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April 5, 2016

### MEMORANDUM

**TO: Council members**

**FROM: Brian Dekiep, Montana Staff**

**SUBJECT: Public Power Solar Projects**

Presenters: Ross Holter, Flathead Electric Cooperative; Jim Maunder, Ravalli Electric Cooperative and a representative from Missoula Electric Cooperative.

Background: In the last year, western Montana has seen a number of smaller scale solar projects announced or constructed in response to local demand or needs. Here's a summary.

#### Missoula Electric Cooperative:

The MEC community solar array is located adjacent to their distribution substation in Lolo and is comprised of 176 panels for a total of 50 kilowatts of installed capacity. Members can purchase output from the system and the credit comes off their MEC electric bill. The price for each Solar Unit is \$700.

<http://missoulaelectric.com/Our%20Community%20Solar%20Program>

<http://missoulaelectric.com/fileaccess/getfile/1073.pdf>

#### Ravalli Electric Cooperative:

The Valley Community Solar Project will install 88 solar panels near the co-op's Woodside substation. The energy generated from the panels would be credited to co-op member's utility bills. REC experienced more demand than they could satisfy with their first 25kw system. Therefore, they increased the project to 50kw and doubled the number of panels. If warranted, they do have space for additional arrays.

<http://www.nbcmontana.com/news/ravalli-electric-coop-launches-community-solar-energy-project/35847366>

<http://www.ravallielectric.com/valley-solar/>

#### Flathead Electric Cooperative:

The project will consist of 356 solar panels, and each 285 watt panel is expected to generate approximately 360 kWh per year. Each panel will cost \$900 and initially, FEC members will be limited to purchasing one panel for the 25-year life of the program. <http://www.flatheadelectric.com/newnews/newsletter/issues/2015/201508.pdf>

#### QF Solar Projects Proposed in Montana:

(Several projects have recently been proposed as Qualifying Facilities, QF's, under PURPA.)

#### Cypress Creek Renewables (Helena):

The first major solar energy supplier to contract with NorthWestern Energy in Montana plans to build a 30- to 40-acre solar farm in the Helena Valley, the first among about 10 facilities it is considering across the state. California-based Cypress Creek Renewables signed a 25-year agreement to sell power to NorthWestern from a 3-megawatt facility to be built on the 7300 block of Green Meadow Drive, south of Lincoln Road. The solar farm will generate enough energy to power about 540 homes.

#### Cypress Creek Renewables (Missoula):

Cypress Creek Renewables wants to establish a 3-megawatt facility on 40 acres off Deer Creek Road outside of Missoula. The plant would be capable of supplying energy

to approximately 540 homes, though the electricity would be sold to NorthWestern Energy to place on the grid they have not secured a purchase power agreement.

Northwestern Energy Pilot Solar and Storage Projects:

Northwestern Energy's Deer Lodge Grid Support:

The pilot project will use an array of ground-mounted photovoltaic panels, inverters and a battery bank to generate electricity when conditions permit and store it for use during outages. The 40-kilowatt solar system and batteries could provide electricity for up to two hours. About 17 NorthWestern customers in the area will be involved in the project.

<http://www.northwesternenergy.com/news/2015/07/27/NorthWestern-Begins-Work-on-Solar-Mico-Grid-Project-Near-Deer-Lodge>

Northwestern Energy's Dispatch Yard Helena:

Battery Storage Project with Renewables Integration small scale battery storage system. Project funded with USB \$ in 2011 & 2012. The project consists of a 50 W system with 4 hour battery backup Installed on NorthWestern Energy distribution line in Helena. [http://www.northwesternenergy.com/docs/default-source/documents/etac/2015/presentation\\_2\\_11\\_2015.pdf](http://www.northwesternenergy.com/docs/default-source/documents/etac/2015/presentation_2_11_2015.pdf)

Clearing Up articles on Community Solar:

The March 18, 2016 (page 5) and the March 25, 2016 (page 3), editions of Clearing Up covered the development of Public and Investor Owned Utilities solar projects in the Pacific Northwestern.