



## **24 Sustainability Success Stories in 2024**

Story 18 of 24: Radiology and Sustainability

### **A Green Fingerprint: UPMC Radiology Stepping Up in Sustainability with Large Energy and Carbon Emissions Savings**

In one of its latest sustainability efforts, UPMC is reducing energy consumption through a project that aims to minimize electricity use in MRI and CT scan machines during low-use hours.

“Medicine in general and radiology in particular contribute significantly to our carbon footprint. As radiologists, we strive to help our patients with our diagnostic and interventional interventions, but doing it in an energy-responsive manner is critically important to us,” said **Jules Sumkin, DO, FACR, Professor and Chairman, Department of Radiology and UPMC Endowed Chair for Women’s Imaging at UPMC Presbyterian.**

Of all radiology equipment in use at UPMC, MRI and CT scanners consume the most energy. The energy consumption of a single MRI machine is equivalent to that of 12 average United States homes, or 16 refrigerators, and that of a CT scanner is equivalent to that of three homes or four refrigerators.

A pilot project is now underway with General Electric to test the energy-saving potential of putting most MRI scanners in sleep mode at nighttime and on weekends at select locations. Currently, the project is in the initial stages with data collection, and the pilot location is being determined.

Using this strategy can reduce energy consumption by up to 33%. Yearly, every MRI scanner placed in echo mode for 12 hours overnight represents about 3 tons of carbon dioxide from being released into the atmosphere. That is similar to the amount of CO<sub>2</sub> captured by planting and growing 50 trees for 10 years. In addition, this strategy can generate cost savings by reducing electricity use.

An important aspect of this project is educating staff on the protocols for placing MRI and CT machines into sleep mode and on which machines can be put into standby.

To have healthy people, we need a healthy planet. As UPMC continues to lead the way in health care sustainability, reducing energy consumption in Radiology represents another impactful strategy to continue protecting the health of our planet.