
EVs and Smart Charging

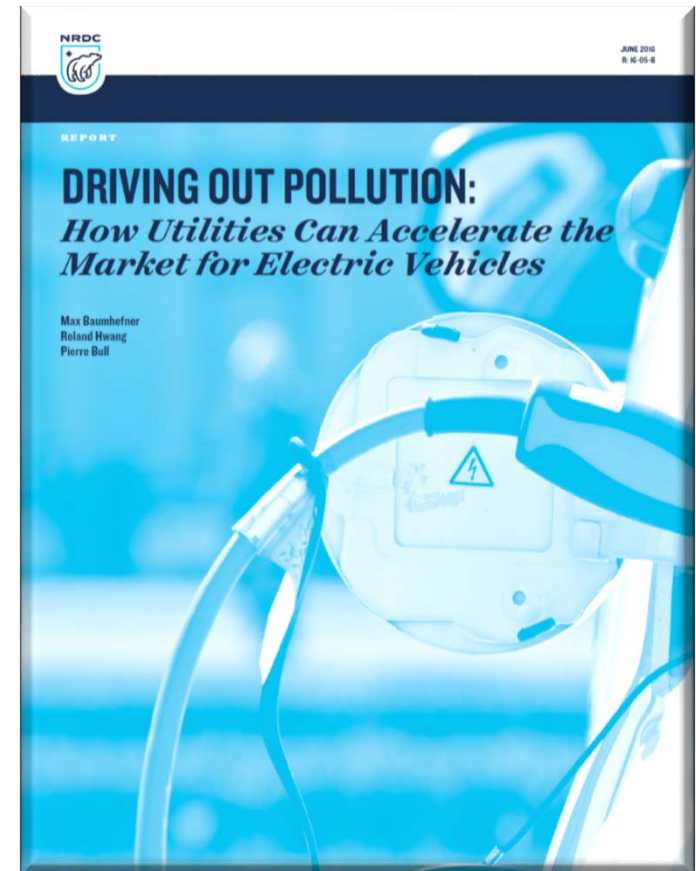
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Additional information can go here

NRDC Electric Vehicle Successes

- SB 350
- Utility Pilot DR Programs
- TOU Rates
- Regulatory Experts (NY, NJ, OH IL, MS...NV, CA, OR)
- (Today) Testifying at Commission in Maryland
 - \$104 Million for TE infrastructure, 24,000 charging stations support.



EVs, The Grid & Renewables



Potential Problem: High Renewables means Decrease in Controllable Supply

Leading to grid management issues in:

- Balancing
- Transmission
- Congestion

Solution: EVs Can Help with Smart Charging!

Grid Management: Congestion management, Frequency Control, Voltage Regulation, Black Start Support, Reserves, Imbalance etc.

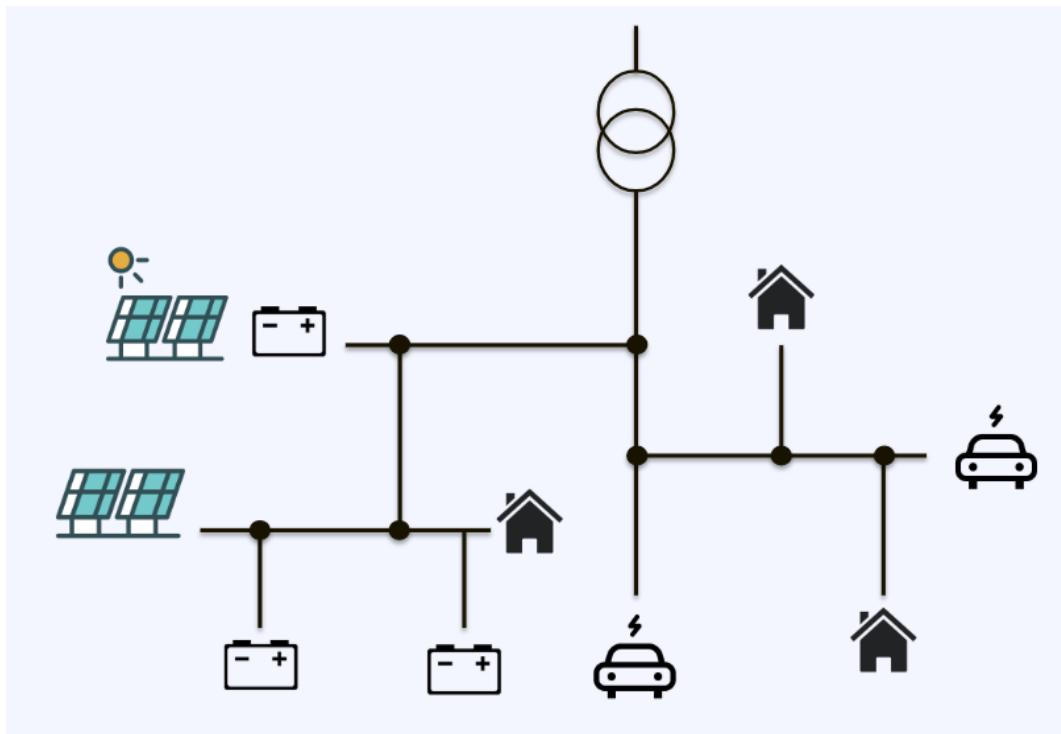
Electricity Trade Optimizations: Day Ahead Planning, Wholesale markets.

Home Management: Use of local Supply, Peak Reduction.



Current VGI Research

CyDER Platform: Co-simulation investigating impact of High EV and Renewables



Evaluates Impact on:

- Transmission grid
- Distribution grid

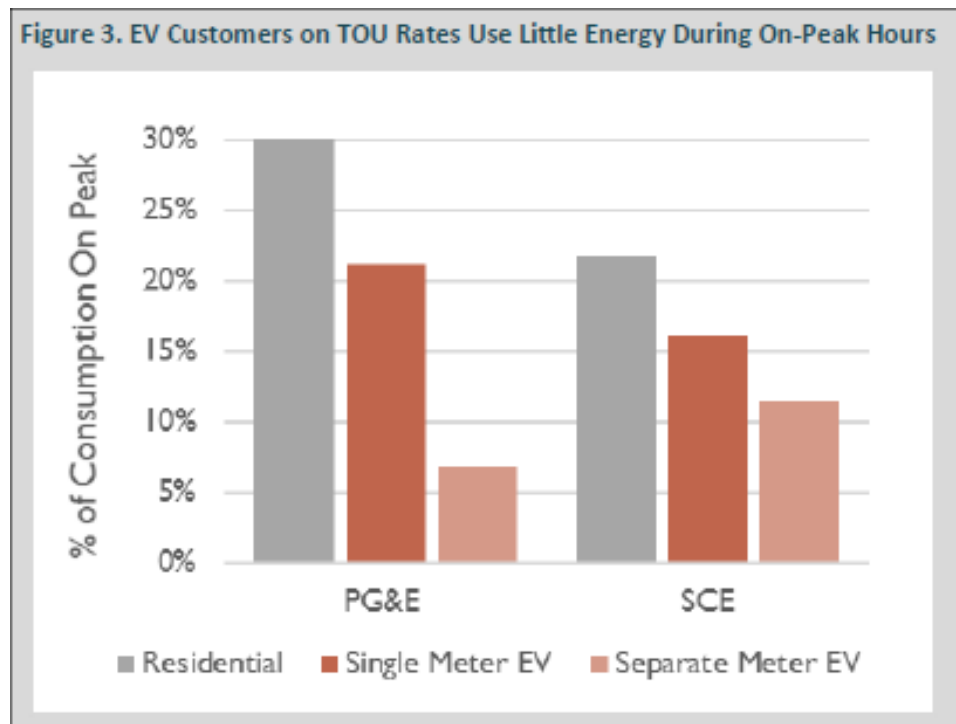
Varying Factors:

- Photovoltaic
- Batteries
- Buildings/Load
- Charging stations



VGI Advocacy

- Charging Infrastructure
- Standards
- Public Awareness
 - Pilots, Reports and Blogs
- Utility Rates & Programs
 - TOU Rates
 - DR Pilots
- Market Policy for DR
 - VGI in Storage Mandate
 - DR Market Operations



Thank You

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