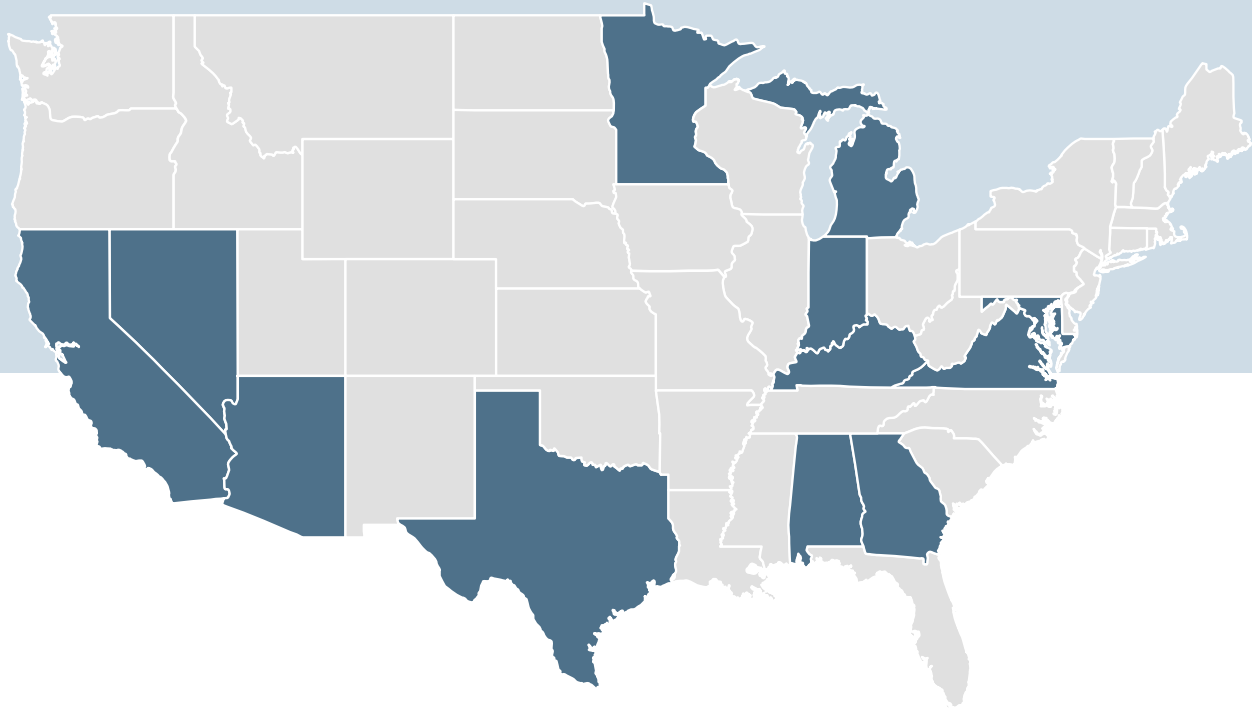


# Volume IV: Summer 2014



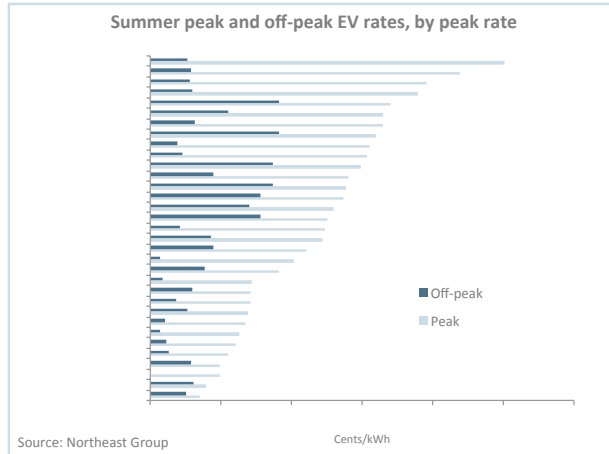
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## United States Smart Grid: Utility Electric Vehicle Tariffs

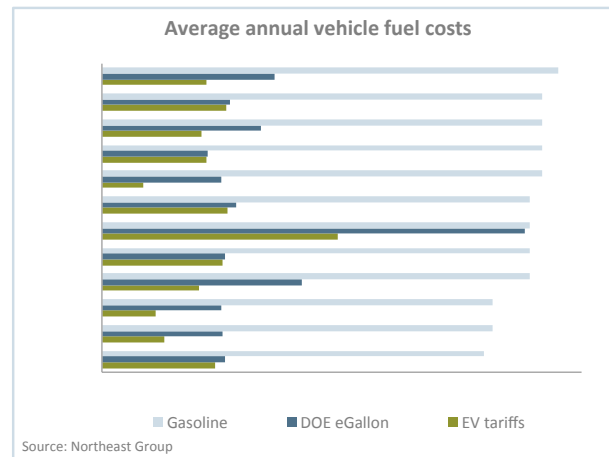
Volume IV: Summer 2014

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Electric utilities in the US are grappling with a number of challenges related to electric vehicles, from determining which infrastructure upgrades may be required on their distribution systems to assessing which tariff structures are most effective. As the first wave of EVs hits the US market, utilities have begun launching EV tariffs. Northeast Group first published its benchmark and analysis of these EV tariffs and their implications for utilities and EV owners in July 2011. This fourth volume of the benchmark includes EV tariffs from two new utilities (while one utility has closed its previous pilot EV tariff program), as well as additional analysis of the implications of these tariffs.



The electric vehicle market has evolved rapidly since the initial version of Northeast Group’s electric vehicle tariff benchmark was published in July 2011. EV sales have increased dramatically in the past year, reaching over 95,000 EVs sold in 2013 across an increasingly diverse number of makes and models. A higher penetration rate of EVs in the US will put added pressure on local grids if charging is not done primarily during off-peak hours. Utilities and regulators are slowly taking note; in the past year only two new utilities added EV tariffs (BGE created tariffs for the first time, and LG&E and KU split their tariffs), while one previous utility closed its EV rate pilot program (SMUD). But as EV sales tick up, this trend could be changing. Mostly notably, Minnesota has mandated that all utilities in the state develop EV tariff plans. By this time next year—when Minnesota utilities will need to comply with the regulation—several more utilities will offer EV tariffs.



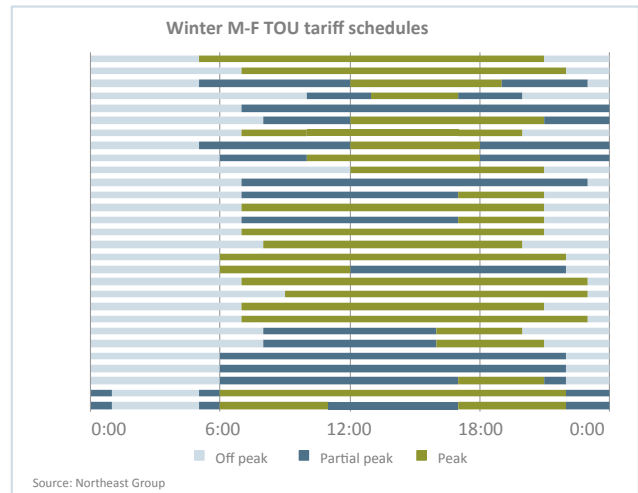
As of June 30<sup>th</sup> 2014, 25 utilities across the US have launched EV tariffs. Utilities included in this benchmark are located in the following states:

- **Alabama;**
- **Alaska;**
- **Arizona;**
- **California;**
- **Georgia;**
- **Hawaii;**
- **Indiana;**
- **Kentucky;**

- **Maryland;**
- **Michigan;**
- **Minnesota;**
- **Nevada;**
- **Texas;**
- **Virginia.**

Key questions answered in this study:

- Which utilities have EV tariffs and what tariff structures have they used?
- How do EV tariffs compare to the eGallon determined by the DOE?
- How have utilities structured their electric vehicle TOU rates and what is the average peak to off-peak discount?
- What are the actual tariffs that have been launched by utilities?



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