscriber Profile</b>	Electric rate payers of the utility	Community investors	Donors, members
<b>Subscriber Motive</b>	Offset personal electricity use	Return on investment; offset personal electricity use	Return on investment; philanthropy
<b>Long-term Strategy of Sponsor</b>	Offer solar options; add solar generation (possibly for Renewable Portfolio Standard)	Sell system to host; retain for electricity production	Retain for electricity production for life of system
<b>Examples</b>	<ul style="list-style-type: none"> <li>• Sacramento Municipal Utility District – SolarShares Program</li> <li>• Tucson Electric Power – Bright Tucson Program</li> </ul>	<ul style="list-style-type: none"> <li>• University Park Community Solar, LLC</li> <li>• Clean Energy Collective, LLC</li> <li>• Island Community Solar, LLC</li> </ul>	<ul style="list-style-type: none"> <li>• Winthrop Community Solar Project</li> <li>• Solar for Sakai</li> </ul>

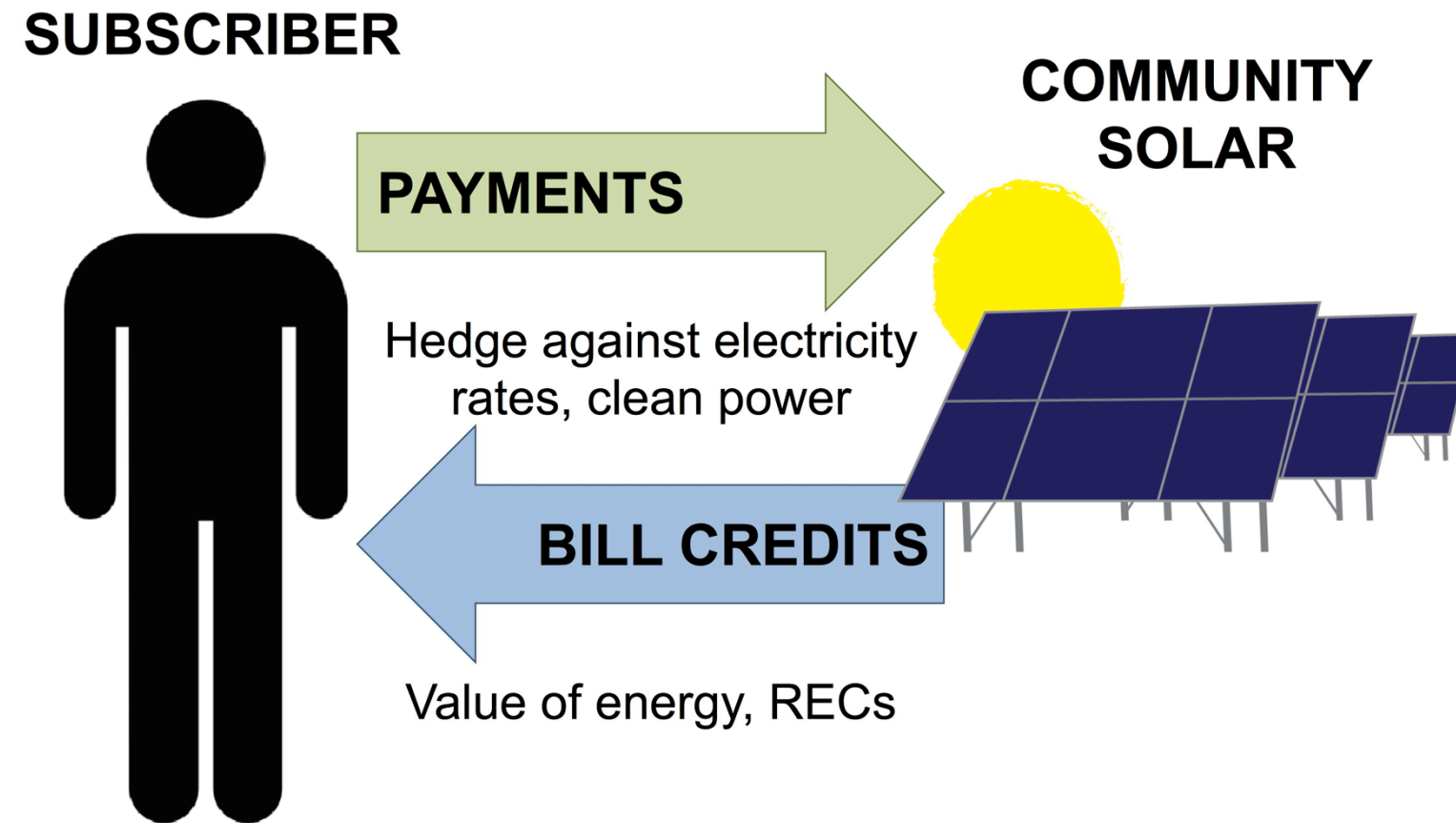
# Legal Issues: Securities Compliance

Is a community solar subscription a security?

## TYPICAL SECURITY STRUCTURE



## TYPICAL COMMUNITY SOLAR STRUCTURE



# Securities Compliance

**The Investment Contract Test – a security exists if:**

- 1. A person invests money or property**
- 2. In a common enterprise**
- 3. With expectation of profits**
- 4. Without the right to exercise practical control over the decisions of the enterprise**

**Projects deemed to be offering a security will incur substantial compliance costs with state and federal securities rules, including registration with the SEC and applicable state regulatory agency**

# Ensuring Securities Compliance

- **Avoid references to “shares” or “stock” or other terminology that would suggest a financial investment with profit expectations**
- **Structure so that subscribers purchase solar power rather than interests in project capital**

## **Private placement exemption:**

- **Used by smaller-scale non-utility-owned projects**
- **Limits project to 35 unaccredited investors**

# Financial Issues: Tax Incentive Monetization

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- **Federal tax incentives can offset more than 50% of commercial project costs, but...**
- **Tax incentives were designed for individually-owned PV or commercial-scale systems, community solar isn't exactly either**
- **Electric coops, municipal utilities, and public utility districts are not eligible for federal tax incentives (these utilities are exempt from federal taxes)**



# Financial Issues: Tax Incentive Monetization

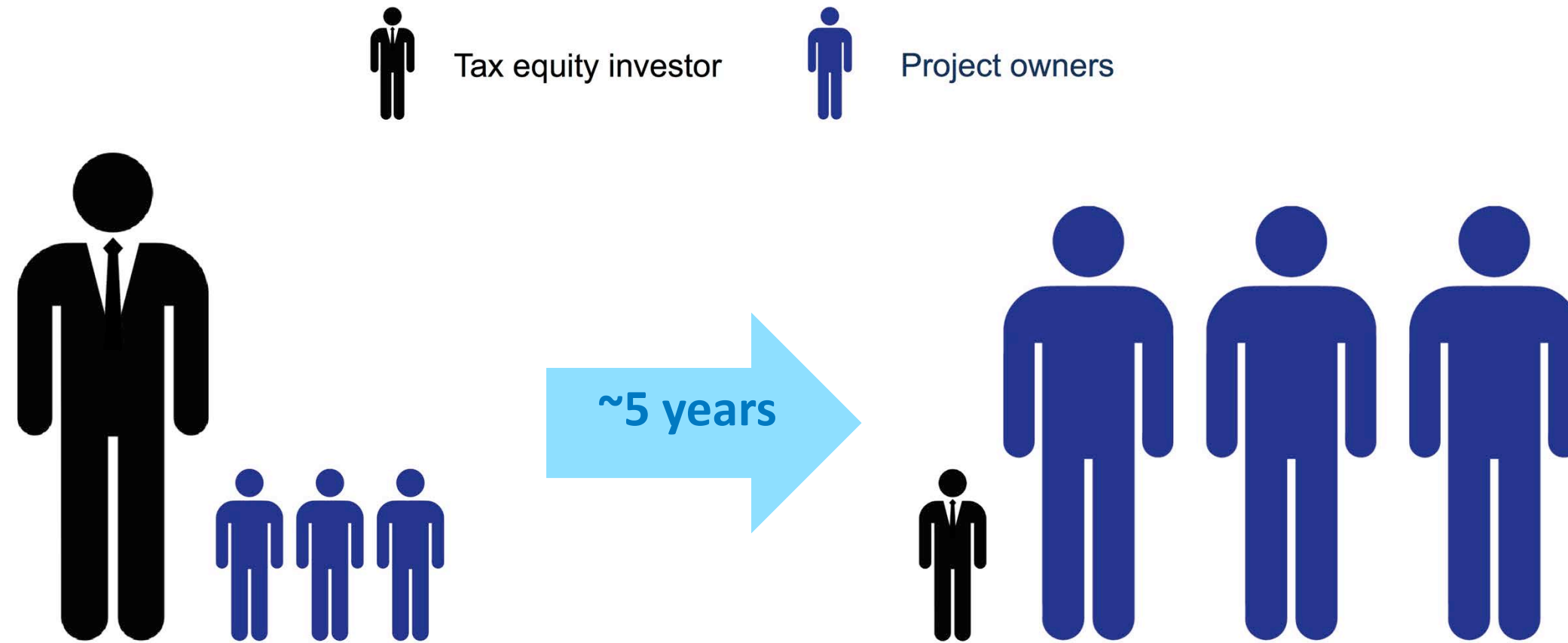
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- **Investor-owned utilities (IOUs) and for-profit private developers are eligible for the federal commercial investment tax credit (ITC)**
- **Normalization rules require IOUs to spread ITC benefits into ratemaking throughout the useful life of the project**
- **Private developers can pass ITC benefits through to the subscriber base much sooner, giving a possible price advantage of utility projects**

# Financial Issues: Passive Activity Rules

- **Passive income: income from a rental activity or a business in which the taxpayer does not materially participate**
- **The IRS only allows tax credits earned from passive activities to be used against passive income**
- **Few community solar subscribers have sufficient passive income tax appetites to fully monetize the ITC**
- **Projects may need to find a tax equity investor with sufficient passive income to fully monetize federal tax incentives**

# Financing Options: Flip Structure



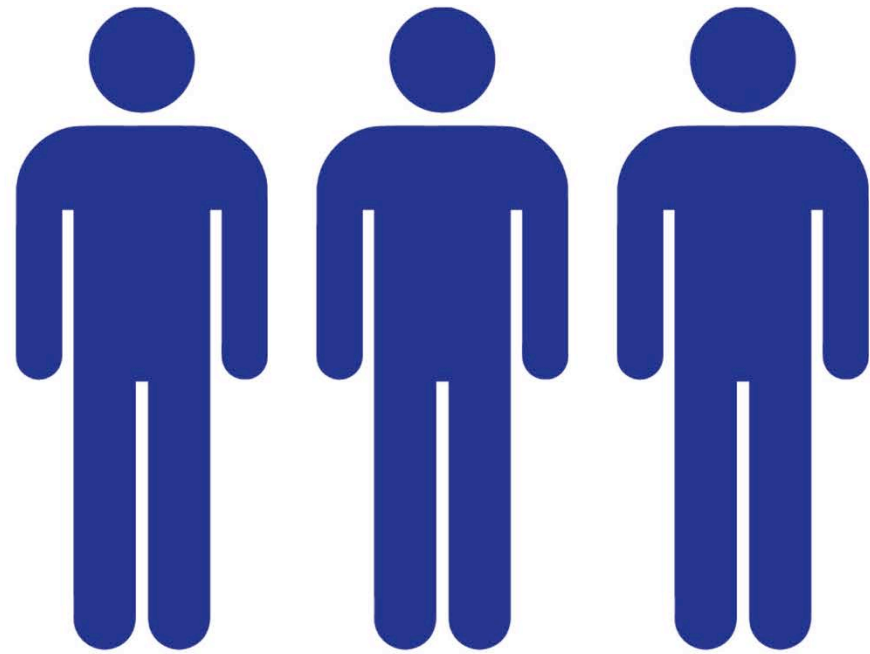
## Start of project:

Tax equity investor contributes most of the equity (~99%) in return for tax benefits

## Flip:

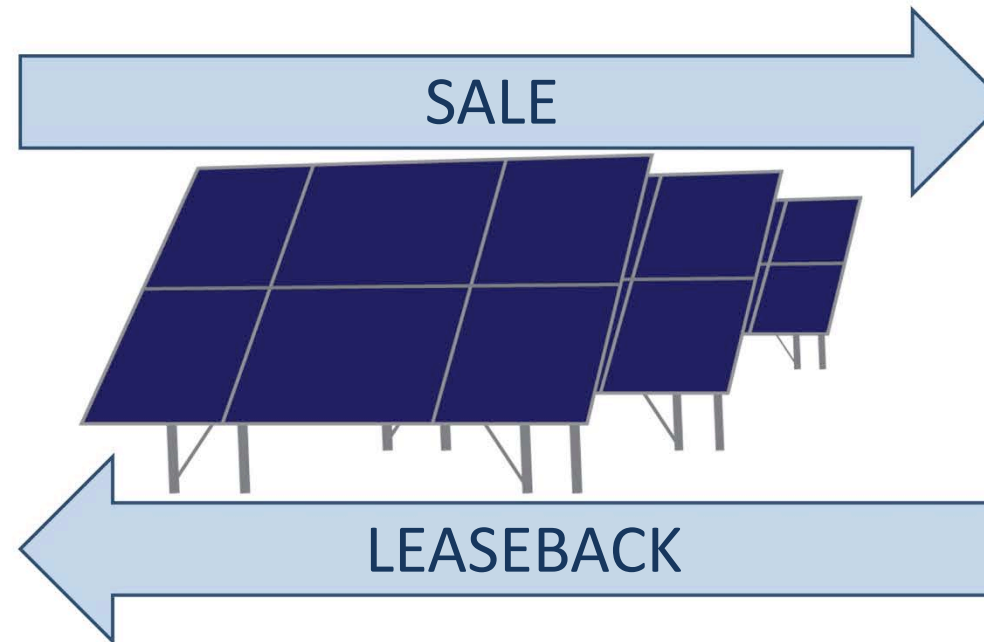
Majority ownership “flips” to the community solar project owners after the tax investor has fully monetized tax incentives

# Financing Options: Sale-Leaseback

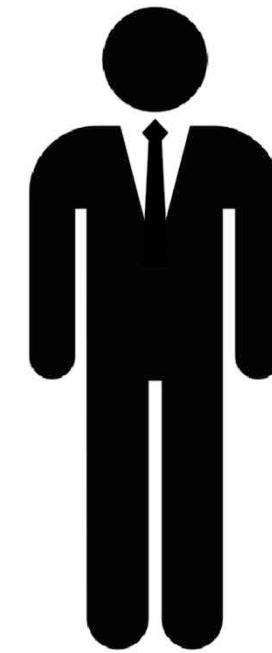


Project developer indirectly monetizes the tax incentives through the lower lease rate

Project developer sells the project to a tax equity investor



The tax equity investor leases the system back to the project developer

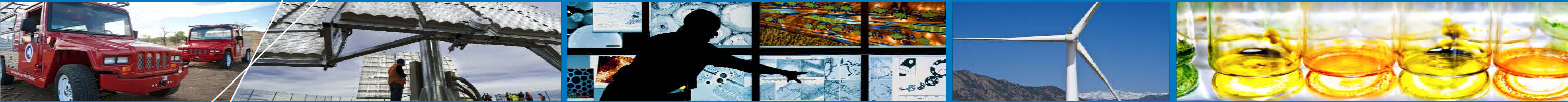


Investor monetizes tax incentives

# Subscriber Claims to Tax Credits

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- **The Federal ITC had traditionally been limited to onsite systems or offsite systems owned by a single taxpayer**
- **In 2015, the IRS issued a private letter ruling stating that a community solar share owner was eligible for the ITC**
- **The PLR does not establish a legal precedent, but may indicate the IRS's interpretation of the tax credit and its future use by community solar subscribers**



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