

Watts Up with Workplace Charging?

Peggy O'Neill-Vivanco

According to McKinsey and Company, electric vehicle (EV) sales in the United States have grown 40% since 2016. For a number of years EVs were out of reach for many, but now it is more affordable than ever to buy an EV.¹ With federal tax credits, state and utility incentives, many EVs are on par with the price and performance of comparable gas-powered vehicles. However, charging infrastructure has lagged behind and many Americans cite charging and battery concerns as a reason for not switching to an electric car. According to a 2023 Workplace Charging Barrier Study by Cadeo Group, "workplace charging can alleviate range anxiety thereby encouraging EV adoption across diverse segments of population... and... can further ameliorate inequitable distribution of charging infrastructure when sited in underrepresented and overburdened communities."²

Thanks to funding support from the U.S. Department of Energy, a new project takes insufficient charging infrastructure head on. **Equitable Mobility Powering Opportunities for Workplace Electrification Readiness** (or EMPOWER) is the first and only equity-focused, nationwide workplace charging program in the United States, and is led by Columbia-Wilamette Clean Cities with East Tennessee Clean Fuels Coalition, over 30 Department of Energy Clean Cities Coalitions, and industry partners. Vermont Clean Cities at UVM's Transportation Research Center, Granite State Clean Cities and Maine Clean Communities Coalitions are leading the implementation of this national workplace charging alliance in our states by working to simplify the transition to EVs for all, by expanding charging infrastructure and by making charging convenient, accessible, and equitable.

Why focus on Workplace Charging?

Vermont and Granite State Clean Cities aim to address the electric charging speed bump through EMPOWER by providing technical assistance to help install EV chargers in workplaces across the Northern Tier of New England. One of EMPOWER's specific goals is to ensure that 40% of the EV chargers installed will be at workplaces with historically underserved work forces. This includes workplaces owned by women or minorities, workplaces with majority-minority workforces, or with employees who live in areas which are rural, formerly redlined, low-income, or have low air quality. For states like Vermont and New Hampshire, our underserved communities include rural areas with higher energy burdens, increased commuting times, limited home charging opportunities, and limited broadband access. Further, there are areas in our communities with a high number of rental properties and multi-unit dwellings, where home charging is not always a viable option. Workplace charging can provide a convenient location and fueling flexibility for those without dedicated home charging, as well as mid-day charging to benefit workers with longer commutes.

Our goals with this project are to provide education and outreach activities to employers and employees on the benefits of workplace charging; provide survey tools, energy calculators and EV information to help identify employee charging needs and help employers find answers to their charging questions, and the right fit to their workplace charging needs. With a focus on energy and environmental justice and underserved



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communities, we aim to get pledges from 12 to 15 employers in each state to install workplace charging.

What's in it for employers?

Vermont and Granite State Clean Cities staff can provide workplaces with free, direct technical assistance and consulting to help determine the best workplace charging plans for them – from hard-wired to off-grid, solar options. We can assist with assessing work sites for suitability and collecting information from employees to help determine interest and demand. We can provide resources and planning assistance for installation, signage creation, employee education, and company policy development. We can help connect organizations with utility partners, leading charging equipment manufacturers, certified installers, and other important vendors. We can provide information and updates on funding opportunities, and state and utility incentives that may offset the cost of purchase and installation. Finally, we can provide statewide and national promotion of workplaces that help speed America's transition to electric transportation.

As fleets begin the transition to electrification, workplace charging infrastructure can serve employees and fleet vehicles in the right situations. Employees can pay appropriate fees for access to charging at work during the day, and fleet vehicles can utilize charging in off-hours.

By pledging to install workplace charging, employers across our states can demonstrate their social and corporate leadership by supporting sustainable transportation options, expanding equitable access to EVs by providing charging to employees with no dedicated home charging and accelerating the U.S. federal target of net-zero emissions by 2050.

Peggy O'Neill-Vivanco is the Director of Vermont Clean Cities. To learn more about the EMPOWER project, contact O'Neill-Vivanco in VT (poneillv@uvm.edu), Jessica in NH (jessica.wilcox@des.nh.gov) or visit: <https://www.workplacecharging.com>.

Major project partners working with Vermont Clean Cities include Burlington Electric Department, Green Mountain Power, and Two Rivers-Ottawaquechee Regional Commission.

Major project partners in the Granite State include Eversource Energy, Liberty and Unutil.

Links available online at GET's website:
¹ McKinsey and Company. "Building the Electric Vehicle Charging Infrastructure America Needs."

² Workplace Charging Barrier Study. 

Lebanon, NH City Officials Thank EV-friendly Employers

Sherry Boschert

The City of Lebanon, N.H. publicly thanked 17 Upper Valley employers in New Hampshire and Vermont that offer employees some electric vehicle (EV) charging or have other policies promoting EV adoption. The city displayed the resolution at the Upper Valley EV Expo on September 30 at Lebanon City Hall.

The resolution encourages other employers to get free help from a new federal program called EMPOWER that helps employers explore workplace charging, so that they do not have to figure it all out on their own. The northern New England contacts for EMPOWER are: Peggy O'Neill-Vivanco of the Vermont Clean Cities Coalition (poneillv@uvm.edu); Jessica Wilcox of the New Hampshire Department of Environmental Services (jessica.wilcox@des.nh.gov), and Jon Gagne of Maine Clean Communities (jgagne@gpcog.org).

Lebanon City Council Resolution Honoring EV-friendly Employers

WHEREAS, the Lebanon City Council is committed to promoting sustainable transportation options and reducing or eliminating greenhouse gas emissions; and

WHEREAS, electric vehicles (EVs) reduce emissions by two-thirds compared with gasoline vehicles, even after



Norwich EV charger installation at Orvis in Manchester, Vermont through the Green Mountain Power Workplace Charger Program. (Courtesy photo).

accounting for emissions created by electricity production (according to the U.S. Department of Energy), and EVs get cleaner as our electrical grid gets cleaner; and

WHEREAS, EVs save drivers money compared with com-

parable gas vehicles thanks to greater efficiency, lower fuel costs, and minimal maintenance; and

WHEREAS, the least expensive, safest, and most logical places to charge an EV are at home or at work, where vehicles typically sit for eight or more hours per day; and

WHEREAS, not everyone can charge at home – especially renters and residents of multi-unit housing – which makes the availability of charging at work even more important; and

WHEREAS, being an EV-friendly employer can help with recruiting and retaining workers who want to drive EVs; and

WHEREAS,

- Dartmouth Health provides more than 20 EV charge ports for employees at three sites (Dartmouth Hitchcock Medical Center, the Heater Road Clinic, and Alice Peck Day Hospital); and
- Hypertherm Associates provides at least seven charge ports at four of its buildings; and

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WESTERN MAINE'S EV CHARGER NETWORK IS GROWING

With New Charging Stations, Western Maine's Foothills Become an EV-Friendly Community Center for an Ecology-Based Economy (CEBE)

The Center for an Ecology-Based Economy (CEBE) recently added four new electric vehicle charging stations, adding eight new plugs to their Western Maine EV charging network. This latest addition makes a total of 26 public plugs that the climate justice nonprofit has installed over the last eight years. The new ChargePoint Level 2, dual-plug chargers are located at Buck's Ledge Community Forest in Woodstock, the Paris River Park in South Paris, the Water Street trailhead for the Farm-to-Town trail to Roberts Farm in Norway, and at the Whitman Street parking lot behind the Fare Share Co-op in Norway. Also, the plugs at the Paris Police Station in South Paris and the Deering Street lot in Norway have been upgraded to dual-plug ChargePoint chargers. Exact locations of the charging stations can be found on PlugShare.com.

Funding from Efficiency Maine Trust, The Nature Conservancy, and an anonymous foundation helped make these upgrades possible. "Electric vehicles are in the future for many residents. Any way we can help with that here in Paris without putting the burden on the taxpayer is a good thing," said Dawn Noyes, Paris Town Manager. "Thank you to CEBE for helping Paris with grants to install two charging stations here in town."

With these recent additions to our

Western Maine EV Charging Network, CEBE declares that the western foothills region of Maine is an EV-friendly community. Norway, Maine has a current total of 13 plugs with a population of 4,962 residents (2020). Neighboring Paris has a total of 10 plugs with a population of 5,187 residents (2020). That means there are roughly 382 residents per plug in Norway and 518 residents per plug in Paris. The density of EV chargers in the western foothills region of Maine is now higher than figures reported by GreenCars.com where they state that "five of the top 10 EV-friendly cities are located in California. San Francisco-Oakland was far and away the leader, with only 465 residents per charger, followed by San Diego in second place (824 residents per charger) and Los Angeles in third (852). Fresno (5th place, 1,024) and Sacramento (7th place, 1,111) also ranked."

"Having three networked dual-plug charging stations within a short walk of Norway's historic Main Street business district is an economic driver for the area," said Scott Berk, President of Norway Downtown. "We often see out-of-state cars charging downtown, which can only be good for the tourist economy." Norway's Water Street chargers also provide an opportunity to charge while hiking, skiing, or snow-

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USDA Rural Development Funds New Hampshire and Vermont Grantees with More than \$1,000,000

Part of Biden-Harris Administration's \$808 Million Investment to Strengthen Infrastructure and Create Jobs Throughout U.S.

On August 28, the U.S. Department of Agriculture (USDA) State Director of Rural Development in Vermont and New Hampshire, Sarah Waring, announced that the Agency is investing \$1,064,000 to municipalities and non-profit organizations in both states through the Community Facilities Direct Loan and Grant Program. The grant funding is part of the Agency's \$808 million national infrastructure and jobs initiative that USDA Secretary Tom Vilsack announced earlier today, focused on helping rural cooperatives and utilities build and improve electric infrastructure, water systems and community facilities in rural areas. The investments will help 480,000 people in 36 states and two U.S. territories stay connected, safe and employed with good-paying jobs.



Northeast Kingdom Waste Management District (NEKWMD) purchased a polystyrene recycling machine with grant funding. The machine condenses the material into ignots which will be sold for use in making foam insulation panels. (NEKWMD)

"USDA invests in rural America because we know strong communities are rooted in their people," Secretary Vilsack said. "Powering people with modern infrastructure creates good-paying jobs and supports opportunities for people to build brighter futures. The investments we're announcing today demonstrate the Biden-Harris Administration's commitment to ensuring that people who live and work in rural areas have every opportunity to succeed – and that they can find those opportunities right at home."

"With this essential funding through Community Facilities grants, rural towns throughout the Twin States will

see quality of life improve in real time," Waring said. "From a state-of-the-art Styrofoam recycling machine in Vermont's Northeast Kingdom, to municipal buildings generating renewable energy in Coos County, New Hampshire, these investments provide a path forward for people looking to make the right economic and environmental choices. And those choices are made possible by the Biden-Harris Administration's insight into the needs of rural communities, and fearless action on their behalf."

The funding advances President Biden's Investing in America agenda, a key pillar of "Bidenomics," to grow the American economy from the middle-out

and bottom up – from rebuilding our nation's infrastructure, to driving over \$500 billion in private sector manufacturing and clean energy investments in the United States, to creating good-paying jobs and building a clean-energy economy that will combat climate change and make our communities more resilient.

The 139 investments announced will help people living in Alabama, Alaska, Arizona, California, Florida, Iowa, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Mississippi, Montana, Nebraska, New Hampshire, New Mexico, New York, Nevada, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, Puerto Rico and the Marshall Islands.

For example, in Lyndonville, Vermont, the Northeast Kingdom Waste Management District will purchase a commercial-grade polystyrene recycling machine with help from a \$36,000 Community Facilities grant. In the first year of use, it will recycle roughly four tons of waste material, which will be sold to a commercial buyer to use in foam insulation panels.

In Colebrook, New Hampshire, solar panels on public works buildings will offset 100% of the costs to operate them. This will provide approximately \$81,000 in annual savings over the next 25 years, and generate carbon-free energy on site.

Under the Biden-Harris Administration, Rural Development provides loans and grants to help expand economic opportunities, create jobs and improve the quality of life for millions of Americans in rural areas. This assistance supports infrastructure improvements; business development; housing; community facilities such as schools, public safety and health care; and high-speed internet access in rural, tribal and high-poverty areas. Visit www.rd.usda.gov.

For NH and VT – Rural Development US Dept of Ag, contact Sarah Waring, State Director at (802) 828-6000, or Sarah.Waring@usda.gov.



City Thanks EV-friendly Employers

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- Adimab recently installed EV charging for employees; and
- Mascoma Bank offers employees an exceptionally low rate on loans to buy EVs; and
- Local car dealers including Lebanon Ford, Volvo and Volkswagen of Lebanon, and Nissan of Lebanon provide EV charging for use by employees and others; and

WHEREAS, these employers serve as role models for forward-thinking employers throughout the Upper Valley,

NOW, THEREFORE, BE IT RESOLVED by the Lebanon City Council that we, the members of the Lebanon City Council, express our gratitude to Dartmouth Health, Hypertherm Associates, Mascoma Bank, Adimab, Lebanon Ford, Volvo and Volkswagen of Lebanon, Nissan of Lebanon, and all other employers in Lebanon who make EV charging available to their employees or otherwise facilitate adoption of EVs by employees. We are grateful for their efforts to meet the needs of employees who drive EVs and to create a sustainable and greener future for our City.

ALSO, BE IT RESOLVED that the members of the Lebanon City Council express our gratitude to employers elsewhere in the Upper Valley who may employ Lebanon residents and who make some EV charging or other EV-friendly policies available to employees, including:

- In Hanover, N.H. – Dartmouth College and Kendal at Hanover;
- In Enfield, N.H. – Montcalm Golf Club;
- In Norwich, VT. – SolaflectEV and King Arthur Baking Company;
- In Hartford and White River Junction, VT. -- The Town of Hartford; Norwich EV;



Clayton Morlock talks with Melissa Ingrisano about his BMW i3 EV at the Upper Valley Electric Vehicle Expo on September 30 in Lebanon, NH. (Meg Newman)

Mascoma Bank; Key Chevrolet of White River; Upper Valley Honda, and All-Star White River at the Gilman Office Center.

LASTLY, BE IT RESOLVED that the members of the Lebanon City Council encourage other employers to take advantage of free assistance for installing workplace EV charging that is available through the federal EMPOWER program (Equitable Mobility Powering Opportunities for Workplace Electrification Readiness) by contacting EMPOWER at www.workplacecharging.com or Jessica.Wilcox@des.nh.gov.

Dated this 20th day of September 2023.
Signed by Lebanon Mayor Timothy J. McNamara on behalf of the Lebanon City Council. ♻️

Avast, Mate – Sail Ho!

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and above-deck storage provide limited deck space for sail-supporting structures.

What's the benefit?

For shipping operators, the biggest benefit is that the wind is free.

The sails cost a reported \$2.55m, according to Yara Marine, and fuel savings should mean payback in as little as seven to 10 years – about a third of the lifespan of the typical cargo ship. Incorporated into newly built vessels with optimized hull and drive train design alongside advanced course planning, they could reduce fuel use by almost one third.

Additionally, consumer demand for low-GHG impact products is growing and some nations are considering imposing carbon emissions fees on shippers.

For the planet, the benefit is a reduction in emissions from an industry that, according to UNCTAD contributes about 2.8% of all GHG emissions and is a focus



The Alfa Laval/Wallenius Oceanbird. (Courtesy image)

for GHG reduction mainly due to its rapid growth, its dependence on carbon-intensive fuels, and the sheer size of its business. More than 80% of the world merchandise trade by volume is transported by sea.

After a career in data product management, Martin Wahl has worked in biofuels since 2006, currently with Lee Enterprises Consulting, a large bio-economy consulting group. Dividing his time between California and New Hampshire, he serves on Corte Madera, California's Climate Action Committee and is a Newfound Lake Region Association member. ♻️