

Business Item: 2016-235:

Unsolicited Community Solar Garden (CSG) Subscription Agreements

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Council Sustainability

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Environment Committee: November 29, 2016



Proposed Action

- That the Metropolitan Council authorize its Regional Administrator the discretion to sign or delegate the authority to sign unsolicited Community Solar Garden (CSG) subscription agreements with developers that meet the Council's defined parameters as shown in Attachment A of the business item.

Overview of Presentation

- Background/Context of Community Solar Gardens
- Review Parameters for Accepting CSG Subscription Offers
- Proposed Action Before the Environment Committee

What is a Community Solar Garden?

- Solar photovoltaic system that provides clean renewable Minnesota electricity to the electric utility.
- Provides subscription opportunity for utility customers to support solar development, and participate financially, without building and managing it on their own properties.

Who participates in a Community Solar Garden?



Solar Developer/Owner

Primary group organizing the solar garden.



Electric Utility

Electricity provider where the garden is installed.



Subscribers

Individual entities (utility customers).



METROPOLITAN
COUNCIL

Flow of Power from a CSG



Community Solar Garden
No larger than 1MW



Flow of Power



Utility Grid



Utility Customers

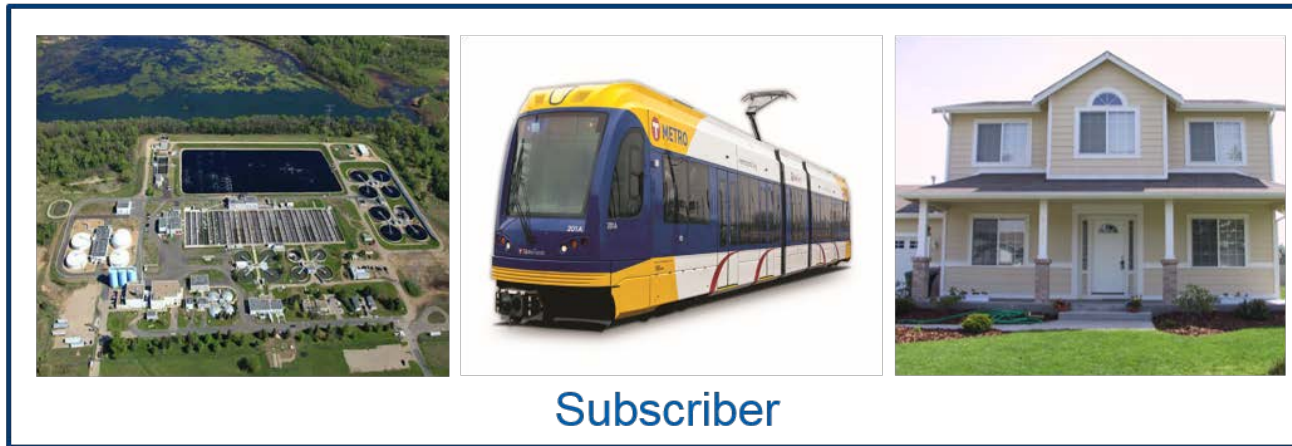
Flow of Dollars from a CSG



Community Solar Garden
Owner/Operator



Electric Utility



Subscriber

Relationship of Participants



Community Solar Garden Versus Behind the Meter

Characteristics	Behind the Meter	Community Solar Garden
Power flow from solar array	to customer facility	to utility grid
Agreement with developer	Power Purchase Agreement	Subscription Agreement(s)
Effect on our electric bills	facility purchases less energy from utility avoids retail electric cost (\$ per kilowatt hour) at site	utility credits customer for subscription to CSG credits in dollars (based on Public Utilities Commission rules)
Location of solar array	on customer property, (where load is located)	Anywhere in County or adjacent County

Subscription Agreement

Contract between developer/owner and subscriber that defines

(at a minimum):

- Location of garden;
- Customer account(s) acting as the subscriber;
- Size of subscription (usually %);
- Price (or price formula) of subscription;
- Legal relationship between parties;
- Data Practices & Auditability Minnesota requirements; and
- Termination clause for each party

Council Benefit of Subscribing

- Financial (benefits rate or tax payers)
 - Across **all** agreements, positive net cash flow every year by 2018
 - Positive net present value (today's dollars estimate) for each contract
- Environmental
 - Advancement of renewable energy
 - Increased energy self sufficiency for Minnesota
 - Reduction in climate and air emissions and other pollution
- Regional Social/Economical
 - Reduction in millions paid for fossil fuels
 - Creation of jobs to support the construction of solar arrays
 - Property taxes or (in lieu of taxes)
 - Economic multiplier from all of above

Council's Proposed Review Parameters

1. Total CSG subscriptions will not exceed one-third the equivalent of a division's total electricity load;
2. Business reason that time is of the essence;
3. Positive net present value and aggregate cash flows;
4. Meets Council policies and procedures;
5. Legal terms are acceptable; **and**
6. Agreements offered to the Council require little to no contract negotiations.

Why only 1/3 of the electricity load?

- Participation enough to have impact
- Includes enough to take advantage of all offered now
- Remaining Capacity free for future opportunities

How much is 1/3 of the electric load?

- MCES = 30 Megawatts (MW) of solar subscriptions
 - Current signed subscriptions = 10 MW
 - Current offers awaiting review = about 10 MW
- Transit = 25 MW of solar subscriptions
 - Current signed subscriptions = 7.6 MW
 - Current offers awaiting review = 0 MW

Calculating the Financials

- Subscription price
 - May be fixed or
 - May escalate over time, or
 - May be a discount off of bill credits
- Utility Bill Credits
 - Formula is approved by the Public Utilities Commission
 - Formula fixed, but inputs vary based on utility rate changes
- Positive Net Present Value & Cash Flow
 - Must provide **savings** - in today's dollars - for rate/tax payers
 - Initial years may or may not result in negative cash flow, but aggregate will be positive in every year

Financial Illustration

Met. Council's CSG Illustrative Financial Net

Year	Actual Dollars			
	Solar Payments \$'s /year	Bill Credit \$'s /year	Net Benefit (\$s)	Annual \$/ Rate Payer*
0	130,000	117,400	(12,600)	(\$0.007)
1	129,350	119,909	(9,441)	(\$0.006)
2	128,703	122,471	(6,233)	(\$0.004)
3	128,060	125,088	(2,972)	(\$0.002)
4	127,419	127,760	341	\$0.000
.....				
23	115,844	190,922	75,077	\$0.037
24	115,265	195,001	79,736	\$0.038
25	114,689	199,168	84,479	\$0.040

*Residential equivalent connections used to determine the number of rate payers.

Illustrative NPV \$466,000



Council Policy and Procedures

- Environmental Sustainability Policy 1-2
- Sustainability in Energy Use and Emissions Procedure 1-2a
- Community Solar Garden Procedure 1-2e

Disadvantaged Business Policy

- Policy and procedures do not apply
 - Council is not procuring or contracting a good or service

Proposed Action

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Questions