Amping It Up

THE ATHENS-CLARKE COUNTY DOWNTOWN LANDSCAPING CREWS SWITCH TO ELECTRIC

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Athens-Clarke County (ACC) has been piloting electric tools across departments. This change was spurred by concerns over noise and air pollution caused by gas-powered landscaping tools, particularly in our bustling downtown area. Central Services' Landscape Management uses more small tools than any other department in ACC, so they have been the major focus of the initiative. However, two other departments including Fire & Emergency Services and Transportation & Public Works' Streets & Drainage Division have also been piloting the replacement of various gas-powered equipment with electric alternatives.

The goal of the program is to evaluate how the county can transition to electric tools. Most tools traditionally used by the county have been gas-powered. By releasing proportionally large amounts of toxic pollutants, these devices, sometimes referred to as Small Off-Road Engines (SORE) directly contribute to global warming and not in a small way; during the summer, gasoline-powered landscape maintenance equipment (leaf blowers, trimmers, edgers, and brush cutters) account for a majority of SORE emissions (source). Unlike their construction and farming SORE equipment counterparts, powered lawn and garden equipment emissions are not federally regulated (source).

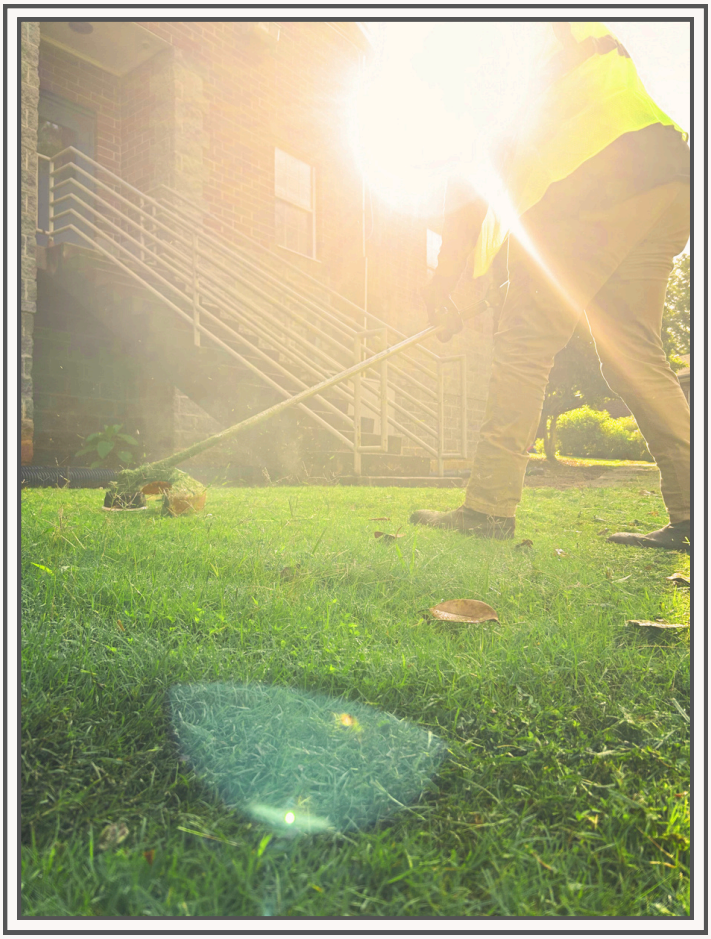

PHOTO CREDIT: HANNAH CHAFFEE
LANDSCAPING CREW LEAD 'KEY' USING AN ELECTRIC WEEDEATER

These emissions are made of volatile organic compounds and fine particulate matter; exposure to these can contribute to both short-term adverse health effects as well as long-term reverberations

including cardiovascular diseases and cancer (source). Those who are immunocompromised including children and older adults are particularly susceptible. Moreover, workers regularly using gas-powered equipment face these potential health risks compounded by the threat of hearing damage.

Also, small tool electrification often makes financial sense in the long run. Despite higher initial investment cost, electric equipment tends to have lower maintenance expenses and decreased fuel costs.

However, battery powered tool technology is still evolving and current products are not without their own sets of limitations. Everyone involved in the project's coordination really appreciates the landscaping staff for dealing with the growing pains of testing new, unfamiliar equipment.

PHOTO CREDIT: HANNAH CHAFFEE
LANDSCAPING CREW MEMBER EARLIE DUNLAP USES ELECTRIC MOWER

SPECIAL THANKS TO THE ACC CENTRAL SERVICES LANDSCAPE MANAGEMENT DIVISION FOR THEIR COLLABORATION!

The ACC Sustainability Office has worked to facilitate this pilot by collecting data and feedback from user surveys and focus groups to determine performance measures such as average run time and charging time of the tools.

A common reported drawback of the electric tools is their comparatively shorter run time which requires batteries packs to be switched out often. Power and weight are another factor in considering operating performance; electric backpack blowers tend to be significantly heavier than their gas-powered counterparts, leading to back strain and fatigue.

That's not to say that the tools haven't also received favorable reviews: the crew members really like the two recently purchased zero-turn electric mowers which have a ten hour run time. Crew members appreciate the mowers' responsiveness, how quiet they are and the reduction in vibration (which affects physical impact on the operator).

It's important to note that Landscape Management is seeing quality improvements with releases of new electric tool models. "We're not there yet, but we're getting closer," wrote Jeanne Connell the ACC Landscape Administrator. Landscape Management plans to continue to expand small tool electrification as it tests more models. Safety and wellbeing of the team is the number one priority which means a continual process of evaluating which new electric tools can efficiently replace gas-powered ones till the crew has a complete set of dependable and comparable alternatives.