Solar Funding Options
Solar Energy

Minnesota has a good solar resource
- More sunny days than Houston
- Distributed well across the state
- Cool weather can be an asset
- Matched fairly well with electric utility peak loads
Solar Energy

Photovoltaic
- Converts sunlight into electricity
- Proven technology is long-lived and reliable, but efficiency is still fairly low
- Cost is declining with manufacturing economies of scale

Financial Incentives
- Net metering
- Minnesota sales tax exemption
- Statewide rebate
- Utility-specific rebates and production incentives
- Federal tax credit
Solar Energy

Solar Thermal
- Captures and stores heat from sunlight
- Proven technology is reliable, but good design in cold weather areas is critical
- Higher efficiency and better cost effectiveness than PV

Financial Incentives
- Minnesota sales tax exemption
- Federal tax credit
Photovoltaic Incentives

- Net Metering
- Minnesota sales tax exemption
- Statewide Rebate

power from the sun
Rebates that Shine!
Photovoltaic Incentives

- Net Metering
- Minnesota sales tax exemption
- Statewide Rebate
- Utility-specific rebates or production incentives

Minnesota Power
- $2,000/KW
- Up to 2 KW

Rochester Public Utilities
- "Solar Choice" Production Incentive

Great River Energy
- $2,000/KW
- Up to 2 KW
Photovoltaic Incentives

- Net Metering
- Minnesota sales tax exemption
- Statewide Rebate
- Utility-specific rebates or production incentives
- Federal tax credit

2005 Federal Energy Bill
- Tax Credit, not a deduction
- 30% of project cost
- $2,000 cap per household
- Expires with 2007
Solar Thermal Incentives

- Minnesota sales tax exemption
- Federal tax credit

2005 Federal Energy Bill
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$6.5%
## Solar Financing Examples

Example: 2 kilowatts in Duluth or Minneapolis purchased and installed by a solar dealer in 2006

<table>
<thead>
<tr>
<th></th>
<th>Individual</th>
<th>Business</th>
<th>Non-taxable</th>
<th>Individual</th>
<th>Business</th>
<th>Non-taxable</th>
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<tbody>
<tr>
<td>Initial Cost</td>
<td>$17,000</td>
<td>$17,000</td>
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<td>State Rebate</td>
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<tr>
<td>Utility Rebate</td>
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<tr>
<td>Federal tax credit</td>
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<td>-$2,000</td>
<td>-$3,651</td>
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<tr>
<td>Sales tax*</td>
<td>-$829</td>
<td>-$829</td>
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<td>-$829</td>
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<tr>
<td>Depreciation**</td>
<td>-</td>
<td>-$2,002</td>
<td>-</td>
<td>-</td>
<td>-$2,982</td>
<td>-</td>
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<td>Final Cost</td>
<td>$6,171</td>
<td>$3,718</td>
<td>$9,000</td>
<td>$10,171</td>
<td>$5,538</td>
<td>$13,000</td>
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<tr>
<td>Cost Reduction</td>
<td>-64%</td>
<td>-78%</td>
<td>-47%</td>
<td>-40%</td>
<td>-67%</td>
<td>-24%</td>
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<td>Electricity Produced</td>
<td>~2,200 kWh/yr (less with shading)</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Savings</td>
<td>$100 - $250/yr (rates, taxes, &amp; fees vary by utility &amp; location)</td>
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<td></td>
<td></td>
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</table>

* Assumes 75% of total costs are subject to 6.5% sales tax

** 35% federal tax bracket less rebates, sales tax exemption, and tax credits; no MN tax saving included.
Thank You!
Community Solar Projects!
What is Community?

Community is broadly defined to mean any group of people with a common interest who can be organized to willingly achieve a common goal. Examples of communities include the following:

- Church congregations
- Neighborhoods
- Non-profit organizations
- Public or private schools
- Block clubs
- Ad hoc groups of individuals
What is “Community Solar”?

- Community solar energy projects are defined by the involvement of the local or regional community in planning, organizing, funding, installing, and/or enjoying a solar energy system.

- Community solar is about neighbors, customers, and members coming together to make a local solar energy system a reality.

- Community solar is about marshalling an investment by a community of like-minded individuals, not just a single property owner.
Why a Community Solar Project?

• Solar energy is a community-based fuel – delivered everyday, to every community, and always for free
• Distributed solar energy systems support the community electric distribution system during times of peak usage
• Solar systems are powerful visible symbols of investing in the future
Types of Community Solar Projects

- Private businesses that host a community system
- Non-profit community institutions that organize members and interested parties to invest in a common solar system
- Organizations that facilitate solar investment by a community
- Church congregations seeking to be better stewards of our natural resources
Creating a Community Solar Program

- Can the solar system sponsor serve as a fiscal agent for donations or sponsorships?
- Who manages the bidding process and oversees the general contractor?
- Are volunteers going to be used to install portions of the system to keep costs down?
- How are sponsors going to be acknowledged?
- How does a community institution create an outreach or marketing effort to generate contributions or sponsorships? What materials or promotions are most effective at getting community members to sponsor the system?
Creating a Plan

- Identify your desired future condition
- Identify the long and short term interim steps that lead you to your desired future condition
- Identify the tools or methods by which you will take the steps that lead you to your desired future condition . . .

Pictures from www.oldmanriver.com
Creating a Plan

Where are we going?

How will we get there?
Where are we going?

Goal - Building or strengthening the community

Goal - Creating a new renewable energy source

Goal – Creating renewable energy advocates
Elements of a Community Solar Plan

- Organization
- Motivation and Promotion
- Physical Design and Installation
- Fundraising, Financing, Incentives
- Continuously Claiming and Giving Credit
Recognizing Organization
Assets and Barriers

- **Identify key organizational decision makers.** Each organization or community has unique structure. Your plan must identify:
  - who must sign off on the plan, and in the implementation effort.
  - who must become an advocate within the community for the project in order for the project to succeed.

- **Identify inter-organizational relationships.** Some projects involve one community or organization, while others are multi-organizational. Your plan must identify:
  - What organizations need to sit at the table to form the plan
  - What organizations need to be part of the implementation process?
Motivation and Promotion

A community solar project needs to build community along with a solar system. How does a community solar project serve your organization’s mission? Your plan answer the following questions:

- Why should people from your community should be motivated to participate, to fund, and to become advocates for solar energy?
- What are the links between why people are part of your community or organization, and the benefits of solar energy.
- How can you promote your project in the language of your community?
Physical Design and Installation

A wide variety of choices will need to be made regarding the location, design, type, and installation method for the solar system. Physical design decisions affect the other aspects of your plan:

- How will the community react to the appearance of the system? Does it add to or detract from the building?
- Will the system be on your property or somewhere else? Where should it be located on the building site?
- What type of system (PV or thermal) fits your community’s motivations or avoids hesitations?
- Can you use volunteer labor to build both the system and your community? Do you have experience managing volunteers?
How does a community fund or finance its solar investment? Financial choices are driven by several factors. In planning your project you need to consider a variety of funding/financing questions, including the following:

- Organizational status - Is the community organization tax exempt?
- Project partners - Will the installation be on a private business?
- Internal resources – can the community raise funds up front, or does the community need to finance the project?
- External resources – are there utility rebates or technical assistance? Foundations or other grants that fit your project?
Continuously Claiming and Giving Credit

Once the project is up and running, the project leaders must claim credit and give credit in order to continue to build the community aspect of the solar project. The project should include a plan to remind community members of their ownership and success.

- What means can the community or organization do recognize volunteers and contributors once the installation is done?
- What can the community do to remind people of their ongoing participation in stewardship, self-sufficiency, and in creating environmental benefits?
- What can the organization do to periodically claim credit for the successful installation and operation of a renewable energy system?
Thank You!