

Reed College Reactor N. I. Power Monitoring Channels

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Collaborators: N/A

Program: Scientific Infrastructure Support for
Consolidated Innovative Nuclear Research

ABSTRACT:

Reed College requests funding to primarily secure and secondarily extend the life of the safety system functions with new power monitoring channels at the console. Obsolete safety-critical signal conditioning of old channels puts the reactor at risk of indeterminate shut-down if not replaced by modern, well-supported technology. In case of a power channel or detector failure, these items have a long lead time; available spares on-hand will prevent lengthy outages. The manufacturer of one the power channels, Thermo Gamma-Metrics, has announced reduced support for nuclear applications, making acquiring spare parts this year essential to continued operation.

The project will replace the current power monitoring channels (two General Atomics channels, one Thermo Gamma-Metrics channel) with modern components supported by vendors which are firmly invested in the future of nuclear. The technology platforms will be chosen by their familiarity with NRC and peer research reactor facilities to reduce the risk of licensing. The safety-critical system(s) / RPS will remain in analog technology and HMI indication design will remain familiar to the current operations requirements to support a successful 10CFR50.59 evaluation.

With successful implementation of this project the Reed Reactor Facility expects to extend the reactor's life for another ten-to-fifteen years.