Executive Summary

This document summarizes the results of a social and economic feasibility study of community solar in L’Anse, Michigan. The goals of the study were to determine a) whether L’Anse utility customers would be likely to buy shares; and b) how to best design an accessible, affordable program for L’Anse residents and businesses. The study team reviewed multiple existing community solar projects for best practices, investigated costs and various economic scenarios, and conducted a community-wide survey, interviews with key informants, and focus group discussions in L’Anse.

Findings show that L’Anse customers do support the Village moving forward with a community solar program and that customers may be willing to purchase enough shares to support a 100kW system. The environmental and community benefits are as important as making a financial return; but the financial benefits to shareholders should outweigh the costs. There are significant affordability concerns and considerations that need to be taken into account. L’Anse customers will require options with low upfront costs and easy no-interest financing. The project would benefit from a lower price per unit and increased affordability if a 100 kW system, rather than a 50kW system, were built; but it would be imperative to gain commitment from one or more anchor customers who are interested in purchasing approximately half of available shares.

The research team makes the following additional program design recommendations.

1. We recommend selling 400 shares in a 100kW system with a program length of 25 years. This amounts to about 250W per share, somewhat less than 1 solar panel. Each share would be expected to produce about 285kWh ($27 worth) of electricity each year.

2. Partnering with one or more anchor customers who are interested in purchasing a large number of shares in order to increase the project size to 100 kW while reducing the risk that shares wouldn’t sell.

3. Working with a private developer would allow L’Anse to reduce costs by taking advantage of tax credits. We recommend selecting a local/regional based developer to keep the project as close to the local community as possible.

4. Creating a participant’s board to make decisions about program design, partnerships, choosing a developer, marketing, and overseeing implementation could increase community buy-in and maintain trust and local control.

5. There should be a clear and easy-to-follow plan for transferring shares from one customer to another in case a customer moves out of the service area, passes away, or otherwise leaves the program.

6. Allowing people to donate shares to non-profit organizations that do community-based work (including schools, churches and social service organizations), which could increase the community impact and help to market the project. It could also mean that such share purchases would be eligible as a tax write-off if donated to a non-profit.

7. Offer a worker-coop model such that one or more community members could work to support the project in exchange for shares.

8. Offer energy efficiency participation incentives and explore possibilities to integrate energy efficiency programs with the community solar program.
9. Offer multiple purchasing program options to customers, including options with little to no upfront cost and 0% interest on-bill financing, with eligibility determined by utility payment history. The team explored several options, all of which would generate excess funds for customers, while allowing the Village to pay for the solar system without impacting electric costs for whose who don’t choose to subscribe. We recommend the Village offer some combination of options similar to these for purchase plans.

<table>
<thead>
<tr>
<th>Financial Model</th>
<th>Payment Plan for Shareholders</th>
<th>Estimated Years to Payback per Share</th>
<th>Estimated Savings Over Program Length ($)</th>
</tr>
</thead>
</table>
| Option 1: Pay Upfront (25 years) | - Upfront payment of $375  
- Estimated annual credit of $27 | 13.9 | 300 |
| Option 2: Pay Upfront-Full, Shorter and Recontract Program Options | Full Program (25 years)  
- Upfront payment of $375  
- Estimated annual credit of $27 | 13.9 | 300 |
| | Shorter Program (5 years)  
- Upfront payment of $110  
- Estimated annual credit of $27 | 4.1 | 25 |
| | Recontract Program (20 years)  
- Upfront payment of $300  
- Estimated annual credit of $27 | 11.1 | 240 |
| Option 3: Minimal Down Payment plus On-Bill Financing (25 years) | - Upfront payment of $25  
- Monthly payment of $3 (10 years)  
- Estimated monthly credit of $2.25 | 14.2 | 290 |
| Option 4: No Down Payment- Full Financing (25 years) | 10 year Payment Plan  
- No upfront cost  
- Monthly payment of $3.50  
- Estimated monthly credit of $2.25 | 15.5 | 255 |
| | 25 year Payment Plan  
- No upfront cost  
- Monthly payment of $1.50  
- Estimated monthly credit of $2.25 | 0.0 | 225 |