Electric Vehicle Fast Charging Technology and Demand Charges

Mike Salisbury – Transportation Energy Lead
“Opportunities for Vehicle Electrification in the Denver Metro area and Across Colorado”
Relationship between PEV Sales Rate and DCFC Stations per Capita by City
DCFC Station Challenges

• High Capital Costs
  Low Utilization
  + Demand Charges
  High Operating Costs
Variance in Annual Electric Bills for DCFC Stations in Colorado
Across Colorado, Demand Charges Would Account for 89% of a DCFC Station’s Electric Bill
Modeled DCFC Distribution by Time of Day

Source: NREL, Electric Vehicles in Colorado: Anticipating Consumer Demand for DCFC
EV Demand Charge Pilots

• Southern California Edison
  • 5 year suspension of demand charges, higher per kWh rate
• San Diego Gas & Electric
  • Eliminates demand charge, focuses more on coincident peak
• Pacific Power 10 year transitional rate
  • No demand charges (under 1 MW), 3 times higher per kWh rate during peak periods
Xcel Minnesota Demand Charge Limiter