Electric Transportation

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Electric Transportation

The movement of people and goods using electricity as a transportation fuel
Transformative Benefits

- Economics
  - less than $1/gal equivalent

- Environmental
  - 80% reduction in GHG emissions

- Performance & Customer Satisfaction

- Energy Security

- Beneficial Utility Revenue & Grid Asset Utilization
The Charging Pyramid

• More than 80 percent of residential and fleet charging is done at “home”
  – “Home refueling,” charging overnight at home for personal vehicles and at work for fleet vehicles

• Workplace charging is on the rise and supports electric vehicle adoption
  – Provides charge for those without dedicated home charging
  – Extends daily range

• Public: Allows for mass adoption
  – Relieves “range anxiety”
  – BEST in destination locations or along major highway corridors
Electric Vehicle Supply Equipment (EVSE) Pilot

- 240 at Home
- 175 at Work/Fleets
- 60 in Public
- 7 DC Fast Chargers

Integrated Network

User Web Portal

Utility Web Portal
Grid Impacts

Residential Daily Demand Per PEV

HOUR BEGINNING

KW

Weekday
Weekend
Analysis & Economic Modeling

Regional Perspective Costs and Benefits Per Personal Light-duty Vehicle,
OR + WA Base Case, NPV 2017 - 2036

Costs
- RPS Cost
- Electric Carbon Cost
- T&D Cost
- Gen. Capacity Cost
- A/S Cost
- Energy Cost
- Charger Cost
- Incremental Vehicle Cost

Benefits
- O&M Savings
- Gasoline Carbon Savings
- Gasoline Savings
- Federal Tax Credit

Net Benefit

Costs vs. Benefits

Costs: $1,941
Benefits: $0

Net Benefit: $1,941
Next Steps at Avista

- EVSE Pilot
  → long term program
- Bus Electrification
- Education & Outreach, Low-Income Programs
- Commercial Applications Research
- Ridesharing & Autonomous EV Research
Thank You!

Photo: Huntington Park, Spokane, Wash.