



# IN-HOUSE ENERGY AND WATER REINVESTMENT PROGRAM RACKS UP 10 YEARS OF SAVINGS

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The Reinvestment Program launched in 2008 as a collaboration between the Infrastructure Services Division (IS) and the office of the Chief Financial Officer (CFO) to help reduce the Laboratory’s operating costs and to meet federal energy and water goals, such as those set out in the Energy Independence and Security Act of 2007, the Energy Policy Act of 2005, and presidential Executive Orders on sustainability.

Under the Reinvestment Program, cost savings are calculated annually from completed energy and water savings projects. Funding equivalent to those annual savings is then provided to the program for reinvesting in projects in the following year until the payback time of each project is reached. Initial seed funding of \$500k was provided to start the program; additional funding from the CFO is provided annually based on costs savings of the current and previous years’ projects.

**CUMULATIVE SAVINGS FROM THE 10-YEAR REINVESTMENT PROGRAM:**

- Energy (Electricity, Natural Gas, and Steam): 114,484 MBtu/year
- Potable water: 67,960 kgal/year

The cumulative annual savings of projects implemented in this ongoing program is \$6.7 million, with an annual average savings of \$600,000.



Brenda Teaster (FAC) and Frank Perrotta (FAC) review the completed lighting project at Building 366.

Argonne completed 23 energy and water efficiency projects in FY 2018, with a net savings of \$170,525: \$141,779 energy cost savings and \$28,746 water cost savings. An overall payback of 4.2 years was achieved for all projects combined, well under the maximum allowed 10 years for the portfolio. The following savings come from the various utilities:

- Electricity: 2,909,000 kWh (9,925 MBtu)
- Natural gas: 1,212,000 cu. ft. (1,212 MBtu)
- Potable water: 5,319,000 gallons (5,319 kgal)

The Sustainability Program Manager oversees the Reinvestment Program with the support of the Energy Analyst. Projects are accepted on an ongoing basis and funding approvals are given on a biweekly basis. Argonne staff can recommend a project; the majority of projects are developed by building engineers,

building managers, and custodial staff. Each project is summarized in a Business Case document that includes a project description, summary of energy and water savings, implementation cost quote, and technical specification documentation about the proposed materials and/or methods. The materials used in the project must meet Argonne's green purchasing guidelines, and must have a payback period of 10 years or less (based on either energy or water savings, or both).

Once costs and savings are verified by the Energy Analyst, the Sustainability Manager reviews the recommended projects and makes a decision on whether to approve them for funding. At the end of the fiscal year, the Energy Analyst compiles the year's completed business cases, calculates the total energy and water savings, and reports this data to the DOE Sustainability Dashboard. A separate report is sent to the

CFO with project documentation supporting the request for the next year's Reinvestment Program funding.

The Reinvestment Program has successfully leveraged annual savings from implemented energy and water savings projects to deliver a stream of funds to reinvest into further energy- and water-saving projects. This program continues to improve the efficiency of Argonne buildings and utility systems and implements project ideas generated by key staff who operate and maintain the infrastructure.

**FOR MORE INFORMATION  
PLEASE EMAIL**

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