

WORK SESSION AGENDA ITEM SUMMARY

City Council



STAFF

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SUBJECT FOR DISCUSSION

Staff Report for Riverside Community Solar Project.

EXECUTIVE SUMMARY

The purpose of this item is to provide an update to Council related to the equipment failure at the Riverside Community Solar Project. The large solar array on Riverside Avenue has not been generating electricity since August 20, 2023. Panel owners, which are local community members who have monetarily invested in this project, are not receiving bill credits and power is not being released back to the grid.

GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED

1. Inform Council of the Riverside Community Solar Project status and plan going forward.
2. Provide background and context for the Riverside Solar Project, which include communication and engagement efforts.
3. Demonstrate to Council how Staff plan to use the 2050 Sales Tax funds approved and allocated at the May 21, 2024, Council meeting.

BACKGROUND / DISCUSSION

What is the Riverside Community Solar Project?

Fort Collins takes climate action very seriously. Established in 2015 and under an agreement with Clean Energy Collective, the Riverside Community Solar Project started as one way to demonstrate our commitment to clean energy. Community Solar provides Utilities electric customers the opportunity to own solar generation assets without installing solar at their home. This makes solar more accessible and provides a way for local government, and the community it serves, to work together to achieve climate goals. The Riverside Community Solar Project owners are Fort Collins community members who have monetarily invested in this program and committed to helping us achieve these larger climate goals.

In 2020, Utilities acquired the Riverside Community Solar Project, including all responsibilities and assets owned or controlled by Clean Energy Collective (Ordinance No. 141-2020). The Program Rules and Customer Agreement for the Riverside Community Solar Project can be viewed at: fcgov.com/community-solar.

What Happened at the Riverside Community Solar Project?

The large central inverter of the solar array failed on Aug. 20, 2023. This piece of equipment is critical for converting direct current (DC) electricity generated by the panels into alternating current (AC), which flows to the grid and can be used for consumption. The solar array cannot function without an operational inverter.

While developing solutions, staff used the following guiding principles to evaluate options for repair:

- Accelerate timeline for repair to resume owner bill credits.
- Minimize likelihood for future failure.
- Minimize financial impact for owners associated with repair.
- Maximize lifetime or remaining existing equipment.
- Maximize remaining Operations and Maintenance fund for potential future needs.

Why Has This Project Taken So Long?

Several factors have led to delays in replacing the inverter. First, Utilities explored the possibility of leveraging the equipment warranty with the manufacturer, Schneider Electric. This took several months, and Utilities ultimately determined that the warranty pursuit was not in alignment with several of the guiding principles for the repair. Staff also assessed the costs and risks associated with just repairing the inverter, but it was determined this approach would also not be a feasible solution. Redesign and replacement the most viable and long-term solution is because the proposed redesign will significantly reduce technical and operating risks through the current timeframe of the Riverside program agreement, which is set to end in 2040.

Additional factors that added to the project delay as well as to the understanding that a full replacement was needed include:

- System Design and Solution Scoping: the large central inverter at Riverside Solar was a standard design and product choice in the industry at the time of Riverside's construction. However, it is a custom-engineered product and represents a single point of failure.
- Cost: the cost to repair the system is expensive, so various funding options had to be explored and ultimately require City Council support.
- Manufacturing: this inverter is a piece of equipment that is no longer manufactured in a way that matches its existing size. Technological advances have now led to prioritizing the manufacturing of smaller inverters.
- Availability: there are supply chain issues constraining the availability of certain parts.
- Specializations Required: a contractor with specialized skills and knowledge must perform this custom repair.
- Bidding Process: Since a third-party contractor will be required for the repair, staff are required to follow the City of Fort Collins' purchasing processes.

What is the Plan Moving Forward?

Utilities has selected a preferred contractor to complete the inverter replacement, and contractor negotiations are underway. While staff have estimated costs for the job, the price for construction will not be fixed until the end of the first design phase.

Proposed design solutions suggest incorporating twenty-two string inverters to replace the existing large central inverter. This design eliminates a single point of failure that is a significant risk in the existing central inverter. The proposed new string inverter design utilizes standard sized commercial inverters, which will make it easier to source for replacement if needed in the future.

The proposal for repair includes three different warranties: new product, workmanship, and an option for extending the product warranty through 2040. The maintenance required to satisfy warranty requirements is straightforward and much less expensive than requirements for the central inverter.

At this time, Utilities is expecting the repair of the array to take 7-8 months. Upon the completion of the repair, the total amount of time the array has not been functioning will be approximately 16 months.

Who Will Be Paying for the Repair?

Staff acknowledge the significant financial burden this replacement could be on our community members who have invested in this project. Staff plan to use the 2050 Tax funds allocated by Council to cover \$250,000 of the \$300,000 estimated cost of the project. The other \$50,000 is planned to be taken out of the Riverside Operations and Maintenance fund, which currently has a balance of approximately \$59,675.

How Has Staff Engaged with the Riverside Solar Participating Owners So Far?

To date, we have provided owners with eight updates that we have posted on our website and have also emailed to them directly. We began these updates in September 2023 and the most recent one was posted in May 2024. Website updates can be viewed at:

<https://www.fcgov.com/utilities/residential/renewables/community-solar-participants>.

Staff created a dedicated email address for the Riverside owner group to reach out to with their inquiries or concerns, which is monitored daily so Utilities can provide prompt responses. We make certain to advertise and encourage the owners to reach out to this email address, regularly, by posting it on the website, sending it to their email, and mentioning it in presentations. The email address is *RiversideSolar@fcgov.com*.

Finally, we hosted two in-person meetings, one on May 13, 2024, at the Senior Center, and another on May 15, 2024, at the Northside Aztlan Community Center. We made the owners aware of upcoming meetings by posting about it on the website, emailing them several times, and sending them mailers to their home addresses. We offered an afternoon option and an evening option to fit diverse schedules. Following the meetings, we published a recorded slideshow version for those who could not make the in-person meetings. We also provided a robust FAQ document for their reference that included their commonly asked questions.

The primary purpose of these in-person meetings was to provide an update on the RFP, apologize for the long duration of the outage, and provide detailed answers to any questions or concerns. We also discussed future stages of the inverter replacement and project communications with them.

Staff have offered to create a Riverside Community Solar Advisory Committee comprised of no more than 20 owners to represent the interests of the owner group. City staff would meet with that small group on a regular basis and provide enhanced communications on matters related to the project. Staff has scheduled a meeting with owners who volunteered to join the committee.

NEXT STEPS

Utilities staff continue work to support affected owners and implement technical solutions to repowering Riverside, including the following next steps:

- Continue focus on redesign and repair with the preferred contractor and communication with the owners.
- Further development of Riverside Community Solar Advisory Committee and communications.
- Develop strategic funding plan for continued operation of site.

ATTACHMENTS

1. Presentation