

Electric Vehicles (EVs) in Beaverton

Sustainability Project Team Report

INTRODUCTION

In the next two years, nearly every major auto manufacturer will be introducing plug-in EVs into the marketplace. This first sustainability project team was created to explore the City's strategy to welcome EVs and their infrastructure to Beaverton. This team approach was initiated to address how EVs will affect the various departments within the City. This team approach brought experienced City personnel into the sustainability conversation and also raised awareness about how EV activity will affect not only the City, but our businesses and residents.

The project team was comprised of members from the following departments:

- Community and Economic Development
- Engineering
- Finance
- Human Resources
- Mayor's Office

The team commenced in the summer of 2010, to develop this informational report to outline the City's strategy to welcome EVs and their infrastructure. The experience of the project team provided comprehensive oversight of the City's strategy.

STAFF RECOMMENDATIONS

The project team recommends that the City encourages EV use in Beaverton by implementing the following initiatives:

1. Supporting EV infrastructure and its use in the City of Beaverton

- a. Coordinating a consistent permitting process for residents, businesses and the City to install EV stations.
- b. Purchasing one or more EVs to add to our current fleet.
- c. Incentivizing the cost of residential and commercial permit fees for EV charging stations.

2. Hosting EV charging stations

- a. The City should consider stations at the following:
 - i. City Library (OpConnect)
 - ii. City Hall (Ecotality)
 - iii. City Library (Ecotality)



The City of Beaverton supports the use of EVs and alternative fuels to reduce our dependence on fossil fuels and emissions.

Beaverton's strategy includes:

- Educating staff to encourage EV development and use
- Adopting consistent signage
- Making the process of permitting for charging stations easy and consistent
- Incentivizing station installations
- Supporting businesses and clean technology development
- Promoting availability of tax credits to residents and businesses
- Exploring electrification of City fleet vehicles.



- b. The City should pay for electricity costs at City-hosted charging stations for at least two years, to coincide with the federal grant project.
- c. The City should purchase renewable energy offsets for power at EV stations.

3. Continuing to explore economic development opportunities surrounding EV and the affiliated green technologies

- a. Foster public-private partnerships to support EV infrastructure and car use.
- b. Support existing green technology businesses and associations.
- c. Recruit additional green technology companies to Beaverton.

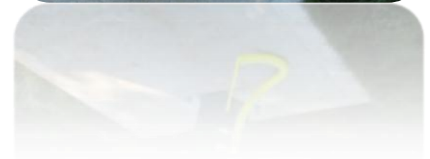
Below are additional details about the core topics discussed by the team:

1. Paying for Power

- a. The City can demonstrate a strong commitment to EVs by paying for power at public charging stations.
- b. Charging fee at City charging stations should be revisited in two years.

2. Offering Incentives for EV stations

- a. City recommends creating incentives for residential and commercial charging stations by subsidizing the cost of the electrical permits and design review fees.
- b. A sustainability line item has been established in the City’s budget to incentivize electrical permit fees and pay for electricity costs for the stations hosted by the city. A request for extra funds to cover permitting incentives was submitted as part of the 2010 supplemental budget process and is awaiting approval.
- c. The City’s permitting fees are estimated to range between: \$321-\$1200*:
 - Design Review (Type I Review is ~\$111 and Type II is ~\$1775*)
 - Electrical Permit - \$200
- d. State and Federal tax credits are currently available to both residents and businesses.
 - Residential
 - i. EV Purchase - \$7,500 (Federal), \$1,500 (Oregon).
 - ii. Charging Station - \$2,000 (Federal), \$750 (Oregon).
 - Commercial
 - i. EV Purchase - \$7,500 (Federal), up to 35% of incremental cost difference between ICE and EV (Oregon).
 - ii. Charging Station – Up to 50% of costs (Federal), up to 35% of eligible costs (Oregon).



* Fees are subject to change



3. Permitting

There are three different permitting processes that may apply:

- a. Public right-of-way permit process:
 - Part of normal permitting process already in place at the City.
 - Utility conflict evaluation and examination of other issues (ex: floodplain, street trees) to be conducted the City's Public Works Department.
 - Traffic safety evaluation to be conducted by the City's Engineering Department.
 - Evaluation of impacts on adjacent property owner/neighborhood to be conducted by the City's Community Development Department.
 - Two spaces can be utilized within the right-of-way (50 ft limit) at discretion of the City's traffic engineer.
 - Electrical permit can be obtained over the counter or by a State minor label electrical permit which is normal part of the City's permitting process.
- b. Residential permit process:
 - Part of normal permitting process already in place at the City.
 - Electrical permit can be obtained over the counter or by a State minor label electrical permit.
- c. Commercial, Multi-family, and Institutional permit process:
 - Part of normal permitting process already in place at the City.
 - Electrical permit can be obtained over the counter.
 - Could be subject to design review if substantial change to landscape or parking lot configuration required.
 - Staff will guide customer to minimize need for design review to be conducted by the City's Community Development Department.
 - Impact protection (bollards) will be required at EV charging stations where they can be impacted by a vehicle.
 - Utility conflict evaluation and examination of other issues (ex - floodplain, street trees).



4. Ensuring Accessibility

EV charging stations in commercial, multi-family, and institutional projects are required to be ADA accessible. This requires a minimum width of 36 inches for an access aisle to the charger, the charger being within ADA-reach ranges and the access aisle to have a maximum slope and cross-slope of two percent.

5. Consistent Parking Signage

- a. In the public right of way, signage will be installed by the City.
- b. On private property, signage will be provided by the City upon request.
- c. Most stations can service two parking spaces, but only one space should be designated for "EV parking only".
- d. It is recommended that commercial, multi-family, and institutional zones include signage similar to parking regulation signage.
- e.



6. Enforcing EV Station Only Parking

- a. In the public right of way, police will enforce parking violations.
- b. The City should add code language allowing EV parking violations to be cited to a specific code item.
- a. On private property, enforcement is up to the property owner.
- b. Beaverton police should be made aware of the EV stations and enforcement issues related to charging at both public and private charging areas.

7. Maintenance and Security

- a. The City will maintain signs within public right of way, based upon franchising language.
- b. The City ordinance for graffiti will apply.
- c. The City should pay special attention to language in contractual agreement with any charging station vendor.

8. Future Considerations

- a. Retrofitting stations to accept user payments should be considered in any agreements entered into by the City.
- b. The City should revisit franchise opportunities.
- c. The City should consider any costs required for maintenance of City-hosted charging stations.
- d. The City should revisit staff recommendations annually.

9. Contract with Ecotality

- a. Ensure that City property is returned to its original condition if any hosted stations are removed (at the cost of vendor - to include pouring concrete pad replacements and ensuring all wires are removed.)
- b. Technology upgrades, maintenance costs and responsibilities should be discussed as part of station installations through vendors.

10. Municipal Fleet

- a. Support the purchase of an EV for City fleet.
- b. Encourage City fleet personnel participation in locating necessary fleet charging stations.

11. How Will the City Encourage Businesses to Invest in Stations

- a. Offer recommendations in the design phase to encourage installing stations (Community Development Department)- such as putting in conduit in advance.
- b. Offer literature for building developers to explore an EV station.
- c. Share information and guidelines about EV stations with internal teams, developers and peers.

12. Economic Development that Supports

EV Economic Development Benefits

A widespread shift from internal combustion vehicles to electric vehicles (EVs) has the potential for **significant job creation**. By 2030, with a targeted focus on transportation electrification, the economy could see as many as:



\$20 million +

in Federal Funding already flowing into OR for advanced battery and infrastructure development

with the potential for significantly more...

Transitioning to electric vehicles will help keep money in the local economy through lower operating costs and "fuel" provided by local utilities.

Source: Electrification Coalition "Economic Impacts of the Electrification Roadmap", April 2010



Green/Clean Technologies

- a. Actively engage with businesses that support electric vehicle, such as software developers, technology companies and service providers for both the electric vehicles and the charging stations, with the intent to encourage them to locate in Beaverton.
- b. Advertise our EV “friendliness” to attract green technology companies to Beaverton.

IN CONCLUSION

In the next two years, the arrival of EVs from almost every major auto manufacturer is expected and Beaverton will be affected by this arrival. The first sustainability project team explored how the use and arrival of EVs and installations of charging stations will be handled by departments across the City.

The team approach to this project ensured that experienced personnel were involved in the conversation and raised awareness. The team recommended that the City implement procedures and strategies to support EV use, host EV charging stations at various locations throughout the City, and continue to explore economic development opportunities surrounding EVs and green technologies. The team notes that the current permitting procedures can process the expected EV station permit requests. The team suggested supporting the purchase of EVs for the City’s fleet, using consistent signage, and that incentives should be initiated to support EV charging station installations. Finally, the team recognized that there may be a need to reconvene annually to discuss changes and strategies to advance EV strategy.

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