Electric Vehicle (EV) Policy Issues

NASEO Transportation Committee – Conference Call
August 31, 2017
EV Policy Issues

- Regulation of EV charging
- Electric rates
  - Time-of-use rates
  - High power charging
- Infrastructure deployment
Regulation of EV Charging

Transformer
Service

Meter
Panel
Conduit/Wiring

Charging Station
Vehicles

Electric rate
Billed by electric company to site host;
$/kWh

Usage fee
Billed by charging station to EV driver; could be
$/kWh, $/hour, $/session, or other
Regulation of EV Charging

Considerations:
- Does electric vehicle charging constitute the sale of electricity, or the sale of a charging service?
- Should electric vehicle charging be regulated by the PUC, or by some other entity?
- If not regulated by PUC, what entity is accountable for consumer interests?

More information:
- Center for Climate and Energy Solutions, https://www.c2es.org/initiatives/pev/maps/who-can-own-operate-a-charging-station
How do PEV owners respond to time-of-use rates while charging EV Project vehicles?
Electric Rates

Considerations:
- Goal: encourage charging behavior that makes efficient use of the power grid
- What mechanisms should we deploy that balance cost and effectiveness? TOU rates are one of many potential approaches to “managed charging”
- How do we phase the approach to encourage market growth and accommodate future technology advances?

More information:
High Power Charging

Figure 4 – Example of the aggregated demand curves for a typical week of two DCFC
High Power Charging

Considerations:
- High powered EV charging is a “different” kind of usage
- Electric rates must balance various objectives, including system cost, policy priorities, and fair customer treatment
- Potential solutions:
  • Operational: increase utilization, pair multiple chargers
  • Technical: manage charging, pair with energy storage
  • Electric rates: innovative approaches such as transitional rates

More information:
Infrastructure Deployment

Service Connection | Supply Infrastructure | Charger Equipment
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Electric Company | Customer | Electric Company
Electric Company | Customer | Electric Company
Electric Company | Customer | Electric Company
Electric Company

Business As Usual
“Make Ready”
Charger Only
Full Ownership
Charging Infrastructure

Considerations:
- Electric companies well suited to spur EV adoption, including infrastructure deployment
- What type of program best meets the needs of your state, market, and customers?

More information:
Charging Infrastructure

- Select state examples:
  - CA: PG&E, Southern California Edison, and SDG&E approved pilots, additional proposals pending
  - WA: Avista approved pilot; commission policy guidance for future proposals (*Docket UE-160799*)
  - MA: Eversource, National Grid proposals pending
  - OR: Portland General Electric, PacifiCorp proposals pending
  - MD: Public Conference 44 stakeholder process
  - MI: Aug. 9, 2017 Technical Conference leading to guidance
  - OH: AEP proposal pending as part of smart cities program
  - UT: Rocky Mountain Power approved for incentive program
  - NV: NV Energy may propose incentive programs
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