**Bemidji State University – 2018 HEAPR Requests**

1. **Energy Controls Upgrade - $4,250,000. (Awarded $2,650,000 in 2017 and requesting $1,600,000 in 2018)**

   The purpose of this project is to establish a highly efficient, easy manageable, campus wide controls system for the campus to build off for the future. The current campus is operating on 3 DDC control platforms, along with a large number of buildings only have Pneumatic controls or no controls at all. The DDC system currently operates with Honeywell, Trane controls and Johnson Controls. In an effort to streamline the maintenance and energy management of the HVAC systems on campus, these systems will be combined into one front end, along with all of the existing buildings on the pneumatic controls systems.

   The controls system upgrade would result in various advantages for the Campus:
   - The project will result in the upgrade of campus energy management controls so that the campus can manage better in regards to energy consumption
   - An Open protocol front end system, which would allow for more completive bidding and service work in the future.
   - It will clean up a large number of controls projects that are currently on campus backlog.

2. **Medium Voltage Improvements – $2,100,000**

   The current power distribution to each building on campus is served with medium voltage campus distribution system. There are currently problems with the current system. These Include:
   - The loop is not complete to provide redundancy.
   - There are current code violations with access and feeder connections
   - Life Safety issues with 5 KV cabling that is at the end of its useful life. This cable is located in the pedestrian tunnels of the campus and could result in a major safety concern if a failure would occur
   - The system is at the end of its useful life. Useful life of the system that is currently installed is 25 years. The majority of the system is 30-40 years old.

3. **Sattgast Hall Re-Roof (Original Building) - $1,700,000**

   Sattgast Hall (Original Building) needs to be Re-Roofed. The current problems with the roof are:
   - The roof is at the end of its useful life and a the built up system offers the best long term performance and meets the roofing standards set by Minnesota State. A built up system would also provide more durability for foot traffic and can be monitored using nondestructive methods.
   - The deck has little or no structural slope; therefore a fully tapered insulation system will be required
   - The existing parapets will be raised to accommodate the necessary base flashing height required to meet Minnesota state standards
   - The existing drains and leaders will be replaced with larger size and additional drains to meet current code requirement. Also, overflow drains and scuppers will be provided.
   - Two new OSHA approved access ladders will be installed to meet current state and local codes.
   - At the skylight / Greenhouse, waterproofing will be necessary to ensure the water tightness of the new roof system.

## Northwest Technical College – 2018 HEAPR Requests

1. **Replace Air Handling Units - $525,000**

   The two units are beyond life expectancy as one is 1966 and the other is 1971 vintage. These units take a considerable amount of resources to maintain and repair and replacements parts are difficult to obtain as well as the current refrigerant will be discontinued in 2020. The units provide HVAC to classrooms, shops and offices at Northwest Technical College. The replacement of these units will improve air quality and provide a climate-controlled environment for learning.

2. **Replacing interior and exterior doors locking systems - $625,000**

   This project is to upgrade the keying and locking system at Northwest Technical College. There are currently numerous key to open interior doors with no master key and no way to monitor access into classrooms and labs. The purpose of this project is to upgrade the keying hardware so, a new tracking system can be implanted and provide key card access to various interior door locations. The will provide a safer environment for students, Staff and Faculty.