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ELECTRIC VEHICLE CHARGING STATIONS:

Two dual-port Level 2 stations

LOCATION: Golisano Institute for Sustainability (Rochester Institute of Technology campus)**VENUE:** Higher education; stations available to students and staff

Charging Stations at RIT

This project was initiated upon the request of professors and staff who drive electric vehicles (EVs) and wished to charge their vehicles during class and activities at the Rochester Institute of Technology (RIT). The campus is located outside of the City of Rochester and is served by only a single bus line, so the vast majority of faculty and staff commute in personal vehicles.

The EV charging stations were installed in the open parking lot of the Golisano Institute for Sustainability (GIS). The stations were included in the earliest construction plans for the new center, so complications regarding site preparation were minimal. The building is home to GIS master's degree and Ph.D. programs in sustainability and architecture, and it was constructed to meet Leadership in Energy and Environmental Design (LEED) standards.

Two Level 2 units with four charging ports were installed in a premium parking location in a lot next to the Center. The four parking spots are marked with aluminum signage, and the stations themselves are highly visible. Precast parking curbs were used to protect the units.

RIT maintains the stations. They are not on an EV charging network, so the stations cannot accept payments. Future EV charging stations at RIT, according to senior sustainability advisor Enid Cardinal, would benefit from fee collection and policy enforcement so that the chargers are more readily available to multiple EV drivers.

Use of the station has been fairly consistent since the soft opening in April 2013. During the spring 2013 semester, the station was regularly frequented by three or four vehicles a day, including three Chevrolet Volts and a Nissan Leaf. Usage declined slightly during the summer intersession to one or two vehicles per day.

Lessons learned from this project include the need to establish payment strategies and parking enforcement policies. RIT was able to avoid many hurdles and added costs experienced by other institutions by incorporating the stations into a larger construction project. Because the parking lot was already being reconstructed, trenching costs were substantially lower. RIT has plans to install additional stations but would like to establish a bigger picture plan and strategy for installing this technology beforehand. RIT administrators must determine how EV charging policies will be enforced, what those policies will be, how fees will be levied, and whether or how the institution might pull electricity from parked EVs during times of peak usage. Because these matters were not previously considered, the answers will inevitably be complicated by the precedent and limited functionality of existing EV chargers. Yet, given that more than one third of RIT's total carbon footprint is derived from the commuting habits of employees and students, the opportunity and potential gain remain significant.



New York State has a goal of having over 3,000 public and workplace charging stations statewide by 2018 through ChargeNY. New York State Energy Research and Development Authority (NYSERDA) supports several charging station projects across the State.