

ATTACHMENT A

2019 Q3 Community Solar Missouri Public Service Commission (PSC) report File No. EA-2016-0207

Key Observations and Recommendations

Performance of program:

- Customer demand for the program is robust, with over-subscription at a level adequate to support another 1.7 MW facility¹.
- The program is meeting customers' expectations, with 92% of participants surveyed satisfied with the program.
- The program provides access to solar generation not otherwise possible for 70% of participants surveyed. The program is fulfilling its goal of expanding access to solar generation for Missouri customers.

Recommendations:

- Based on customer demand and strong survey results, program design has been successful and should be continued.
- Ameren Missouri filed a sixty day notice in July 2019 which initiated the process to consider additional capacity to be built through this pilot. We are preparing options for expansion of the pilot for the PSC and other stakeholders to consider.

Introduction

Background

In 2018, Ameren Missouri received PSC approval for a Community Solar pilot program.

An overall goal of this program is to provide access to solar generation to Ameren Missouri residential and small business customers who are interested in solar generation but may not have the ability or desire to install and maintain their own solar panels.

Program participants enroll and agree to pay for solar blocks of 100 kilowatt-hours (kWh) each that will replace an equivalent kWh amount of electricity they receive from their standard class of service. Customers can replace up to fifty percent of their average annual electric energy usage. Through its support of this program, Missouri has established itself as a leader in making renewable generation accessible, affordable, and reliable to its residents.

The purpose of this report is to provide a quarterly update on program enrollment, planning and construction, customer billing, future considerations, lessons learned, and recommendations to the PSC.

¹ As of September 30, 2019, 456 customers and an associated 2185 blocks are on the waitlist. One MW of solar requires 1302 blocks for full subscription.

ATTACHMENT A

Program Enrollment

The Community Solar program has been open for enrollment since October 15, 2018, via an online application process.

The marketing campaign was very successful and fully subscribed the program in 55 days, on December 10, 2018. After December 10, 2018, all proactive marketing concluded; however customers are still able to enroll and be placed on the waitlist through the Community Solar website.

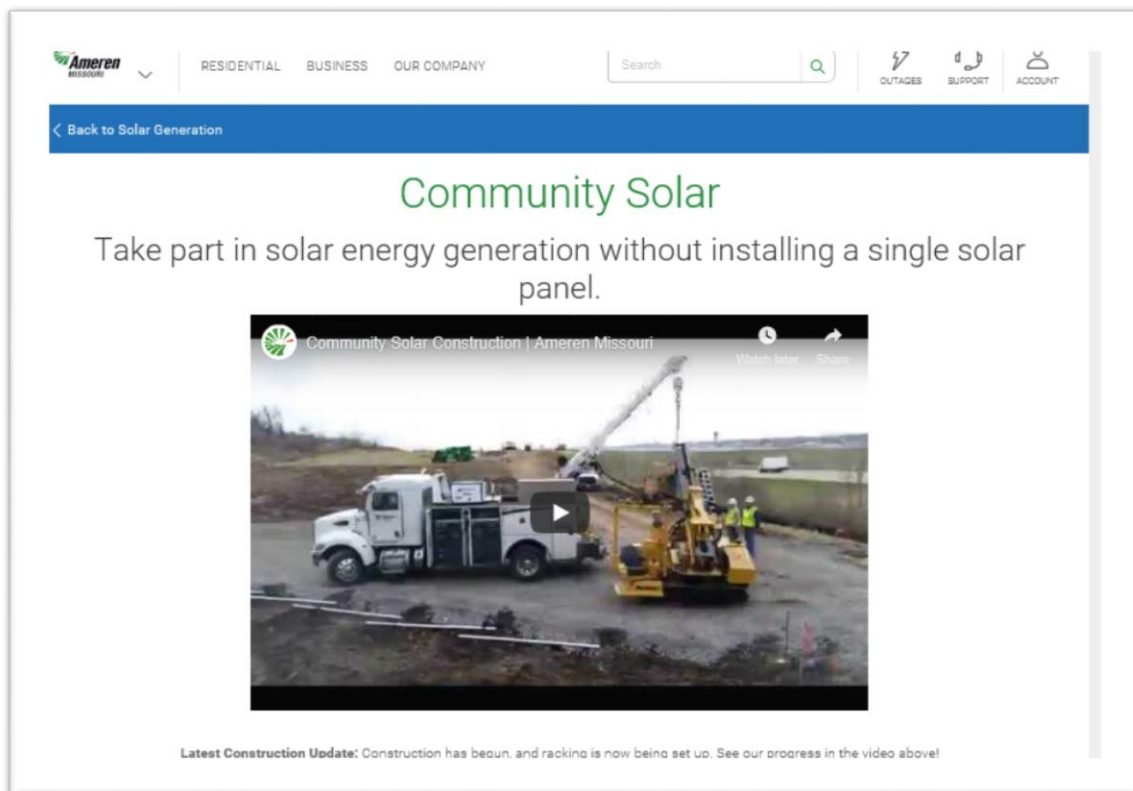
Since December 10, 2018, customers have continued to be very interested in participating in the Community Solar program. As of September 30, 2019, 456 customers and an associated 2185 blocks are on the waitlist, which is enough to support an approximately 1.7 MW facility.

Lambert Community Solar Center Construction

This is a 1 MW solar energy generation facility located on St. Louis Lambert International Airport property, which is an ideal location for solar panels with an abundance of open land that would otherwise go unused. Panel layout is designed to be positioned away from runways and out of the line-of-sight of pilots taking off or coming in for a landing.

The construction of this site started in February 2019, and the site was placed in-service on August 9, 2019.

A time lapse video on the Community Solar website was updated weekly during the construction period. The video documented the construction of the project from the beginning, through the rainy spring through to final construction phases.



The screenshot displays the Ameren Missouri website's 'Community Solar' page. At the top, there is a navigation bar with 'RESIDENTIAL', 'BUSINESS', and 'OUR COMPANY' links, a search bar, and icons for 'OUTAGES', 'SUPPORT', and 'ACCOUNT'. Below the navigation is a blue banner with a back arrow and the text 'Back to Solar Generation'. The main heading is 'Community Solar' in green, followed by the sub-heading 'Take part in solar energy generation without installing a single solar panel.' Below this is a video player showing a construction site with a white truck and a yellow excavator. The video title is 'Community Solar Construction | Ameren Missouri'. At the bottom of the video player, there is a 'Latest Construction Update' text: 'Construction has begun, and racking is now being set up. See our progress in the video above!'.

ATTACHMENT A

Customer Billing

Participating customers received their first energy statement that reflected the new energy charges in August 2019.

Future Considerations

Appendix D to the *Non-Unanimous Stipulation and Agreement* submitted in this proceeding on September 23, 2016 ("*Stipulation*") identifies topics for **Learning Opportunities**, **Key Questions to Explore** and **Planned Activities to Gain Insight**. Information from this analysis will assist Ameren Missouri in determining first-hand how best to structure supply options related to distributed solar generation. The intent is to engage customers, solicit their feedback and provide a basis to continually adjust the program offering in order to meet their expectations. The lessons learned through this pilot program should provide insights into the advantages and challenges associated with a pilot solar program.

Based on additional program data since first quarter of 2019 and the July 2019 program participant and non-participant survey, updated responses to learning opportunity questions and other lessons learned are addressed, below. The participant and non-participant survey instruments and results are included as Attachments B, C, D, and E with this report.

Learning Opportunities

Q: How did customers react to the various pricing opportunities presented?

A (based on program data): As stated in the first quarter 2019 version of this report, the over subscription that resulted from the initial enrollment process indicates that pricing of the Community Solar program was appropriate for this segment of customers. This is further reflected by the rapid enrollment (55 days to full enrollment) on the first solar installation, and the continued growth in customer enrollment for future phases (over 450 customers currently on the waitlist).

A (based on survey results): Participants surveyed responded positively to the price points and kWh caps. Forty-three percent of participants surveyed were very satisfied with pricing, and forty-five percent were at least somewhat satisfied with pricing. Eighty-one percent of participants surveyed felt that the 100 kWh blocks were sized just right.

Q: Did the offering of the community solar program provide customers who didn't have access to Net Energy Metering an opportunity to participate in adding solar to the grid?

A (based on program data): As initially reported in first quarter 2019, customers who reside in buildings which are not conducive to solar panel installations and associated net metering opportunities are key candidates for this program. Anecdotal conversations at that time with participants and non-participants confirmed this premise.

ATTACHMENT A

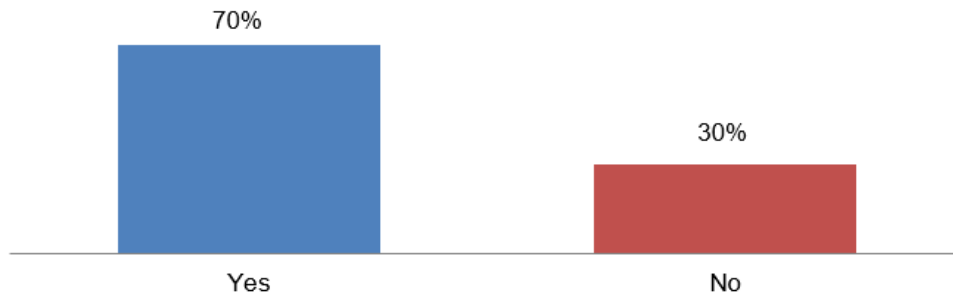
A (based on survey results): Surveyed participants were satisfied to see an offering of a solar opportunity where the option did not previously exist for them.

- A majority of respondents (70%) felt that the program provides them a solar option that would otherwise not be possible for their household. This indicates those customer households which may not have access to Net Energy Metering are taking advantage of the opportunity to participate in adding solar to the grid.

Most feel Ameren Missouri's Community Solar program provides a unique solar option



n=80, those who indicated they are currently enrolled/wait listed



Did Ameren Missouri's community solar program provide a solar option that otherwise was not possible for your household?

- Thirty-three percent of respondents selected their inability to install solar at their residence as a main reason for enrolling in Community Solar.
- Thirty-five percent of respondents selected the fact that they do not have to purchase and maintain solar panels as a reason for enrolling, further highlighting the financial and ownership barriers to solar that this program alleviates.

Q: What value or benefits do customers perceive from adding solar at the distribution level, compared to adding large-scale solar at the transmission level?

A (based on survey results): As a way for survey participants to differentiate between distribution-level and transmission-level solar, participants were asked if they had a preference on where community solar fields are located. Sixty-six percent did not have a preference on location, which indicates they do not have a preference on whether solar is added at a distribution or transmission level.

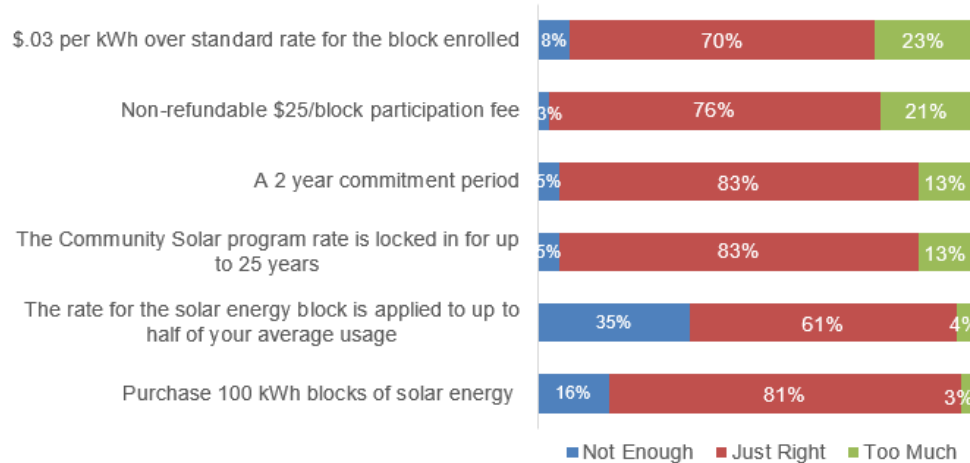
Q: What were customers' reactions and sensitivity to other program design aspects? (e.g. Timing, Fees, Quantities, Length, Commitments, Transferability, Caps, and potential for pricing to increase through facilities charge)

ATTACHMENT A

A (based on survey results):

Most believe the terms of the Community Solar program are just right

n=80, those who indicated they are currently enrolled/wait listed



Survey Feedback on Quantities Available through the Pilot Program:

Thirty-five percent of surveyed customers indicated a desire to expand eligibility of Community Solar to more than 50% of their annual average energy usage. In addition, in open-ended comments, surveyed customers expressed that they would like to see an expansion of the Community Solar program pilot. For example, participants had the following responses when asked what additional information or improvement is needed for the program:

- Allow participants to receive a greater percentage of their energy use from solar generation
- Provide information on future stages of the program and expansions
- Provide more solar or wind generation
- Expand the program more aggressively or more rapidly
- Decrease the amount of time participants are on the wait list

July 2019 Survey Results Analysis

In accordance with Appendix D, Ameren Missouri will conduct a survey of the program participants after the first 18 months of program operation. Since the project is operational and to establish a baseline, both a participant and non-participant survey were conducted in July 2019 to gather customer feedback on the following list of topics. A follow up survey will be conducted after the first 18 months of program operation.

Overall, the survey indicated that Community Solar participants are satisfied with the program and its offerings with 92% of survey respondents selecting ratings of Very Satisfied or Somewhat Satisfied. In addition, overall there is interest from non-participants to enroll in the

ATTACHMENT A

program given they are provided more information, with 60% of non-participants indicating interest.

- **Is the program meeting customer expectations?**
 - Yes, 92% of program participants are very or somewhat satisfied
- **What areas of the program need improvement?**
 - Program participants would like to see more communication and interaction from Ameren Missouri, with 49% of respondents asking for monthly communications.
 - Participants would also like more information on the energy generated by the solar field (Note: at the time of the survey, the Lambert solar site was not yet in service. Ameren Missouri is considering the ability to provide generation information on our website).
 - Non-participants who were surveyed indicated more education on community solar would improve the program's appeal.
- **What aspects of the program do the customers like and dislike?**
 - Positive feedback on:
 - offering a new way to participate in solar
 - appropriate price points and kWh caps
 - greater knowledge of solar energy as a result of the program
 - being included in producing renewable energy
 - Opportunities for improvement:
 - Additional or expanded community solar programs
 - More communication and interaction from Ameren Missouri
 - Opportunity for customers to purchase renewable energy credits
- **Do participants find the timing, level, and refund limitation of the up-front reservation fee reasonable?**
 - Yes, 97% of surveyed participants satisfied with enrollment process, and 88% satisfied with pricing.
 - Seventy percent satisfied with \$0.03 per kWh over standard rate for block enrolled.
 - Seventy-six percent satisfied with non-refundable block participation fee.
- **Are current and potential subscribers willing to commit to a two-year subscription?**
 - Yes, 83% satisfied with two year commitment period.
- **Would a shorter mandatory subscription period (or no period at all) be more appropriate?**
 - A shorter mandatory subscription period (or none at all) does not appear to be a factor in enrollment. Non-participants surveyed did not indicate this as a reason for not participating in the Community Solar program. Further, open-ended comments from program participants did not indicate any dissatisfaction or concerns with the mandatory subscription period.
- **Would current or potential subscribers be interested in the ability to transfer subscriptions to other customers without penalty?**
 - Since we have a waitlist of customers who want to participate, the penalty does not apply and therefore the survey did not ask questions on this topic. As the program matures, this and other topics may be more appropriate for future surveys.
- **Is the block size appropriate?**
 - Yes, 81% of participants feel the block size is appropriate.

ATTACHMENT A

- **Do current or potential subscribers want to be able to subscribe to more than 50% of their usage?**
 - Yes, 35% of program participants surveyed would like to subscribe for more than 50% of their annual average energy usage.
- **Should the 50% energy usage limitation be relaxed or eliminated for customers exhibiting high load factors?**
 - High load factor customers are usually non-residential customers. Since only residential customers have subscribed in the current program, this question was not included in the July 2019 survey but will be considered for future surveys.
- **Are customers aware of the potential for part of the subscription fee to increase with potential rate increases? With this knowledge, are they still willing to participate?**
 - Yes, based on the survey, customers appear to be aware of this potential, and are still willing to participate. Sixty-nine percent were satisfied with potential for increased fees due to potential rate increases.
- **Are there any aspects of the program that provide the customer with a greater understanding of solar energy generation?**
 - Yes, participants indicated at a rate of 54% that they have a better understanding of solar energy generation. Based on the fact that 50% of respondents have visited the Community Solar website and 40% viewed the time-lapse construction video, these educational outreach efforts appear to have been effective.
 - Opportunities exist to more frequently communicate with and educate customers on Community Solar. Sixty-six percent of participants want to be kept informed and updated. Among open-ended comments, the desire for more communication was commonly expressed.
- **What is the impact of the program on non-participating customers?**
 - Based on the non-participant July 2019 survey, the only impacts identified by non-participants have been intangible and related to communication/education:
 - Although seventy-seven percent of non-participants were not aware of the Community Solar program prior to the survey, sixty percent of those surveyed indicated some level of interest in participation.
 - The most commonly cited reasons for not participating in the program included the cost/expense (31% of the 152 non-participants who had decided to not participate), being in an apartment or condo (18%), and disinterest (15%). There are opportunities to explore these perceived barriers.
 - At the pilot scale there is negligible financial impact to non-participants as the revenues from participants are expected to cover the cost of the solar facility over its life.