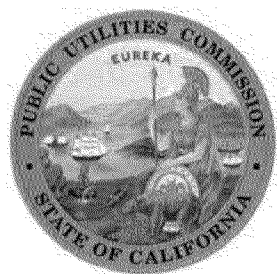
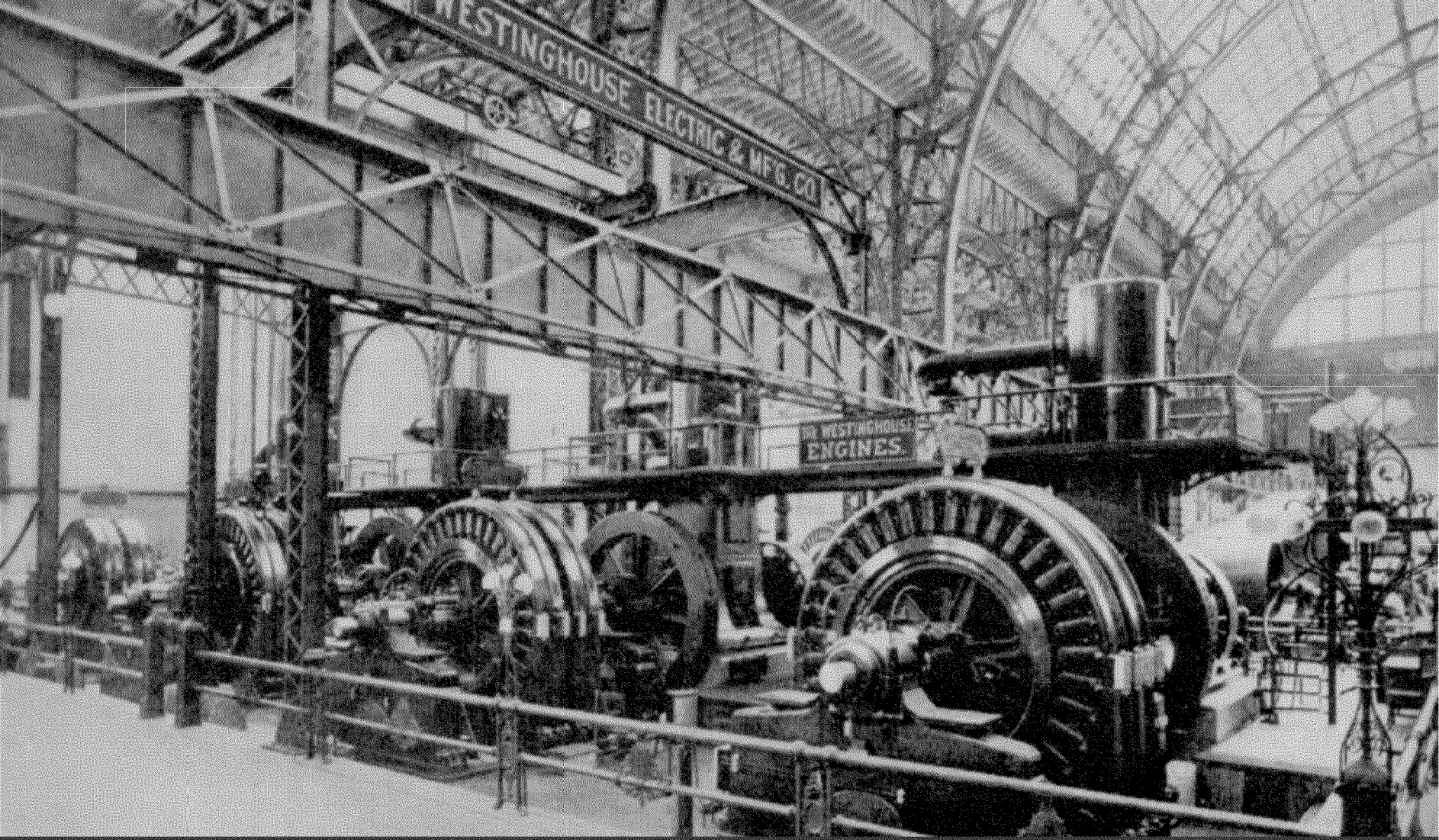


The Most Exciting Time in a Century:

The Utility Model and Regulatory
Framework for the Future



October 2013

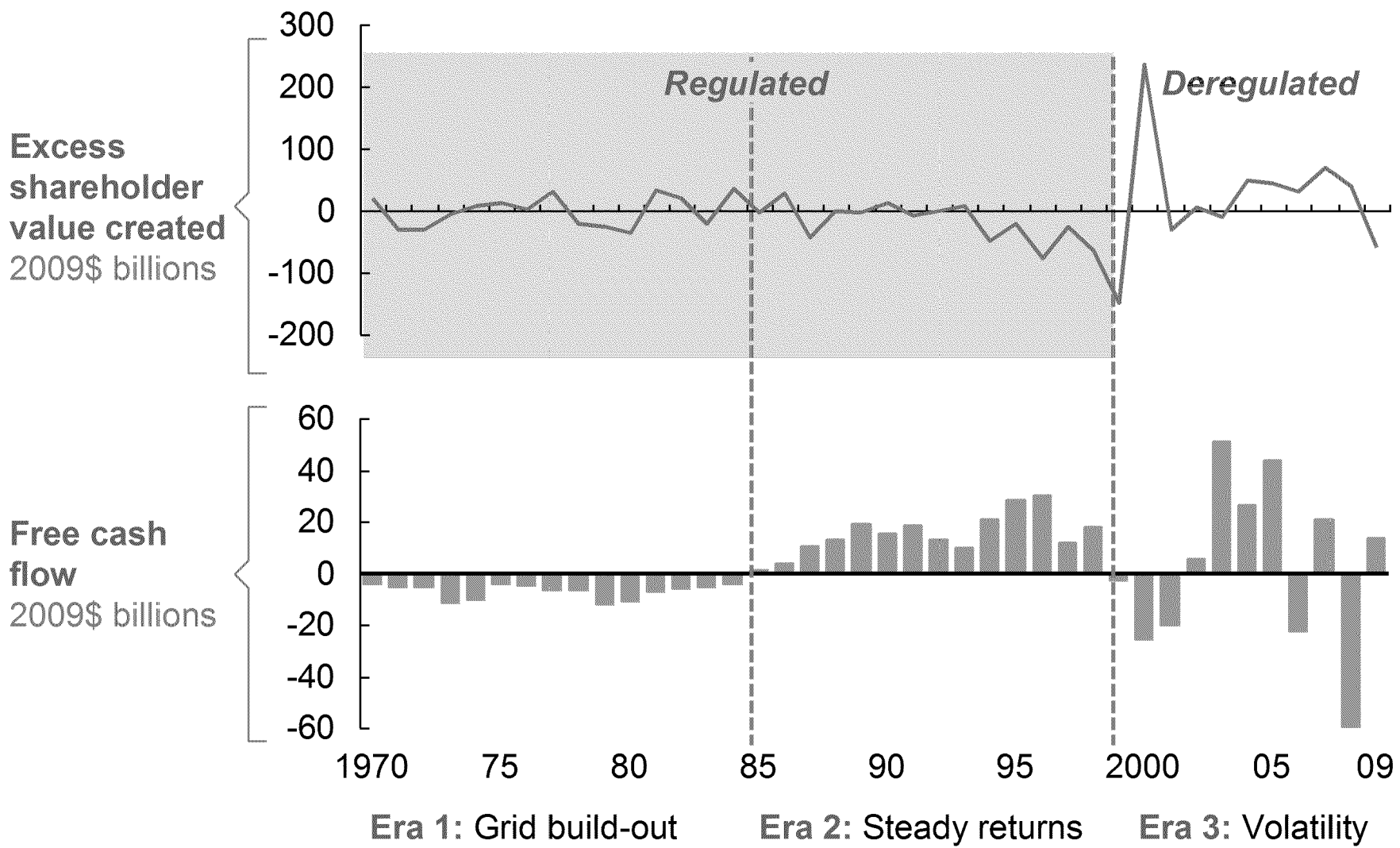


1885: The US utility industry was born

The next 100 years delivered: Safe, Reliable, Low Cost, Universal Service



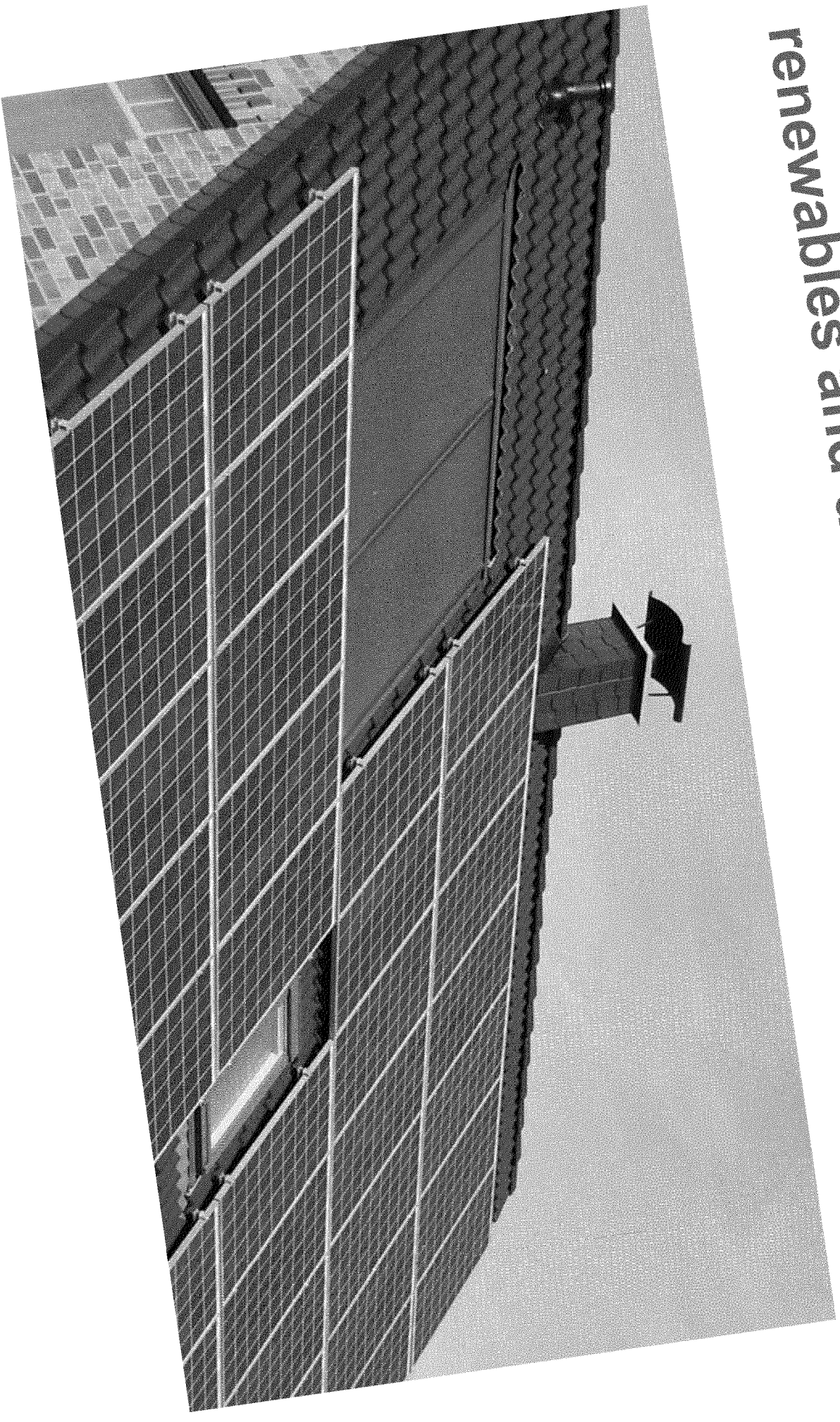
In 1985, the industry collected more cash than it spent in capital for the first time



Rapidly changing network structure complicates future regulatory choices

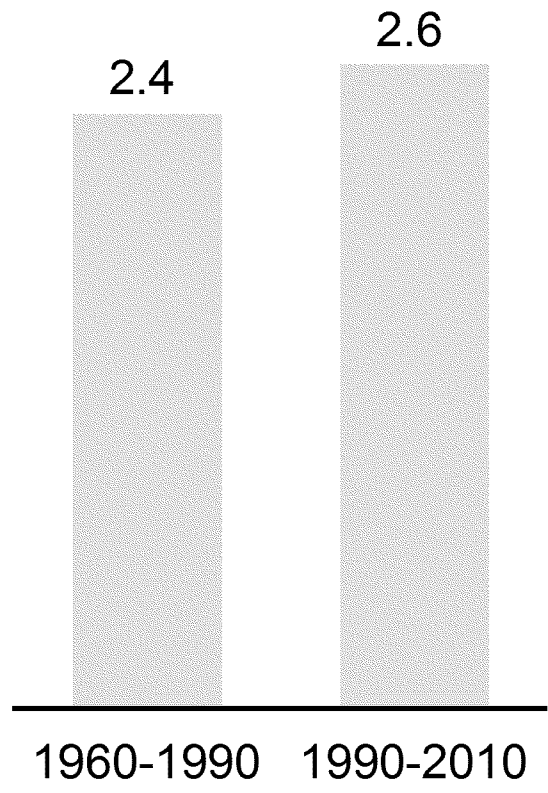


**Today, on the supply side: growing
renewables and distributed generation**



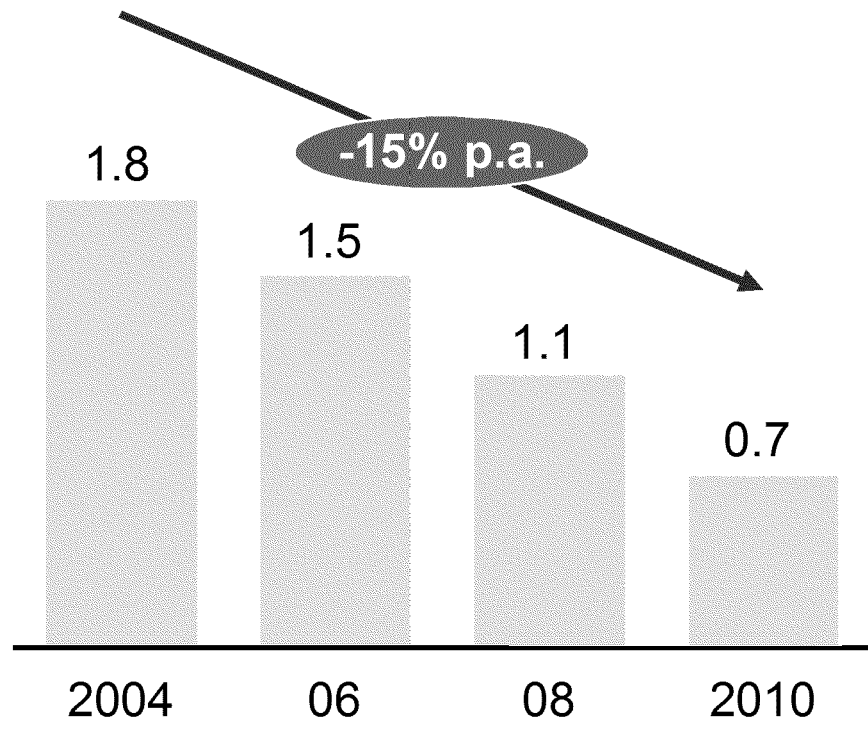
From a demand perspective, decelerating growth

Historical growth rate



Long-term electric consumption annual growth rate¹

As forecasted in EIA AEO, Percent

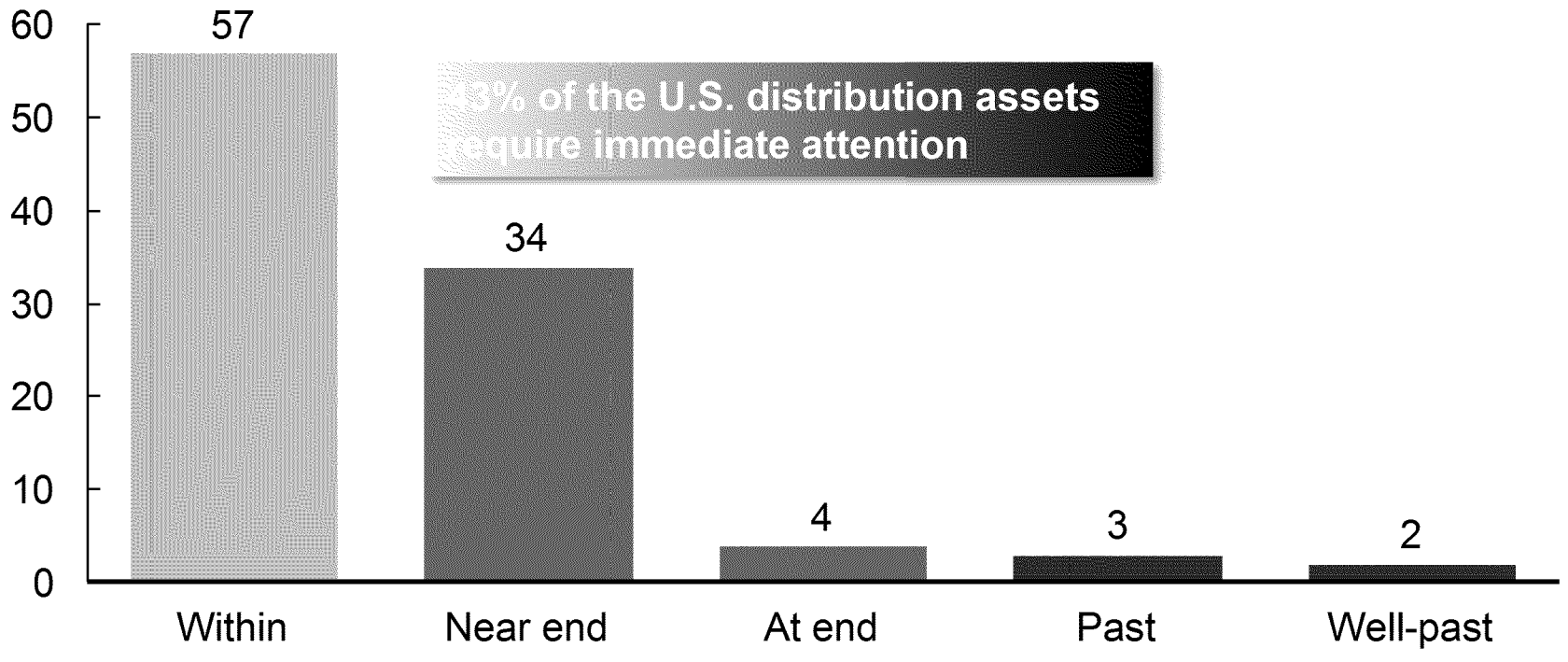


¹ Normalized to 2005-25 CAGR for all AEOs

Meanwhile, the grid is rapidly aging after 20+ years of underinvestment

U.S. distribution assets are getting old

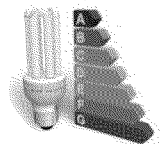
Age of U.S. distribution assets compared to their expected lifetimes
%







Customer needs and expectations are changing rapidly



Variety of electricity packages



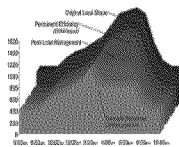
Detailed consumption data with user-friendly apps



Turnkey solutions for distributed generation



Simple bundles for Evs



Access to automated or voluntary DR programs

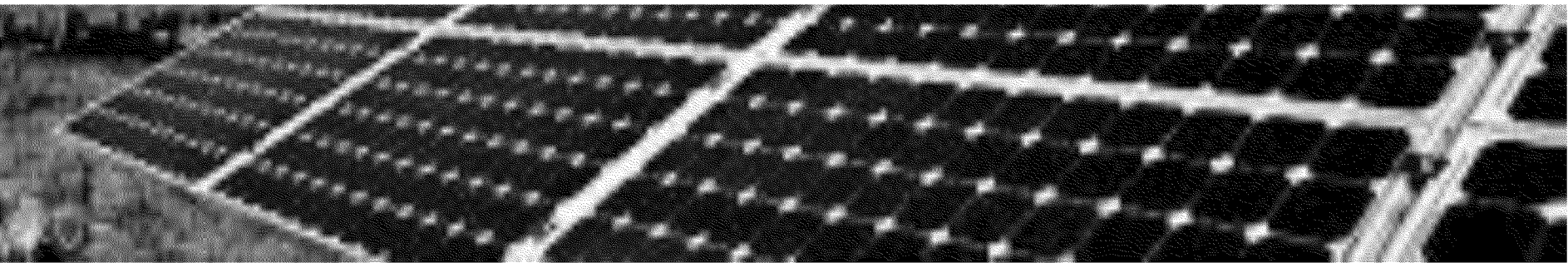


Portal to monitor and program smart home appliances'

- New profit pools emerging
- New capabilities required
- Opening for non-traditional players to compete

Key regulatory supply side questions to consider:

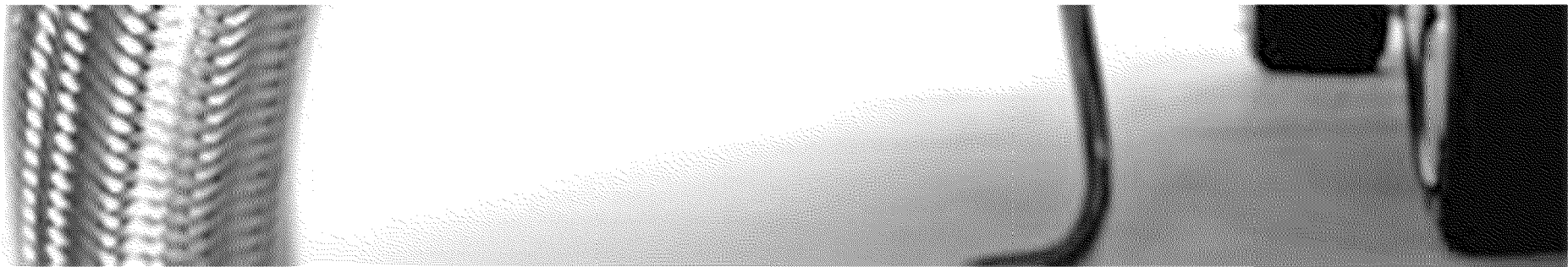
- **Who should pay for grid integration costs for new renewable sources?**
- **What is the appropriate approach to cost allocation for integrating new distributed generation sources?**
- **How should ancillary services be priced?**
- **What incentives will attract new capital for load following and grid resilience?**



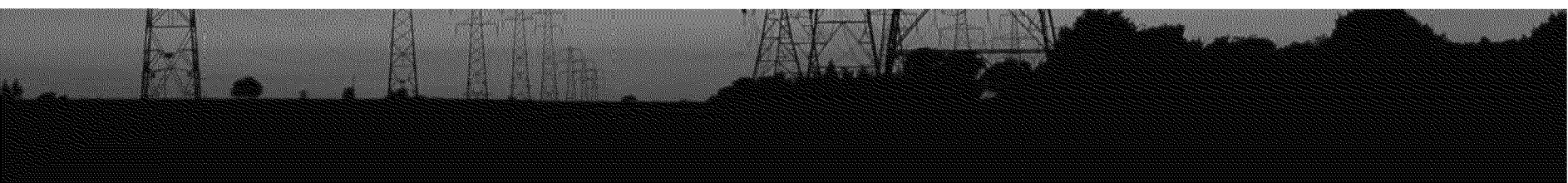


Key regulatory demand side questions to consider:

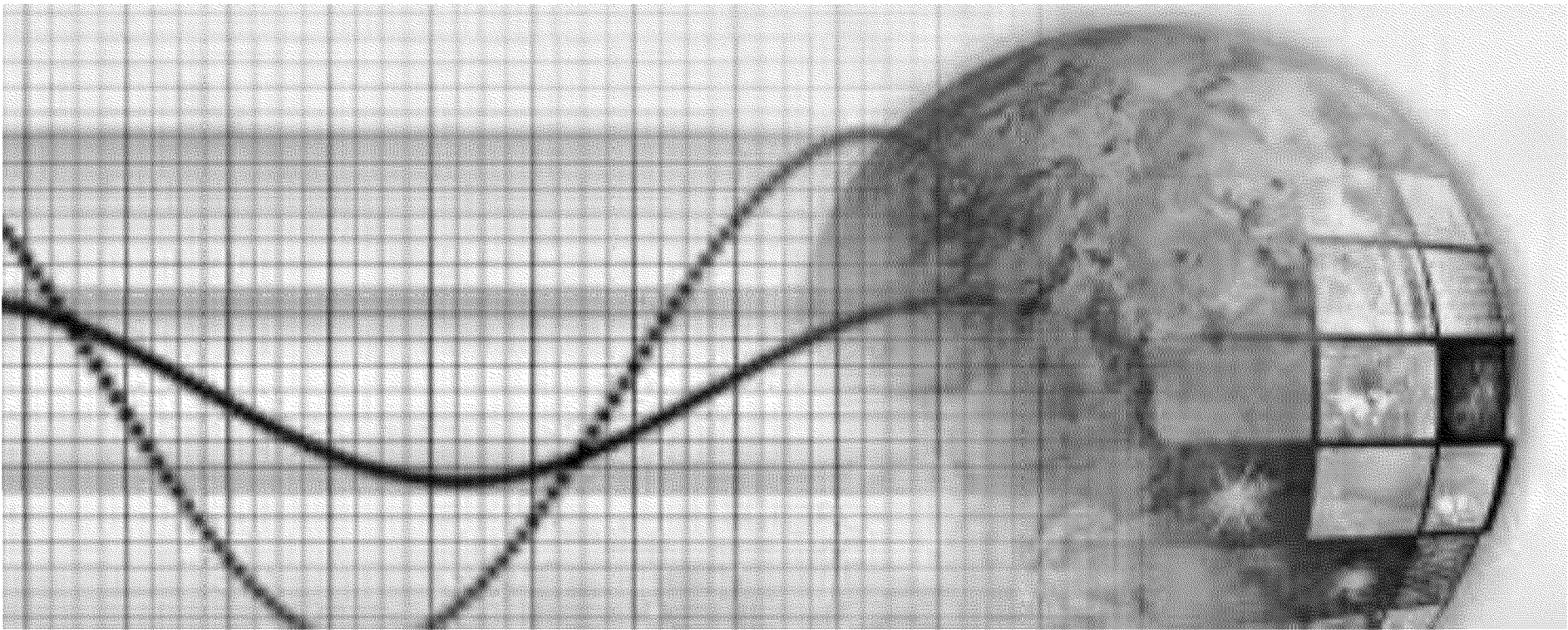
- **Who should pay for the infrastructure to fuel the transportation fleet and other high impact new demand sources?**
- **How should energy efficiency programs be structured if demand isn't growing?**
- **How can demand response capabilities integrate into the grid without creating major instabilities?**



- **How can new capital be attracted to finance grid replacement cycles and new supply source build outs?**
- **How can the grid ensure timely ROW development for new transmission and distribution lines?**
- **What if different users want to – and are willing to – pay for different service?**
- **How should the market think about investments in resiliency?**
- **Who should carry the obligation to serve?**
- **Should regulations create incentives for technological innovation?**
- **What happens to the rate structure if the grid renewal programs grow while aggregate demand begins to fall?**



**The commission will be asked to consider
myriad alternatives**



Today's discussion represents a start to an important deliberative process

A deliberative path forward:

- **Understand the changing market landscape – supply, demand technology, customer preferences**
- **Define alternative regulatory models**
- **Evaluate alternatives under potential market scenarios**
- **Find ways to test new models empirically**
- **Select a preferred model**
- **Define an implementation roadmap to move from the current state to a new model**