

Dialogue and Deliberation Guide for Facilitator: Solar Energy

Connections Prompt

In this opening exercise, invite every member of the group to share a personal story related to these prompts. A person may choose to pass, but everyone should be attentively listening to who is sharing without interruptions.

- Tell us about your conceptions of renewable energy
- What do you think of when you think of sunshine?
- Some Christians have taken to calling solar power “energy from heaven.” How does switching to solar energy connect to your faith?

Climate Change Background

The facilitator may read this short summary or ask a volunteer from the discussion group to read the same paragraph from their own handout.

Our planet is warming at a rate that concerns scientists. Tree rings, ocean sediments, coral reefs, and layers of sedimentary rock provide ancient, or paleoclimate, evidence revealing that current warming is occurring roughly ten times faster than the average rate of ice-age-recovery warming. There is scientific consensus that this warming rate has been accelerated by human activities, including burning fossil fuels, deforestation, and anything that releases carbon dioxide and other greenhouse gases into the atmosphere.

Evidence of this rapid change include a global temperature rise of 1.62 degrees Fahrenheit since the late 1800s, decreased mass of ice sheets and northern hemisphere snow cover, increased extreme weather events, and the rise of global sea level by 8 inches in the last century. NASA has predicted dangerous effects due to this rapid change, including increased frequency and danger of hurricanes and heavy rain events, higher temperatures that bring droughts and heat waves, sea level rise, and disruption of agriculture.

However, there are also ways to mitigate the effects of these events. One of the primary ways is to reduce the emission of greenhouse gases, like carbon dioxide, into the atmosphere. This can be accomplished through reducing burning fossil fuels and turning to renewable energy sources such as solar, wind, nuclear, and hydroelectric power.

Questions for Discussion

The facilitator should read the questions and open up the table for discussion after each question. Be careful to allow time for multiple voices to speak to these prompts.

1. Have you heard any of the information discussed above before today? Is there any information that sticks out to you?
2. Have you discussed any of these issues within a religious context? If so, what did you discuss? If not, how do you think climate change issues should interact with discussions of faith in this congregation?

Option #1 - Rooftop Solar Panel Installation

Having solar panels on the roof shows that Augustana is dedicated to reducing their carbon footprint. There are many options associated with installing solar panels on the roof of Augustana which gives flexibility and allows for Augustana to generate and consume renewable energy while obtaining the maximum financial benefits. The cost of installing solar panels has decreased every year since 2009, a trend that is expected to continue. In comparison, the price of utility electricity is expected to increase. Generally, rooftop solar panels can be divided into two categories, Ownership of solar panels or leasing of solar panels.

Ownership

A. Paying the full upfront cost of the solar panels

Advantages	Disadvantages
Generate free electricity for the entire life span of the panel	Paying the full upfront cost of solar panels is often difficult for nonprofits
	Tax incentives are not received. For example, the 30% federal tax credit cannot be received by Augustana.

B. Solar loan: You can receive a loan to pay for the solar panels, and make payments over time.

Advantages	Disadvantages
Augustana will still own the solar panels, but the payment will be spread out.	Interest rates may increase the overall price Augustana will pay for the solar panels
	Tax incentives are not received

Solar lease/ Power Purchase Agreement (PPA): With this option the company you lease the solar panels from will own the solar panels on your roof. The owner will receive any tax breaks, rebates, and financial incentives, and you will pay for the solar energy.

Advantages	Disadvantages
Standard agreements allow you to buy the solar panels at any time if you wish.	It can take a very long time to enter into a PPA.
This option could result in cheaper energy, because the solar panel owner will . . .	You will pay a monthly fee.

receive tax breaks and financial incentives that will be factored into the monthly payment.	
Augustana will not be responsible for any repairs or maintenance.	The congregation will not own the solar panels.

Questions for Discussion:

The facilitator should read the questions and open up the table for discussion after each question. Be careful to allow time for multiple voices to speak to these prompts.

1. Are there any obvious advantages or disadvantages of panel installation that stick out to you?
2. Does owning solar panels or leasing solar panels seem to be a better option for Augustana?
3. What are some of the first steps Augustana should take to implement this option?

Option #2 - Solar Garden participation

Another way to engage in powering your church building (or any building) with solar panels is to invest in a solar garden. Solar gardens are extensive collections of solar panels that belong to a municipality or community, allowing community members to make use of solar energy without making a major up-front investment through installation. The basic idea is that members who choose to partake will pay or “subscribe” to the solar garden on a monthly basis, the same way you would pay a utility bill. Through a process known as virtual net metering, the church is given credit on their electricity bill for their share of solar power that is fed back to the grid by the community solar farm. The garden will then provide members with a portion of the power it is producing each month. The panels and associated equipment are owned by either a third party or by the community itself. This type of engagement promotes community collaboration on a larger scale, potentially allowing the garden to expand and benefit other members who want to make use of solar energy but are unable to install panels on their personal property.

Approximately 50% of all homes in the United States are unsuitable for panel installation due to lack of sunlight from orientation or shade, so community solar avoids this issue altogether.

Advantages	Disadvantages
Community solar options require no installation or maintenance on the part of the member, meaning there are fewer associated expenses and efforts involved. It is a very more accessible option.	Is not as tangible of an investment; given that the physical location of the solar panels would be further removed from the church

It will not affect the aesthetic of the church or cause any spatial inconvenience during installation.	
The larger the solar panel installation, the cheaper the price per kilowatt to produce and use the energy.	Will not have the same long-term monetary benefits as installation because you cannot benefit from incentives and payoffs
Spread awareness about solar throughout the community	Not tied as directly to the church, a step removed through the community solar
Minnesota is one of the few states that offers virtual net metering, which would reduce electric bills	

Questions for Discussion

The facilitator should read the questions and open up the table for discussion after each question. Be careful to allow time for multiple voices to speak to these prompts.

1. What sticks out to you when you think about how community solar compares to panel installation? Are there any obvious significant disadvantages or advantages that sway you?
2. For the congregation, what options does community solar present for being engaged with the community at large beyond the church?
3. What are some of the first steps Augustana should take to implement this option?

Closing Discussion Questions:

1. Based on what you discussed today, how can you take action as an individual or as a congregation?
 - Can you commit to taking steps?
2. How can this group commit to showing the larger congregation why and how they made this decision?
 - What are the ethical and religious reasons? Why should the congregation be committed to this decision?
3. How can our congregation continue to engage with issues centered around renewable energy and climate change?
4. How will the committee engage the congregation with the financial obligations of the transition to solar energy?