
The challenge:

Is our grid ready for an electrified future?

Employing and Monetizing Peak Demand Flexibility



Commissioner Maria S. Bocanegra
Illinois Commerce Commission

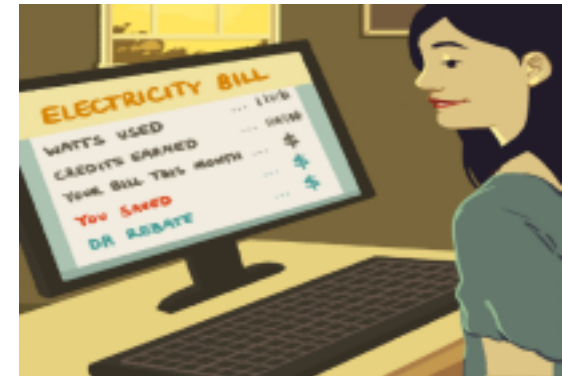
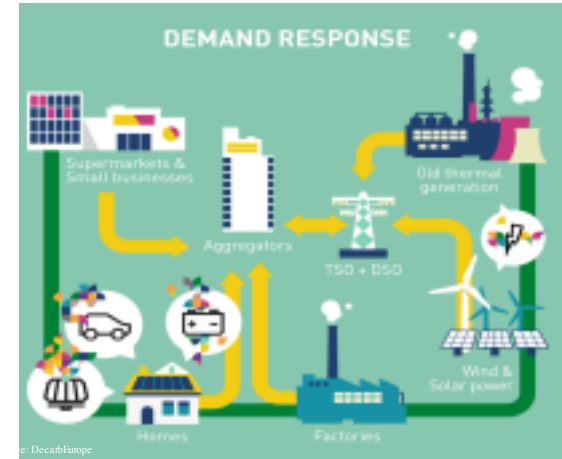


The Grid & Flexible Consumption

Our power grid works to balance too much energy supply, where power plants sit idle and too little energy supply, which can lead to blackouts and dangerous conditions.

Energy flexibility programs, like active demand response, pay consumers to use less energy at peak times to ensure grid balance.

These programs monetize reduced energy use and protect the grid from high-risk imbalances.



By not employing energy flexibility, we leave money on the table



\$3.55 Million¹

Potential total average cost captured per MW hour

\$2.27 Million²

Potential total average capacity avoided cost captured per MW hour

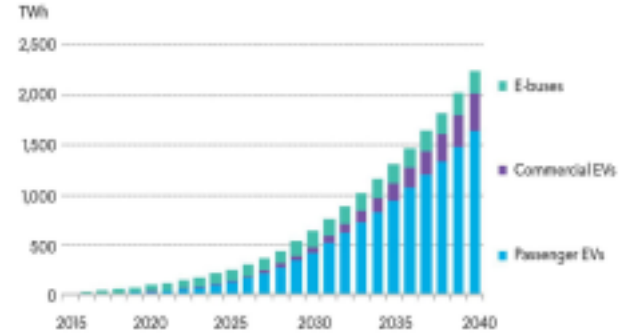
Timing EV Growth

By 2040, EVs will add 11% to total electricity consumption in the US.¹

Even a conservative observation of EV adoption will demand prudent generation management to maintain grid stability.

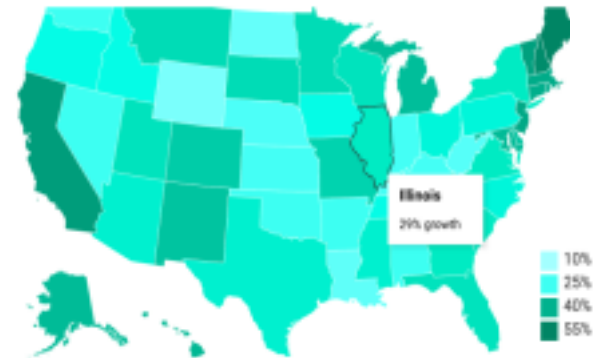
¹ Electric Vehicle Outlook 2019, BloombergNEF

Yearly Electricity Consumption by Vehicle Type




Source: BloombergNEF

Projected Electricity Consumption if 100% EV Adoption



Map: The Conversation, CC-BY-ND; Source: F. Todd Davidson and Kazunori Nagasawa



The lack of flexible consumption (demand response) is preventing our smart cities' futures and impacting our grid.

The next decade's electrification will define the 21st Century's energy economy.

Without energy management systems in place, our cities diminish – both financially and innovatively – their ability to maximize the electrification revolution.

The private sector has tapped into its energy flexibility, with 25% of businesses ranking demand response as a management tactic for reducing costs.¹