



## Seattle Parks & Recreation

### MEMORANDUM

Date: July 13, 2017  
To: Board of Park Commissioners  
From: Joelle Hammerstad, Sustainability Manager  
Subject: Partnership with Seattle City Light to install a Solar Microgrid for Resiliency

#### **Requested Board Action**

Seattle Parks and Recreation (SPR) would like to enter a project with Seattle City Light (SCL) to install a Solar Microgrid for Resiliency at a community center. As this aligns with the Park Board goals for their work plan, staff seek input and engagement from the Board regarding:

- Site selection criteria
- Potential opportunities for the Board to advocate and engage with the public regarding SPR's environmental work
- Feedback and issues for further consideration

#### **Project Description and Background**

Seattle Parks and Recreation (SPR) has been working for more than a year with Seattle City Light on a Department of Commerce (DOC) Clean Energy Fund 2 Grant to install a solar microgrid at one of our community centers. This matching fund grant supports development, demonstration and deployment of clean energy technologies.

The inclusion of a community center as a project site has multiple additional benefits:

- It lowers facility operating costs for the community center
- SPR will receive net-metering benefits of solar of up to 100 kW
- A community center site could allow the utility to pilot solar canopy Photovoltaic (PV) technology and infrastructure

In August 2017, the DOC announced that it had selected the City's proposal to install solar panels, a utility-scale battery system and emergency generators at a designated emergency shelter. The project's purpose is to create an "islandable" microgrid powered by renewable energy, that can completely detach from the grid and draw all its power from onsite generation and be used in an emergency.

Many utilities around the nation are experimenting with and adopting new microgrid technologies. City Light's proposed project will test an islandable microgrid, including

renewable energy-based storage options, i.e., a large battery. The battery would be about the size of a commercial shipping container.

In disasters, such as earthquakes, floods, or severe windstorms, diverse renewable power supplies help provide power to critical services for response and recovery operations.

Renewable energy-based storage offers the added benefit of reducing carbon emissions compared to traditional back-up diesel generators, which are currently in place for emergency operations at city of Seattle fire stations. Recent natural disasters in the eastern U.S., including Superstorm Sandy and Hurricane Katrina have shown back-up diesel generators frequently fail during major events.

With SPR's guidance, City Light will perform a site analysis of community centers, and make a recommendation of a preferred location. City Light will provide project management for the installation. It will fund design, construction and commission and operate the project for a minimum of 14 years.

City Light will adhere to SPR's construction oversight protocols, including bringing the project to ProView at 30%, 60% and 90% design.

City Light will provide training to the host site staff on the functions of the microgrid. It will also host a mock emergency drill to test the use of the microgrid, and staff's understanding of the emergency procedures. Emergency drills will also take place in subsequent years after the initial drill.

The installation will also provide SPR a unique opportunity to partner with City Light on educating the public about the benefits of renewable energy. City Light will provide an educational kiosk and other materials to explain the solar microgrid at the host site.

### **Issues for Discussion**

SPR and SCL have come up with a list of sites, based on the the following criteria:

- at a community center that is designated as an emergency shelter
- in a low-income community
- in a geographically isolated area

Please see the attached spreadsheet, which indicates SPR's and SCL's combined thinking on the highest priority sites. These sites will be reviewed by a consultant, who will make a recommendation for the most appropriate site. The Park Board is invited to weigh discuss the pros and cons of the various sites.

What additional considerations should SPR and SCL make in selecting a final site?

What feedback do you have regarding the plan (issues, opportunities, etc...)?

**Environmental Sustainability**

This project will install solar panels at one of our community centers, which will reduce the department's carbon footprint.

**Budget**

The state will provide \$1.5 million; SCL will match that with \$1.8 million. SPR will contribute \$21,000.

Seattle Parks and Recreation will receive an electricity cost offset for the facility where the microgrid is housed for the lifetime of the project, which is expected to be 14 years.

**Schedule**

- Seattle City Light and the Department of Commerce will sign a contract by end of June 2017.
- Seattle City Light has issued a Request for Proposals for a consultant to study and recommend a final location. They are in negotiations with the finalist, and will likely be able to announce the consultant at the July 13 Park Board meeting.
- SPR and Seattle City Light to sign Memorandum of Agreement in August 2017.
- SPR, SCL and DOC are working on a public announcement for September 2017 to possibly include Gov. Jay Inslee, Mayor Ed Murray and Superintendent Jesús Aguirre.
- The public process starts fall 2017
- Construction: 2018

**Additional Information**

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**Attachments**

- Copy of 2017\_06\_20\_9238\_Microgrid\_Sites