



University of Rochester



“New York State’s willingness to invest in energy-efficient technology through the NYSERDA program enabled the University of Rochester’s Center for Integrated Research Computing to deploy an innovative technology (GPUs) to meet the computational needs of the research community. The NYSERDA support was invaluable as the University sought to reduce its energy footprint without compromising its ability to support world-class computational research.”

– David E. Lewis,
Vice President for IT and Chief
Information Officer, University of Rochester

As a top-tier research institution, the University of Rochester requires exceptional computing power. The Center for Integrated Research Computing (CIRC) provides technology, software, expertise, training, and support to research teams working across academic disciplines. Since its inception in 2008, the CIRC has provided the University of Rochester with more than 100 million CPU hours utilizing the three high-performance computing clusters located in the University’s main data center.

In early 2010, the CIRC investigated ways to expand computing capacity from 24 to 35 teraFLOPS. Recognizing that the data center was a major source of energy consumption on campus, the CIRC decided to add capacity by implementing Graphic Processing Units (GPU) card technology, an emerging technology that is far more energy efficient. To help cover the additional capital cost, the CIRC worked with NYSERDA’s outreach contractor, Willdan Energy Solutions, to apply for financial incentives through the Industrial and Process Efficiency (IPE) program.

Recommendations

In order to add 11 teraFLOPS of computing power to their data center, the CIRC had two options: either buy 90 new standard servers, or buy only 10 new servers and retrofit them with GPU cards. Instead of adding processing power through additional servers, GPU cards are able to execute the same volume of instructions on fewer servers, consuming significantly less energy. The Willdan team worked with CIRC staff members to estimate energy savings and submit their application.

Get started

To learn how you can participate in this exciting program, call the NYSERDA hotline at **1-866-NYSERDA** or email IPEOutreach@nyserdera.ny.gov.

Visit nyserdera.ny.gov/datacenters for more information and answers to frequently asked questions.

