



## 24 Sustainability Success Stories in 2024

Story 2 of 24: Sustainability in Facilities

### UPMC Northwest Earns Energy Star Certification

[UPMC Northwest](#) was recently awarded Energy Star certification, an Environmental Protection Agency (EPA) program that grants certification based on strict energy performance standards such as electric, natural gas, and water usage, along with hospital metrics.

To achieve certification, a building must maintain a minimum score of 75 over a year-long period. UPMC Northwest scored 83 for 2022.

The facilities team at UPMC Northwest was able to achieve Energy Star certification with an energy efficiency project completed in partnership with Envinity, an energy-efficiency and sustainability-focused engineering firm with a core in building commissioning. The project's goal was to implement a customized energy management plan that prioritized facility improvement measures.

The major elements of the project included:

- **Chiller plant optimization and pump variable frequency drive**
- **Variable air volume direct digital control upgrades and unoccupied modes**
- **Air re-engineering and re-balancing**

The impacts of the project include:

- **Reduced cooling load and improved plant performance** to maintain redundancy without having to replace or add cooling towers or chillers after adding the new cancer and imaging wing.
- **Decreased cooling loads and improved heat rejection**, reduced geothermal wellfield temperatures while improving efficiency and reliability.
- **Improved air quality for patients, visitors, and staff** by finding under-ventilated zones and resolving pressurization issues during the VAV upgrade and building rebalance.

UPMC Northwest's Energy Star score jumped 24 points after the project was completed. The project showed a 15% energy use reduction, a \$232,870 annual energy cost savings, and \$1.8 million total project savings. UPMC Northwest has saved \$0.80/sq. ft. with this project, and that savings funded 25% of the hospital conversion from local



pneumatic to direct digital controls. Envinity also helped Northwest obtain an \$80k rebate for the project not including lighting.

The greenhouse gas emissions reduced due to the project are equivalent to 219 gasoline-powered passenger vehicles driven for one year. The CO2 emissions reduced are equal to 1,104,359 pounds of coal burned. This is a significant offset and just one example of the win-win of a more sustainable UPMC.