



# Community Solar: Overview of Project Model Types & Considerations

A nighttime photograph of a city skyline with various skyscrapers and buildings illuminated against a dark blue sky. The lights from the buildings create a bokeh effect in the foreground.

**NLC** NATIONAL  
LEAGUE  
OF CITIES  
CITIES STRONG TOGETHER

# About SolSmart

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- **Funding**
  - US Department of Energy (DOE) funds SolSmart through its SunShot Initiative
- **Goal**
  - Designate 300 US communities as a SolSmart community by October 2018
- **Designation**
  - SolSmart nationally recognizes local solar achievements by designating communities SolSmart Gold, Silver, or Bronze
- **Technical Assistance**
  - To help local governments that might currently lack necessary resources or knowledge achieve SolSmart designation, or to help communities pursue a higher level of designation

# Community Solar Business Models

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- **Primary actors:**
  - Solar developer
  - Electric utility
  - Financier
  - Participant
- **3 general types of community solar business models**
  - Utility-sponsored
  - Solar developer-sponsored
  - Non-profit and other community-based organizations
- **Considerations**
  - Who owns the project?
  - Who administers the program?
  - How does the customer pay?

# Who owns the project?

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- **Individual community members/participants**
  - Participants own some panels or a share (e.g. 5kW) of a project
  - Similar to purchasing rooftop system
  - Can limit participation – upfront capital or credit rating
  - Challenges with using the ITC depending on tax liability (SPE)
- **Third party**
  - Subscription model
  - Developer retains ownership
  - Third party financier
- **Local electric utility**
  - Subscription model

# Who administers/leads the program?

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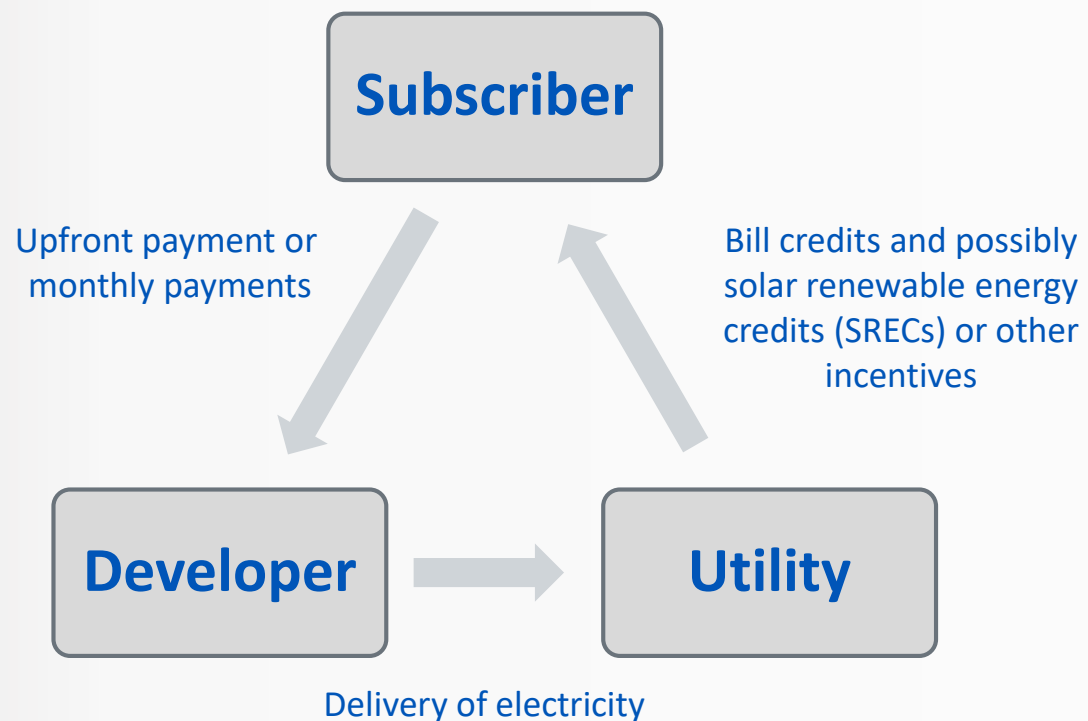
- Third party on behalf of individual community members
  - Non-profit
  - Other community organization
- Third party solar developer
- Local electric utility

# How does the customer pay?

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- **Ownership**
  - Up-front payment
  - Structured payments over a set timeframe
- **Subscription structures**
  - One time up-front payment
  - Monthly pay as you go

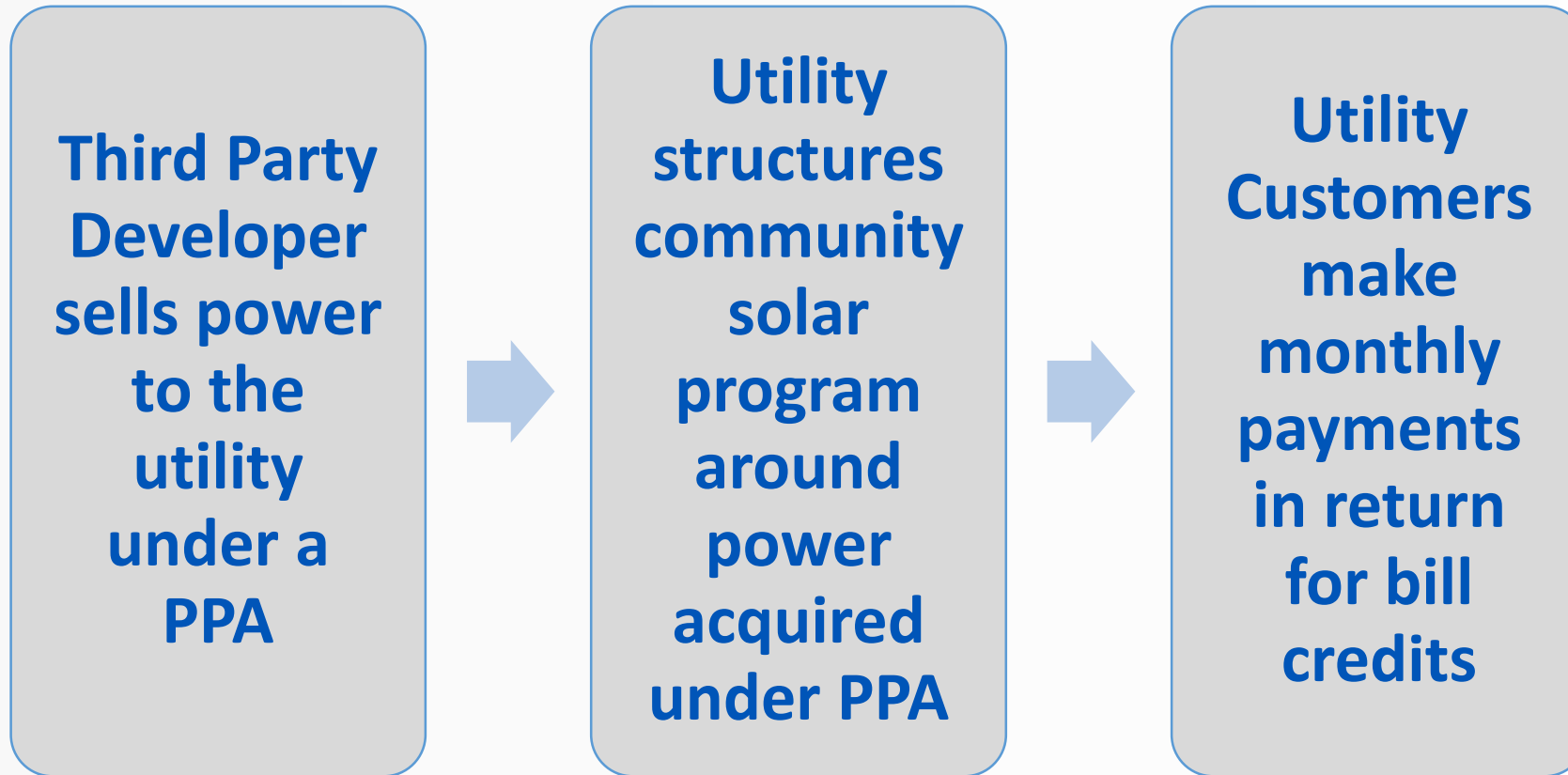
# Developer/Third party-sponsored



## Example of Program Variables:

- SREC treatment
- T&D charges
- Transferability
- Minimum subscription times
- Minimum number of subscribers (e.g. 10)
- Low income participation (e.g. 5%)
- Maximum subscription size (e.g. 40%)
- Unsubscribed power

# Utility-sponsored



**Utility can also install the project itself and develop a community solar program**



## Ex: Lafayette, CO

- 2 – 500kW PV Projects – Ground mount
- Xcel's Solar Rewards program
- Xcel purchases electricity and RECs
- Subscribers receive monthly bill credit
- Developer/financier owns and operates the system



## Ex: Orlando, FL

- 400 kW PV Project – Canopy
- Subscriptions: 1 to 15 kW
- Cost: \$0.13/kWh, fixed
- Solar rate roughly \$0.015-0.025/kWh more than retail rates but fixed for up to 25 years.
- \$50 deposit, refundable after 2 years provide good credit rating
- 2-year minimum participation
- Expanded offering with 12 MW array



## Ex: Rocky Mountain Power, UT

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- 20 MW PV Project – Ground mount
- Subscriptions: 200 kWh/month blocks
- Cost: \$0.117/kWh, fixed
- RMP summer peak demand is \$0.145/kWh
- Up to 20 year subscription
- Termination fee if less than 3 years

## Ex. Fremont, NE

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- 1.55 MW PV Project – Ground mount, under construction
- Fully sold or subscribed
- 2 kinds of subscriptions
  - Panel (315-watt panel) purchase upfront at \$180 each (participant ownership)
    - \$0.03/kWh maintenance fee for 20 years
    - Customers can receive 30% ITC
    - Up to 80% of customer's total consumption
  - Block subscription of the project's monthly energy output
    - 150kWh blocks for \$0.06/kWh fixed for 20 years
    - \$0.01 higher than current rate

# Things to consider when selecting a model

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- **Financing structure:**
  - Bank loans
  - Third party investors – monetize tax benefits (ITC)
  - Grant funding
  - Community members/Subscribers
- **Location:**
  - Specific offerings limited to utility service area
- **Low to Moderate Income component**
- **Ease of customer acquisition**
- **Building the waitlist**

# Local gov't considerations

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- Do you have transparent processes and clear guidelines?
- Are you prepared to permit a community solar array?
  - What permits are necessary?
- How is community solar zoned?
  - Do you have a planning and zoning pathway to approve an array?
- Help identify and/or provide land
  - Brownfield
  - Rooftops of municipal buildings
  - Canopies
- Support customer acquisition efforts