Foothill Transit

Electric Bus Fleets as a Distributed Energy Resource

CPUC Advanced Rate Design Forum
December 11, 2017

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Foothill Transit Fast Facts

- Serving eastern LA County, 371-bus fleet (CNG and electric), 15 million passengers/year
- 16 fast charge buses in operation, 14 extended range currently being deployed
- Electric buses on the road since 2010, 1.3 million electric miles to-date
- 100% electric by 2030!

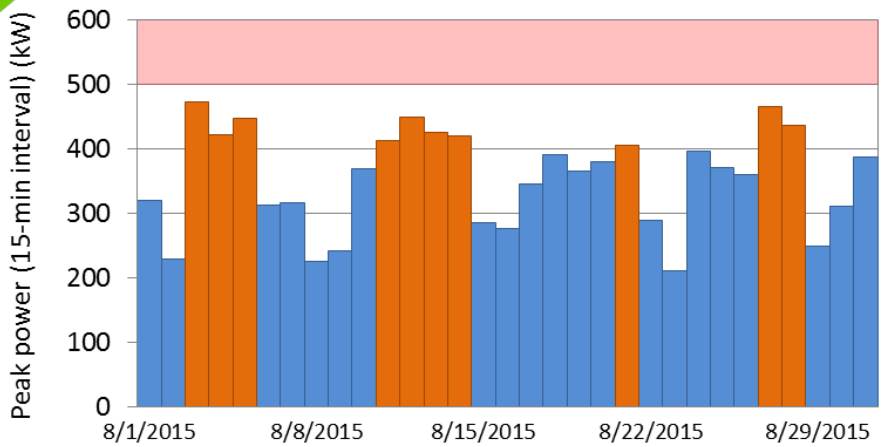
Today's Electric Infrastructure: On-Route

Azusa Intermodal Transit Center

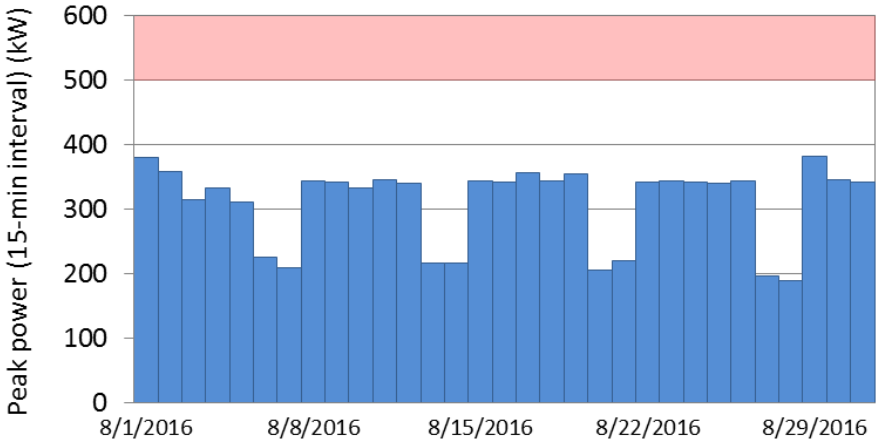
Pomona Transit Center

- Two on-route stations, each with two charge heads
- Up to 500kw (fast charge buses), 120kw (extended range buses)
- 74,500 kwh monthly usage
- 15.2c/kwh (winter), 20.1c/kwh (summer)

Demand Charge & Demand Mgmt



Aug 2015 – uncontrolled demand



Aug 2016 – managed demand

- 2015: Peak load ~500kw, high demand charge, exceeding tariff
- 2016: Software solution mitigated demand ~350kw, well within tariff
- Elec costs & DCs now stable with mgmt. software, high volume use, consistent operations

DER has many possible benefits…

- Lower electricity costs or rate tariff
- Support for up front infrastructure / equipment costs
- Being a good neighbor on the grid
- However: we're not looking for a new revenue source

…but also several concerns

- Would it shorten battery life? (or violate battery warrantees?)
- Would it interfere with or add complexity our operations?
- Would it increase up-front / capital costs?
- Would it require dedicated staff time or additional staff to manage?

Questions?

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