

ENGAGING CUSTOMERS TO DECARBONIZE CONSUMPTION

A conversation with Commissioner Tim Echols of
Georgia

PRESENTED BY

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Principal

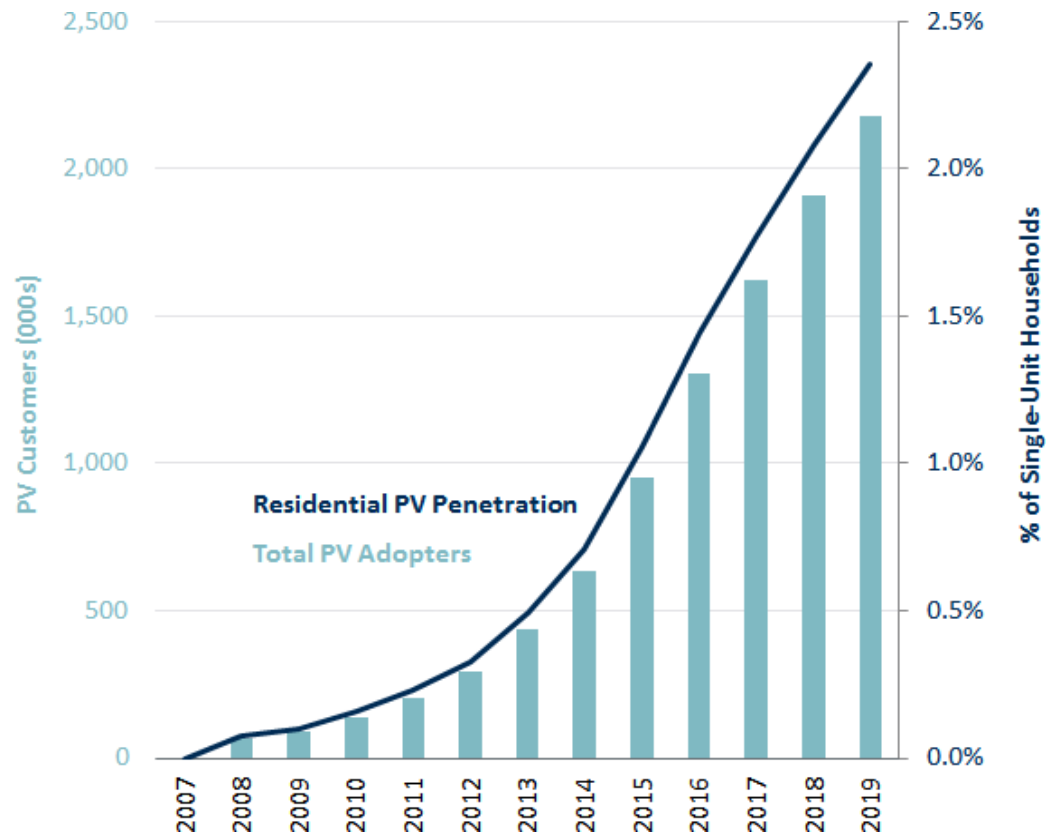
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Solar Energy, Electric
Mobility, Decarbonization
and Georgia's Economy:
Virtual Seminar



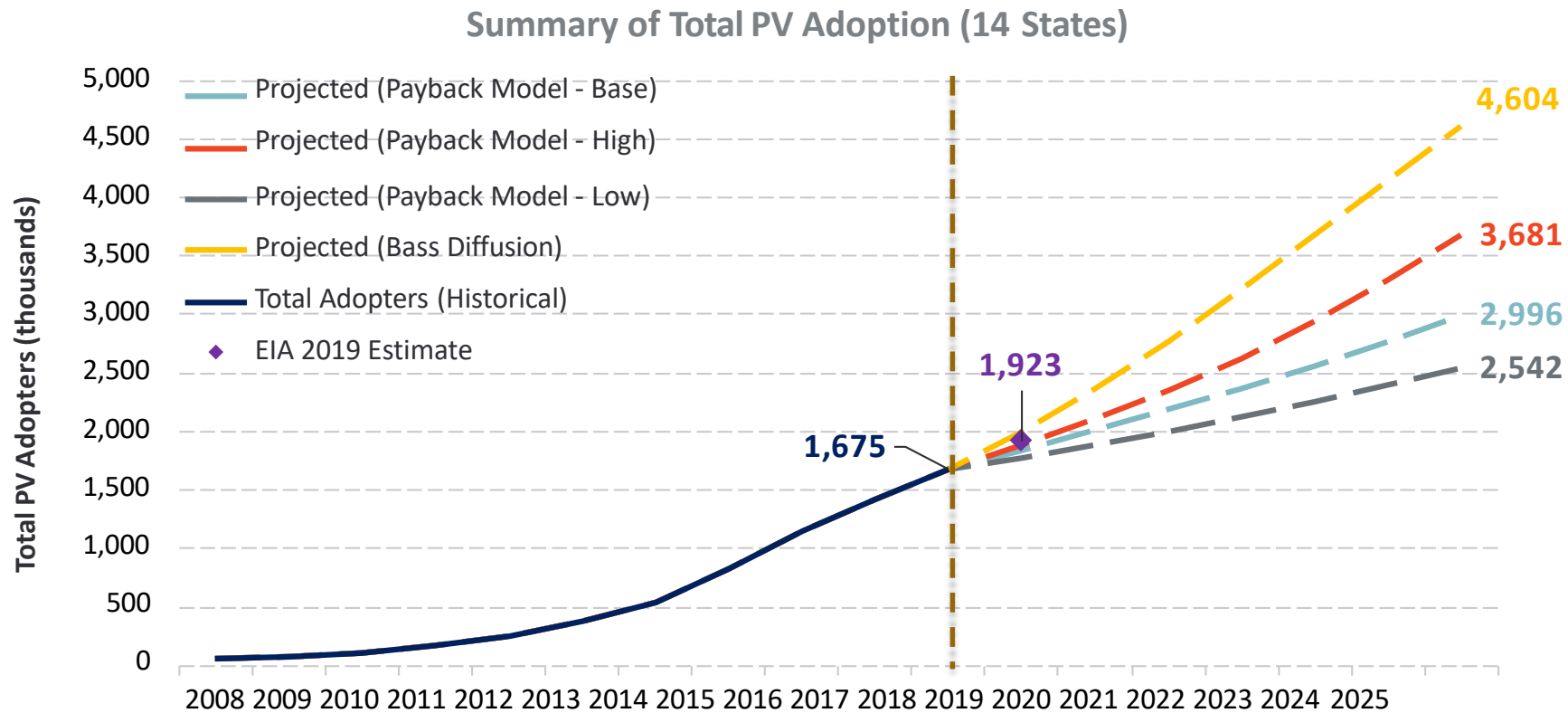
Residential customers are turning into prosumers



Source: Residential PV adopter counts from Form EIA-861, “Net Metering” data. Residential PV penetration calculated as Residential PV Adopters over total number of single-unit households, using U.S. Census data.

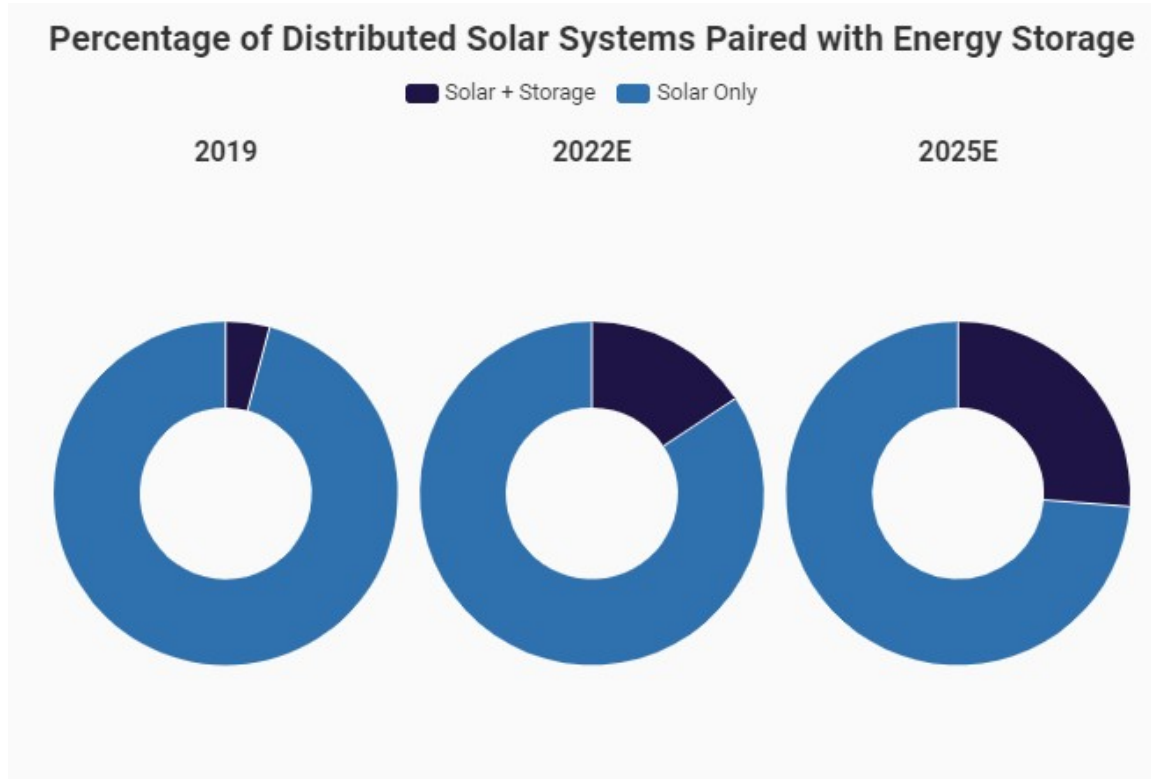
The top 14 States may see a doubling of solar installations by 2025, barring any significant policy changes

The Bass Diffusion model predicts 4.1M total PV installations by 2025 across the 14 states, while the payback model predicts ~3M PV installations.



Notes: The top 14 states are CA, HI, MA, NJ, SC, AZ, CT, FL, MD, NM, NV, NY, PA, and UT.

Prosumers are turning into prosumagers. By 2025, more than 25% of all behind-the-meter solar systems will be paired with storage, compared to under 5% in 2019

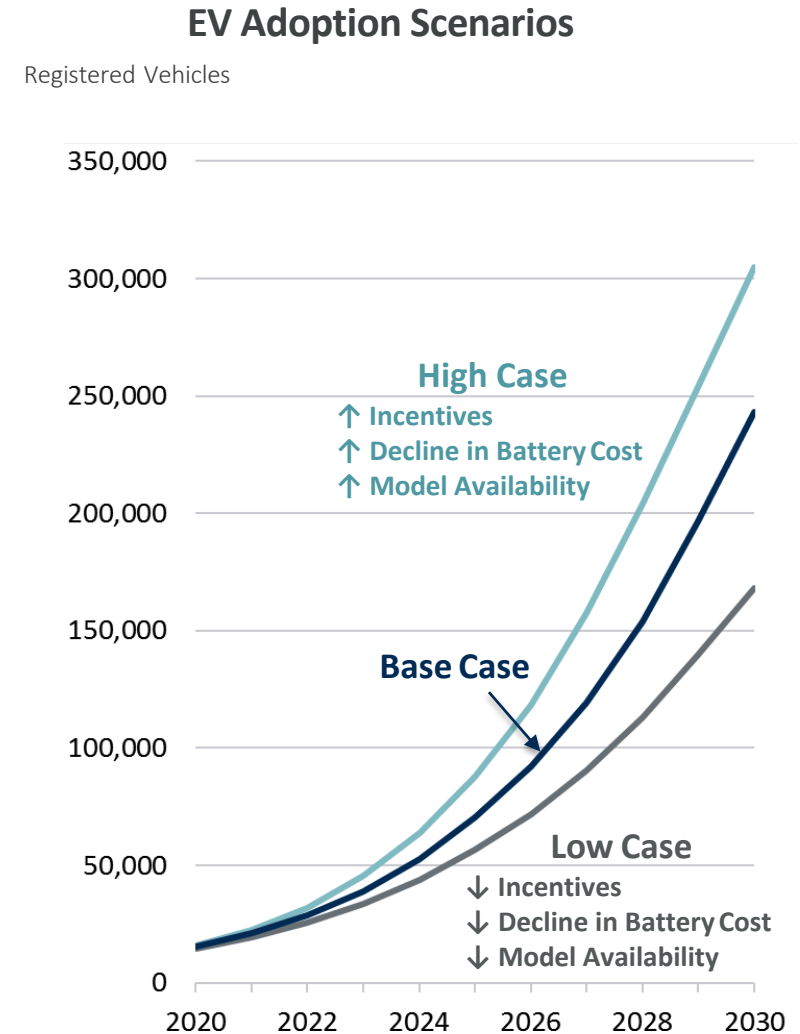


Source: SEIA/Wood Mackenzie, "U.S. Solar Market Insight 2019 Year-in-Review," <https://www.seia.org/us-solar-market-insight>

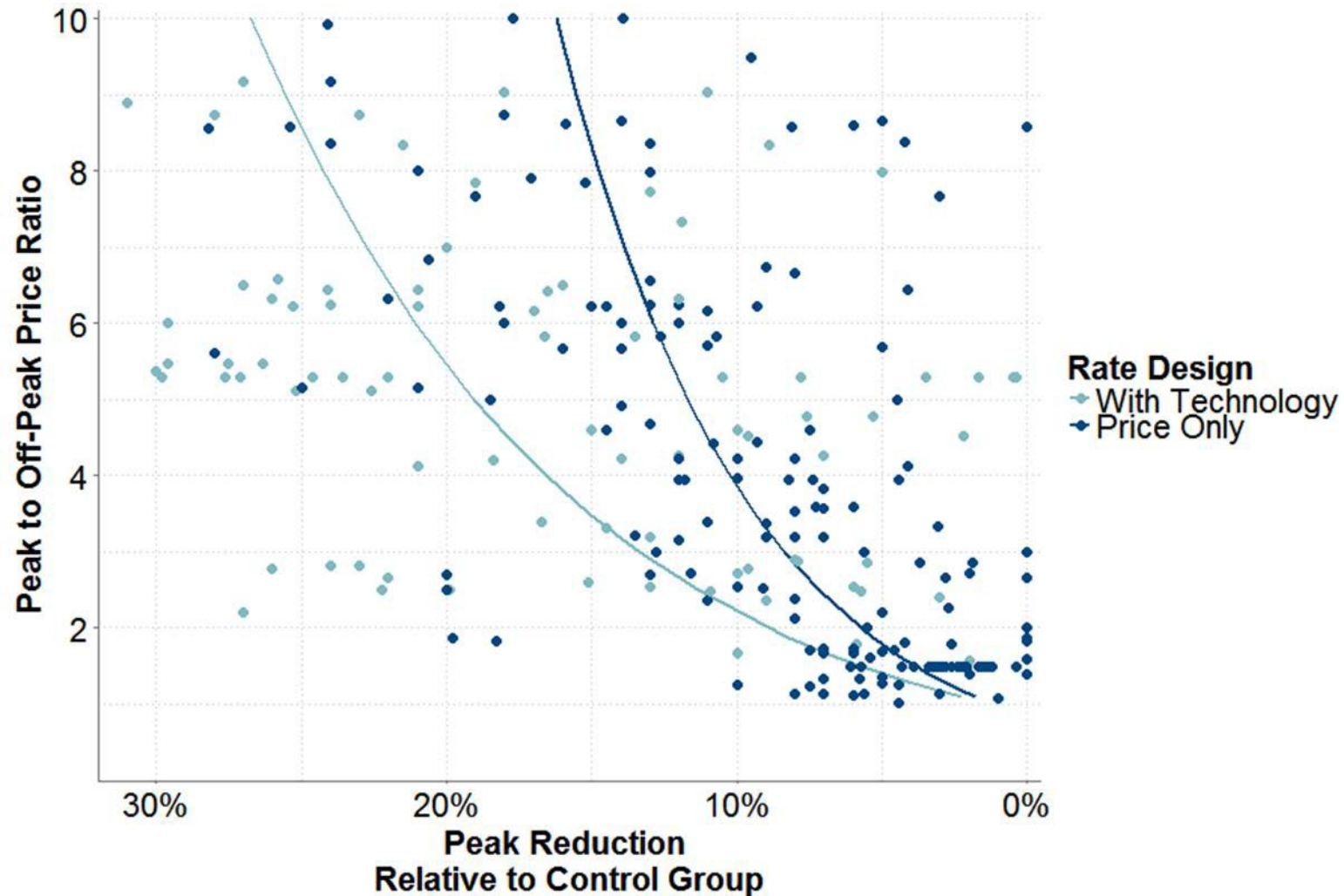
What is driving EV adoption?

Analysis of data from 2011–2019 across all 50 states yields the following insights

- **Policy Mandates**
States with a ZEV mandate have 26% higher EV sales
- **Vehicle Incentives**
\$1,000 increase in total incentives increases EV sales by 7.5%
- **Battery Price**
\$10/kWh decrease in battery price increases EV sales by 4%
- **Model Availability**
Every 10 additional EV models increase EV sales by 8%
- **Fuel Costs**
10% decrease in “fueling” cost savings increases EV sales by 3%



Dynamic pricing will be crucial to decarbonization –customers respond to price changes and technology boosts price response



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Dr. Faruqui is an energy economist whose consulting practice encompasses decarbonization, demand forecasting, demand response, distributed energy resources, electrification, energy efficiency, grid modernization, load flexibility and smart meters.

In his career, Dr. Faruqui has advised some 150 clients in 12 countries on 5 continents. He has testified 57 times before regulatory bodies, governments, and legislative councils in 27 states, territories, and provinces, including Alberta, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Maryland, Minnesota, Missouri, Nevada, New Brunswick, Nova Scotia, Ohio, Oklahoma, Ontario, Pennsylvania, Texas, and Washington. He has also appeared before governments in Australia, Egypt, Jamaica, Malaysia, New Zealand, Philippines, and Saudi Arabia.

He has authored or coauthored more than 150 papers in peer-reviewed and trade journals and co-edited 4 books on industrial structural change, customer choice, and electricity pricing. His innovations have been cited in Bloomberg, Businessweek, The Economist, Forbes, and National Geographic, in addition to news outlets including the Los Angeles Times, The New York Times, San Francisco Chronicle, San Jose Mercury News, and the Washington Post. He has also appeared on Fox Business News and NPR.

He has taught economics at San Jose State University, the University of California, Davis, and the University of Karachi and delivered guest lectures at Carnegie Mellon, Harvard, Idaho, MIT, New York University, Northwestern, Rutgers, Stanford, UC Berkeley, and UC Davis. He has also given seminars on energy issues on 20 countries on 6 continents.