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New Mexico Public Regulation Commission's Grid Modernization Webinar Series
May 19, 2022 Webinar #7

Transportation Electrification in Distribution Planning

Meeting Objectives

- Provide overview transportation electrification (TE) and its impacts on distribution system planning.
- Gather stakeholder input on the opportunities and challenges of supporting and addressing transportation electrification in a Grid Modernization NOPR

In attendance:

- 38 individuals
- 19 distinct participating organizations represented

Meeting Agenda is available [here](#)

A presentation on Transportation Electrification in Distribution Planning by:

- Trina Horner, Director, Kevala [here](#)

Stakeholder Facilitated Discussion (Grounding; Reflection; Interpretation; Decisional)

Considerations for Grid Mod Notice of Proposed Rulemaking (NOPR):

- The growth in EVs in NM was 164% in 2021. TE is expected to accelerate at a non-traditional pace creating an urgency to incorporate TE planning into grid planning.
- How to think of ZEVs as an opportunity for the grid:
 - They are both a supply and demand side resource
 - They can be moved, rather than only serve in a fixed location
- Evaluating impacts of EVs can be accomplished through adoption/deployment scenarios that can be incorporated into distribution planning taking into account:
 - Where vehicles will be charged
 - When vehicles will be charged and for how long
 - Number of vehicles that will be charged
 - Who are ZEV adopters? How will adoption change over time?
 - When does the aggregate impact of adoption hit the grid?
- Incentives and rate design can help manage vehicle/fleet owners' charging behavior.
- Timing mismatches
 - Long-term nature of distribution planning and desire to get NOPR done in a year.



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- Brisk pace of EV adoption v. slow regulatory processes. How can the regulatory process stay in sync with fast-moving EV adoption?
- Distribution grid planning to support TE should differentiate varying customer and grid needs of residential, commercial and industrial fleet EVs.
- Utilities will need to incorporate flexibility when planning for new EV infrastructure to be able to adapt to situational changes.
- Planning would be aided by incorporating any TE goals and targets being set by municipalities, businesses, fleets or others. Outreach to customers should be robust.
- A future issue to grapple with is ownership of public charging stations. NM utilities have proposed different models in their TE filings.
- Utilities need certainty for cost recovery for EV-related expenditures, including for pilot programs and experimentation. Utilities can be incentivized to act through amortization schedules and approval of capital expenditures.

Regarding PRC regulatory and utility planning processes (and also potentially addressed in the NOPR):

- Need to take a holistic approach to planning, recognizing the interactivity between resource, distribution and transmission planning as well as rate setting.
- EVs will increase electricity use, but ensuring charging is done off peak will provide system and cost benefits.
- The effective application of emerging rate designs for EVs will determine whether increasing energy demand through EV deployment spreads customer costs and leads to downward pressure on rates.
- There are several potential overlaps with the Grid Mod rule addressing EV, such as anticipated EV and transportation planning rules.
- Interactive system planning will be aided by AMI data identifying where vehicles are being charged.
- Optimizing the distribution system around EV planning requires going beyond traditional data sets and the interconnection request process, to anticipate who, where and when EVs will be adopted.
- Direct customer engagement by utilities has been and will continue to be critical to support accurate planning for heavy and medium-duty vehicle sector customers.
- Utilities have all filed TE plans but they are initial. Learning will continue to occur.

Other Process Input

- Grid planning takes time. The time to start planning is now.



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- In the absence of a TE regulation, the state of Colorado and some NM utilities use their statutes as default rules.
- Airports and truck stops charging facilities are anticipated to be high demand locations for EV charging. Batteries at these facilities can provide EV charging and other services (e.g., ancillary services).