

# The ELECTRIFICATION of Parks and Recreation

## How to position your agency for a more reliable and resilient future

By Richard J. Dolesh

One of the most far-reaching trends that will sweep the field of parks and recreation during the next decade is the conversion of fossil-fueled power sources to electric power. Many park and recreation agencies already have begun to implement the conversion from fossil fuels to electrically powered tools, equipment, vehicles and even buildings. However, other agencies have barely acknowledged that there is a tidal wave of change sweeping over public parks and recreation. They may be far less prepared to meet the challenges that such a changeover encompasses.

We are on the cusp of great change. Park and recreation agencies have an opportunity now to plan, budget and implement a changeover to electric power that positions them for more cost-efficient operations and a more reliable and resilient future that demonstrates a commitment to sustainability. We can make a truly sustainable commitment to doing our part to reduce greenhouse gas emissions and contribute to slowing the pace of climate change.

The cost of inaction in meeting this challenge will mean those agencies that do not step up will be left behind in capacity and ability to adopt innovative solutions, in

the cost savings of electrification, and in the ability to reduce their environmental footprint in a future challenged by a changing climate.

### What Is Happening and Why?

There are many reasons why this ground-shaking changeover is occurring so rapidly. These include a push toward more cost-efficient operations, a recognition that electric power based on renewable rather than fossil-fueled energy will

and buildings will be driven by public expectations, causing us to make a tangible commitment to do our share to reduce the impacts of climate change and to operate in a way that supports better health for our workers and the public.

The bottom line is that electrification is happening everywhere, all at once, and the cost of inaction is unsustainable.

Twenty-one states have now enacted laws requiring them to move toward 100 percent carbon-free energy sources, as have 180 cities through legislative or executive action. Six states have enacted laws phasing out sales of new vehicles powered by internal combustion engines (ICE). Approximately 24 percent of all electricity in the United States will be generated by renewable sources of energy in 2023, according to the U.S. Energy Information Agency.

The City of Raleigh (North Carolina) Parks, Recreation and Cultural Resources department has converted about 60 percent of its tools, small equipment and mowers to electric.

## We're Plugged In!

Raleigh Parks is using electric maintenance equipment for a greener and more sustainable Raleigh.



[raleighnc.gov/parks](http://raleighnc.gov/parks)

1919

tion Administration—a percentage that is growing annually.

The cost of converting to electric power will not be insubstantial, however. How park and recreation agencies will pay for the costs of converting to carbon-free energy is a matter of concern, doubly so in an inflationary cycle. On the positive side, however, tens of billions of dollars in new funding will be available to states and localities from the federal Inflation Reduction Act passed in 2022. Park and recreation agencies may be eligible for grants or matching funds to build out vehicle charging infrastructure, for conservation and climate-resiliency projects, for cost-sharing the purchase of clean-power vehicles and equipment, for community health projects that reduce urban heat island effects, and for community connectivity and walkability projects.

## EVs at DPR

There are currently 830 fleet vehicles throughout MNCPPC Prince George's County below is a breakdown of type and opportunity. These opportunities cover class 1&2 vehicles which comprise most of the fleet.

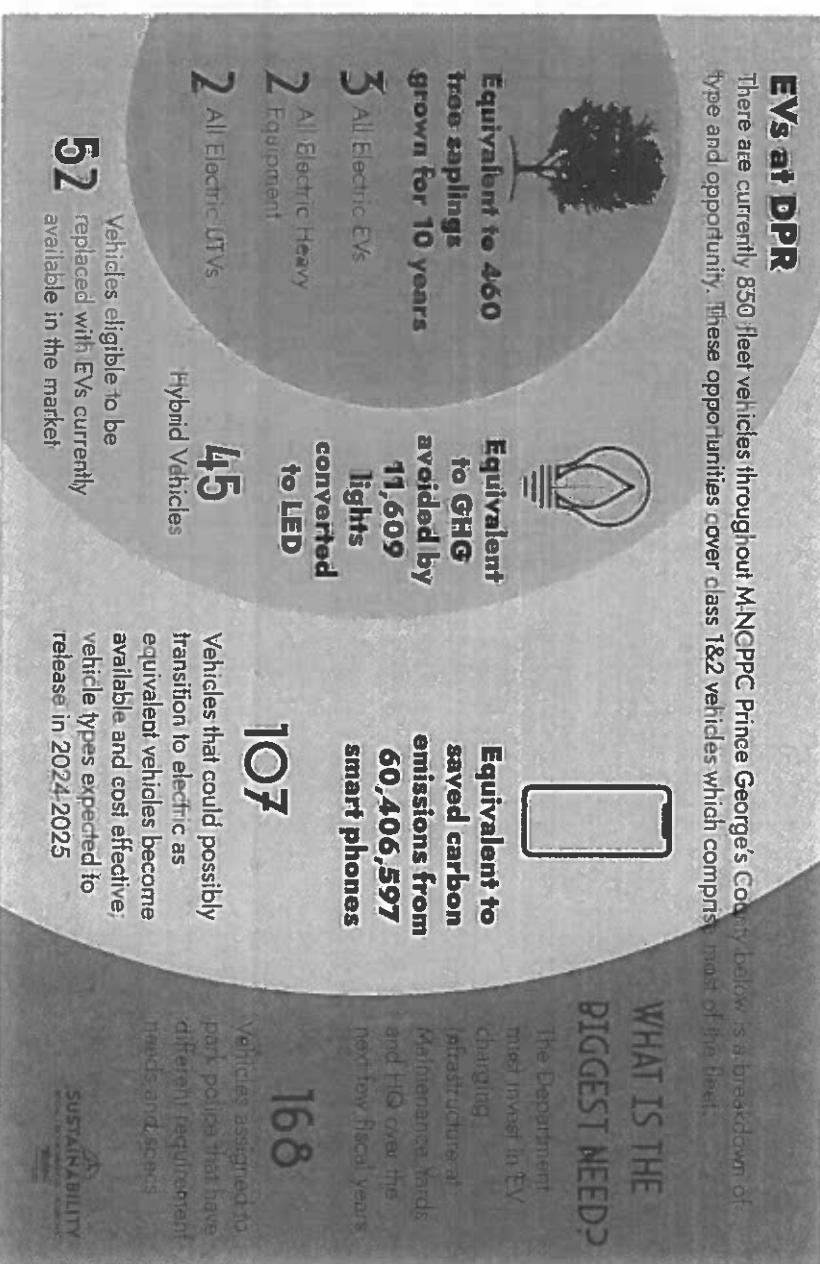


IMAGE COURTESY OF THE MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMMISSION

## Manufacturers Gearing Up for Electrification

In a wide-ranging conversation with senior representatives of The Toro Company, one of the leading manufacturers of commercial grade mowers and power equipment, the representatives affirmed they are making the conversion to electrically powered equipment a strategic priority of the company. "We are providing electrically powered products to our customers who are increasingly requesting such equipment," says Tony Ferguson, senior product marketing manager of the commercial division at the company.

The company sees the move to electrification as an industry-wide imperative driven by customer demand and regulatory factors. It's important to note that more leading manufacturers of diesel and gas-powered tools, equipment and vehicles to those powered by renewable sources of energy. Much of this regulatory framework is intended to reduce greenhouse gas emissions. "Customers want to be better stewards of the environment," says Paula Siefert, senior marketing manager at The Toro Company, noting this is a belief held strongly in both the public sector and the private sector.

commercial-grade mowers and power equipment recognize this need in the park and recreation space and either currently offer or plan to introduce electric-powered products in the future.

On the regulatory front, early adopting states, such as New York and California, are being followed by many others, passing mandates to transition from diesel and gas-powered tools, equipment and vehicles to those powered by renewable sources of energy. Much of this regulatory framework is intended to reduce greenhouse gas emissions.

A Smartflower, installed by Mecklenburg County at First Ward Park in Charlotte, North Carolina, is an innovative and almost sculptural solar collector that opens in the morning tracks the sun, and then closes at night.

## Widespread Agency Adoption Begins

Increasingly, agencies show they are embracing electrification strategies as vigorously as the supply industry. Park and recreation departments are installing public electric vehicle charging stations and upgrading charging capacity for their own vehicles. "Because we are a front-facing agency to the public, city officials are very supportive of our clean power goals," says Stephen Bentley, director of Raleigh (North Carolina) Department of Parks, Recreation and Cultural Resources. "The mayor or has been leading and the city council is fully behind us. We have

fully embraced the goals of our climate action plan and [have] fully integrated them into our budget process."

Are workers ready to make the changeover to electrically powered equipment and vehicles? Overall, maintenance supervisors say staff support it, even if there are some naysayers.

Andy Phillips, division chief of facility services for the Maryland National Capital Park and Planning Commission (MNCPPC), says some staff have commented on certain tools being too heavy for comfortable all-day use, but most contend new battery-powered equipment gets the job done. Additionally, it is reliable and doesn't require dealing with fumes or hazardous fuel. Phillips relayed a conversation he had with his heavy equipment crew when they first got a new electric-powered jackham-

mer for pavement and concrete removal, telling them they would like it. "Yeah, right, that's not gonna happen," one operator said. But after using the breaker on the job, they quickly became believers. Not only did the tool do the job well, but also there was no loud air compressor constantly running and no long cords or hoses to pull around.

Said one of the heavy equipment crew, "You can even carry on a conversation."

Staff are getting into the spirit of moving to electric power. Bentley noted that in Raleigh, they have about 200 employees in field operations. Battery life for blowers, weed eaters, chainsaws and other tools just doesn't make it through a full day. Park maintenance staff approached their supervisors with a plan to outfit one of their landscape equipment trailers to better handle

all the batteries and tools they need on the job. Working with electricians, they neatly wired-up chargers and built storage for tools, so that they could plug in their trailer and provide overnight charging for all the tools for a day's work.

## Innovation in the Park and Recreation Space

Innovations in clean power are exploding with new technologies being introduced on what seems to be a monthly basis. Among the technology advances that will be of particular importance to parks and recreation are large battery energy storage systems, especially those using low-tech materials, such as rocks, bricks and sand; solar photovoltaic coatings for building roofs, walls and windows; solar photovoltaic shingles; and smarter, more adaptable charging stations, espe-

