

## ATTACHMENT II: EP4-15 Quarterly Updates (2017-2018)

Fourth Funding Cycle –Project Status and Progress

EP4-15: Minnesota Renewable Energy Society (1.0 MW<sub>DC</sub> Solar Garden Pilot)

Start Date: February 17, 2015

Grant Amount: \$2,661,320

End Date: May 17, 2017

Funds Invoiced: \$0

**Project Summary:** The goal of this project is to install 1,000 kW<sub>DC</sub> solar PV capacity and demonstrate the concept of collective Solar Garden ownership as a way to increase the penetration of solar renewable electric production in Minnesota.

### 2017

**First Quarter Activity:** In partnership with the Little Earth Youth Build Program, MRES submitted a SunShot Solar application for the urban array to be used as a philanthropic program model for low-income peoples. The model would have at-risk youth learn and then educate their communities on solar and its potential along with an energy efficiency program to show community member how to save energy while saving money. An interconnection study with Xcel Energy has been initiated at both the urban and rural sites. Soil testing, early negotiations with vendors, engineering, and site planning have also been started. Various research ideas have been discussed as to what would yield the most valuable data on outcomes relative to the best low income model. The goal is to validate a replicable model for low income subscribers which can be of value to developers, investors and communities. A minor contract modification requiring administrative approval was made to reflect a change in the Project Manager. On January 30, 2017 a no-cost contract amendment was executed (see Attachment B) to modify the name and contact information of the Project Manager in Exhibit D of the RDF grant contract. The modification was made and approved according to procedures stipulated in Part 4, Paragraph C of the RDF grant contract EP4-15.

**Second Quarter Activity:** During this quarter initial site evaluations were done using LIDAR [surveying technology] to begin drafting preliminary designs. A 386 kW<sub>DC</sub> urban array will be a roof-mount photovoltaic system with a ballasted racking system at a 10% tilt directly facing south. A 614 kW<sub>DC</sub> rural array will be a fixed position, ground-mount system and use helical. A cost-benefit analysis was done regarding a fixed vs. seasonal tilt racking system for the rural array. With newer, higher output panel choices the decision was been made that the fixed system is the best choice since it will eliminate any possibility of malfunction with the seasonal tilt mechanics. MRES has requested from several vendors a request for quotes for installation and technical equipment to determine installation options. Applications for interconnection studies were submitted during April for both the urban and rural arrays. Final solar site evaluations will be completed after all documentation are signed and the interconnection studies are complete. MRES expects 90% of the capacity will go to low-income subscribers. Low-income model research is being conducted as to the most effective strategy to engage and motivate participants.

**Third Quarter Activity:** During this quarter, review of the interconnection applications proceeded. Other project activity was primarily administrative in nature pertaining to negotiations regarding contract modifications. An amendment to the project has been negotiated which would allow third party ownership to allow MRES to access tax credit financing and would also allow MRES to use the Community Solar Garden (CSG) pricing tariff. Energy pricing for the CSG is higher than the PPA energy prices that were initially proposed. To account for the higher energy price the amendment would reduce the grant amount to around \$1.3 million. MRES has asked that the grant savings be used to construct an additional facility with participation by the City of Minneapolis. The amended contract was submitted to the Commission for approval on September 22, 2017.

**Fourth Quarter Activity:** During this quarter, the Department of Commerce provided comments on a proposed contract amendment. The contract amendment would allow third party ownership so that MRES could access to tax credit financing and use the CSG pricing tariff rather than a PPA pricing structure, thereby reducing the grant contract. The Company also requested feedback on whether MRES could use a portion of the unused grant monies to install a third garden for low-income subscribers in Minneapolis. In the Department's comments, it proposed an alternative that would allow third party ownership, but would keep energy pricing as originally proposed and the grant award would be reduced to \$514,352 due to reductions in the project budget. Reply comments will be submitted in January 2018.

## 2018

**First Quarter Activity:** During this quarter the project developer met with Xcel Energy to identify the interconnection location and site to place the transformer for the urban array in north Minneapolis. An easement will be needed for the small, grassy area that was identified. A survey will be needed provide a legal description and conduct a basic title search to assure all titles are clear. The interconnection evaluation for the rural site near Northfield determined that the substation is already at capacity and a new site will need to be identified. Interested parties are being contacted and, hopefully, there will be another party wanting to be a part of this project soon. MRES hopes to find a better site in terms of visibility, marketability, and overall value to a community. A decision by the MPUC regarding the proposed contract amendment what would allow third party ownership so that MRES could access to tax credit financing and use the CSG pricing tariff rather than a PPA pricing structure, thereby reducing the grant contract, is still pending.

**Second Quarter Activity:** During this quarter the project developer met with the building owner of the urban site and a roofing contractor to discuss relocating some of the roof top equipment and gas lines as well as work flow issues to facilitate a better layout and improve installation conditions. A new roof will need to be installed under a portion of the urban array. A decision on the selection of equipment has been made. The array will use Heliene 340 72M PV modules, CPS TL 3Ø inverters, and Unirac RM10 racking. Due to a possible reduction in the size of the rural site, site plans and engineering documents were created for a second smaller urban array and therefore a Community Solar Garden application is being prepared. Preliminary site plans and engineering documents were created for an alternative rural site in Dodge County. A quick screening process is being conducted to determine if the distribution system could support the proposed array at the site Dodge county site. MRES also continues to look for alternative rural sites. A decision by the MPUC regarding the proposed contract amendment what would allow third party ownership so that MRES could access to tax credit financing and use the CSG pricing tariff rather than a PPA pricing structure, thereby reducing the grant contract, is still pending.