SUSTAINABILITY AND GREEN INITIATIVES

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Yale Replaces Grounds Equipment with Electric Alternatives

Yale Landscape and Grounds Management is taking the initiative to replace its gas-fueled and diesel-fueled equipment with electrically powered alternatives. The effort will improve air quality, reduce noise pollution, and help Yale in achieving its greenhouse gas emissions reduction commitment.

Researching Electric Alternatives

The effort began earlier this year, when Dev Hawley, Director at University Planning & Facilities Operations, actively began researching electric alternatives to gas backpack blowers. He expressed that while the gas equipment is effective, it is loud and emits fumes that are harmful to the environment.

"Electric not only helps from an emissions point of view, but it also helps with noise because the electric equipment is generally a lot quieter," says Hawley. "We're in a learning environment where we don't really need a leaf blower or lawn mower creating lots of noise right outside of the classroom."

Reducing Emissions and Noise While Benefiting Health

By reducing localized emissions and cutting back on noise, the initiative will also benefit the health and well-being of the Facilities grounds staff.

Working with Paul Catalano, Director of Grounds Maintenance, he put together an inventory of current grounds equipment. Yale has over 30 backpack blowers, along with a large quantity of augers, handheld blowers, tractor lawn mowers, push lawn mowers, chainsaws, hedge trimmers, string trimmers, leaf vacuums, and sweepers. To help manage its property of over 1000 acres, Yale also hires contractors. Any equipment that Yale replaces for electric will also need to be replaced by the contractors.

Considering Price and Performance

When considering alternatives, they looked into the price and performance of the equipment. They asked questions such as: Does the land mower cut as fast and collect the grass as well? Does the electric blower blow the leaves when the leaves are wet?

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While the market for electric grounds equipment is currently in a state of development and transition, they found areas of opportunity. Without any major performance compromise, they found replacements for about half of their inventory including handheld blowers, chainsaws, push mowers, hedge trimmers, and string trimmers.

When it came to backpack blowers, they were not convinced that the electric alternatives would have ample power to perform the job efficiently. They decided on replacing half of the backpack blower supply with electric alternatives to test their performance this fall. Hawley expects the equipment will measure up so that they can replace the remaining supply next year.

Challenges to Switching to Electric

One of the challenges that comes with the switch to electric is batteries. For the equipment to last during a day's worth of work, the battery needs to be charged midway. To account for this, Yale will install a battery

station at the main Grounds Management office with enough batteries to act as replacements throughout the day.

This initiative is a larger reflection of Yale Facilities' efforts to reduce its environmental impact and lower its carbon footprint, supporting Yale's commitment to reduce greenhouse gas emissions by 43% below 2005 levels by 2020, and achieve carbon neutrality by 2050.

Yale is committed to building a more sustainable world. By doing what we do best—integrating science, the humanities, and our community—Yale creates, tests and adopts innovative solutions to the environmental and social challenges we all face.

Yale's Vehicle Replacement Program

As part of a Vehicle Replacement Program that started last year, Yale Facilities needed to replace 20 fleet vehicles. After researching alternatives, they were able to replace 13 vehicles with hybrid models that would take advantage of a nearby propane fueling station.

"That again is sending the message that Yale Facilities is going to drive as a priority—a much more sustainable solution to everything we do, and we're really taking it from trucks all the way down to the string trimmer," says Hawley.

Building a More Sustainable World

The new electric grounds equipment will be up and running by the end of this calendar year. For the remaining equipment, Yale will continue to research alternatives and expects to make progress each consecutive year.

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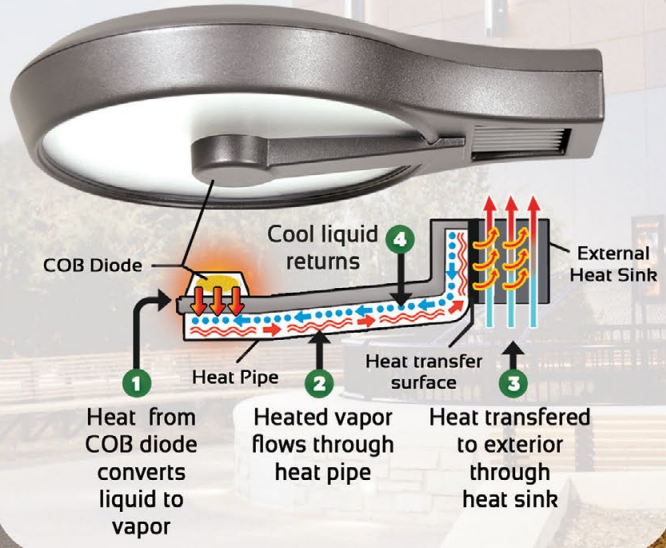

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