



# BRAINERD PUBLIC UTILITIES

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[www.bpu.org](http://www.bpu.org)

May 31, 2022

Brainerd Public Utilities (BPU), a municipal utility owned and operated by the City of Brainerd, would like to submit a proposal to the Emerging Issues Account for a solar demonstration project in the amount of \$1,095,000 at BPU's Wastewater Treatment Plant (WWTP). The current WWTP was put in service in 2011 and serves the wastewater needs for the Cities of Brainerd and Baxter, which have a combined population of approximately 23,000. Reasons for applying for the grant are as follows:

1. BPU is planning to construct a 2.6 MWAC Solar Project next to the WWTP and has been in discussions with American Electric Power Energy Services (AEPES), BPU's current power provider, to be the developer and owner of the Project. BPU would enter into a Purchase Power Agreement (PPA) with AEPES to purchase the generation output from the Project over a 30-year term with an option to purchase the array.
2. BPU and AEPES will begin construction of a 5.7 MWAC solar project at the Brainerd Regional Airport in July 2022 with completion expected in the spring of 2023. There would be efficiencies in using AEPES as the developer of the WWTP Solar Project since the construction crew could transition from one site to another later this fall.
3. The reason AEPES would be the developer of both the Airport and WWTP Solar Projects is that BPU is a full requirements wholesale energy customer of AEPES, and the best kWh energy pricing was received from AEPES as compared to outside developers. This project would be deemed to be single source contract due to BPU's contractual agreement with AEPES.
4. Due to the various processes involved at the WWTP, energy usage is high making the WWTP one of the largest energy users in the two cities. BPU would like to move away from reliance on fossil fuels and a solar project at the WWTP would be a start in reaching that goal. This project would generate solar energy on perennially vegetated WWTP buffer land near the Mississippi River. BPU would partner with local schools and colleges, environmental learning centers, and other community resources to bring outdoor experiences to students.
5. The estimated cost of the fixed tilt system is \$5 million which would calculate to an estimated PPA rate of \$90/MWh. If BPU were to receive a \$1 million grant it would be used to reduce the capital cost of the Project and decrease the PPA from \$90/MWh to approximately \$75/MWh. The savings to ratepayers would approximate \$3 million over 30 years.
6. This array will serve as a showcase both in Brainerd and Baxter, as well as across the State to bring students to the array/WWTP for tours where BPU staff present hands-on-activities with an emphasis on clean water and renewable energy. BPU will partner with CERTs, MNTAP, MN Wastewater Operators Association, MPCA, and others to demonstrate the effectiveness of solar at WWTPs.

Sincerely,

Todd Wicklund, CPA

Finance Director

Brainerd Public Utilities

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