Community Solar Gardens

Webinar: Is a CSG subscription right for your local government?
July 25, 2016
Statewide Partnership & Collaboration

Regional Sustainable Development Partnerships

University of Minnesota Extension

Minnesota Department of Commerce
Division of Energy Resources

GREAT PLAINS INSTITUTE

SRDC
CERTs Mission: Connect individuals and their communities to the resources they need to identify and implement community-based clean energy projects.
What we’ll cover

1. Community Solar Garden Overview
2. Subscription Pricing Risk and Savings: Evaluating pricing in Xcel’s program
3. Understanding Contracting Terms
4. Your Questions – throughout 😊
5. Recap of Resources and Tools

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Community Shared Solar: Cliff Notes

Point to yours!
Community Solar Gardens

Definition: Centrally-located solar PV systems that provide electricity to participating subscribers.
Xcel Program Rules (In Brief)

- **Subscribers...**
  - May cover up to 120% of annual electricity usage
  - Must be in same or adjacent county to the garden

- **Gardens...**
  - Max size 1 Megawatt = 5-8 acres
  - No limit on # of gardens
  - 5 subscribers minimum (5,000 maximum)
  - No subscriber > 40% of garden output (your allocation)
Why local governments as subscribers?

Local governments make good “anchor tenants.”

- Good credit
- Stable, secure customers
- Larger loads

Image source: tattoos.org

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How does it work?

3rd Party Operator develops & runs garden. Maintains relationship w/ subscriber for payment. Utility provides subscriber w/ bill credit.

Xcel Energy Program

**OPERATOR:** primary group running the solar garden

**SUBSCRIBERS:** individuals or groups to get solar power

**UTILITY:** approves garden, tracks production, provides credit.

[Source: mncerts.org/solargardens]
How much does it cost?

$/kWh

Bill credit rate

Set annually by Public Utilities Commission, based on average electricity prices

$/kWh

Subscription rate

Set by developer, explained in contract

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## 2016 Bill Credit Rates and Renewable Energy Credit (REC) Payments

<table>
<thead>
<tr>
<th></th>
<th>Residential Service</th>
<th>Small General Service</th>
<th>General Service</th>
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<tbody>
<tr>
<td><strong>Standard Rate</strong></td>
<td>$0.12596 /kWh</td>
<td>0.12229</td>
<td>0.09740</td>
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<tr>
<td><em>(Applicable Retail Rate)</em></td>
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<tr>
<td><strong>Standard + $.02 REC Payment</strong></td>
<td>$0.14596 /kWh</td>
<td>0.14229</td>
<td>0.11740</td>
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<td><em>(gardens &gt; 250 kW)</em></td>
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RECs in brief

A renewable energy certificate (REC) ... represents the property rights to the environmental, social and other non-power attributes of renewable electricity generation.

RECs are issued when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource.

Credit: https://www.epa.gov/greenpower/renewable-energy-certificates-recs
REC in brief

This certificate represents the annual purchase of 1,000 kWh of renewable energy credits from Renewable Choice Energy on behalf of Trevor Drake. This purchase helps to save up to 1,123 lbs CO2.
Example Claims for a Solar Panel Owner or Leaseholder

Example 1
- Keeps and retires RECs and is the only party to make claims about using the renewable energy.
  - Claim: “We use renewable energy.”

Example 2
- Does not own the RECs and makes public claims about using renewable energy.
  - Claim: “We use solar power.”
  - DOUBLE CLAIM

Example 3
- Keeps the RECs but a third party (such as a utility) makes a public claim about delivering the renewable energy to other customers, such as through a renewable portfolio standard.
  - Utility Claim: “All solar installations in our territory contribute to our state requirements to deliver renewable energy to consumers.”
  - DOUBLE CLAIM

Example 4
- Does not own the RECs but makes clear, accurate, and prominent statements about who owns the RECs.
  - Claim: “We host a solar PV system, and sell the renewable energy to other parties.”

Source: Center for Resource Solutions
How much does it cost?

$/kWh  
Bill credit rate  
Set annually by Public Utilities Commission, based on average electricity prices

$/kWh  
Subscription rate  
Set by developer, explained in contract

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Pay-as-You-Go

Subscriber pays Developer/Operator every month for 25 years and receives bill credit from utility every month.

Ideally, monthly payment is tied to production.
Pay-as-You-Go
Common Pricing Structures

1. Flat rate
   (monthly payment constant)

2. Rate with escalator
   (monthly payment increases each year)

3. Percent Discount from Bill Credit
   (monthly payment is X% less than bill credit)

4. Monetary Discount from bill credit
   (monthly payment is $X less than bill credit)

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How much does it cost?

Bill credit rate
Set annually by Public Utilities Commission, based on average electricity prices

$0.11

Subscription rate
Set by developer, explained in contract

$0.10

Yearly Cost/Savings = (# kWh produced) x (Bill Credit Rate – Subscription Rate)
2017 Payments to change

• Public Utilities Commission: 13-867

• Formal decision anticipate this Fall 2017

• Future projects to include customer bill credit at the Value of Solar rate

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Now for the real question...

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Imagine...

You have been asked by Loon Lake City Council to look into solar garden subscriptions for Loon Lake City Hall, because the City has a goal of eventually offsetting the building’s energy use with 100% renewables.
Let’s issue a Request for Proposals!

• City hall uses 100,000kWh annually per year
• Pay-As-You-Go pricing only
• Willing to sell RECs for better pricing

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Fun in the $UN! $ .1395/kWh

Soleil, Eh? $ .1220/kWh, Increase 1% per year

Polar Solar Always $ .01 less than bill credit
Opportunity Cost...

- Market improves
- Technology improves
- Program design changes
- New renewable energy programs
Fun in the SUN!  
$0.1395/kWh

Soleil, Eh?  
$0.1220/kWh, Increase 1% per year

Always $0.01 less than bill credit

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Details, details, details

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Subscriber Agreement: What does it cover?

- Term
- Operation of the Facility
- Allocation
- Price & Payment
- Records & Audits
- Taxes
- Representations, Warranties and Covenants
- Performance Guarantee
- Default and Force Majeure
- Remedies & Limitation of Liability
- Early Termination
- Assignment
- Miscellaneous

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Termination!

• If something goes wrong:
  – “In the event that the Commercial Operation Date is not achieved by December 31, 2017...either party may terminate this agreement without liability”
    • Interconnection issues with Xcel
    • Disqualified from the Xcel program
    • Developer isn’t able to obtain financing or “adequate” subscriptions

• Subscriber backs out:
  – Subscriber owes the unpaid monthly allocation payments due at the time of termination
  – Subscriber pays actual, reasonable, and verifiable damages resulting from breach

• Developer Fails to Perform
  – Force Majeure (Unforeseen extraordinary event e.g. Act of God, War, Crime)
  – Breach of Contract

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Assignment

• Puts conditions on transferring the agreement
• Owner can transfer if:
  • Company has same or better credit strength.
  • Agrees in writing to subscriber’s rights under agreement
  • Agrees to comply with all terms
• Subscriber can transfer under certain conditions

Data Practices

• Subscriber Agreements are not intellectual property
Insurance

LMC Recommendations

- At least $1 million in Commercial General Liability (Prefer $2 million)
- City endorsed as an additional insured.
- Contractor requirement to defend and indemnify the city if the contractor’s negligence injures a third party and the city gets sued.

- *Is the company self-insured?* This may increase risk that the company might not be able to fulfill its indemnification obligations.
- *Does the agreement require binding arbitration?*
  - League discourages this due to expense and often are less favorable.
- *Is there a limitation on liability?* Some agreements limit liability to a certain dollar amount or an amount based on some formula which might be substantially less than the damages suffered by the city.
- *Does the contract prohibit a local government from recovering any special, consequential, incidental damages, etc.?*
  - Limits the local government’s available remedies.
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Wrapping up

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Resources for more info

- Subscriber Agreement Disclosure Checklist
- Questions Subscribers Can Ask of Operators
- CSG Tips for Subscribers

- Subscriber Financial Decision Tool
- Local Government CSG Toolkit
- CSG Tips for Communities

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CERTs: Minnesotans Building a Clean Energy Future

QUESTIONS?

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