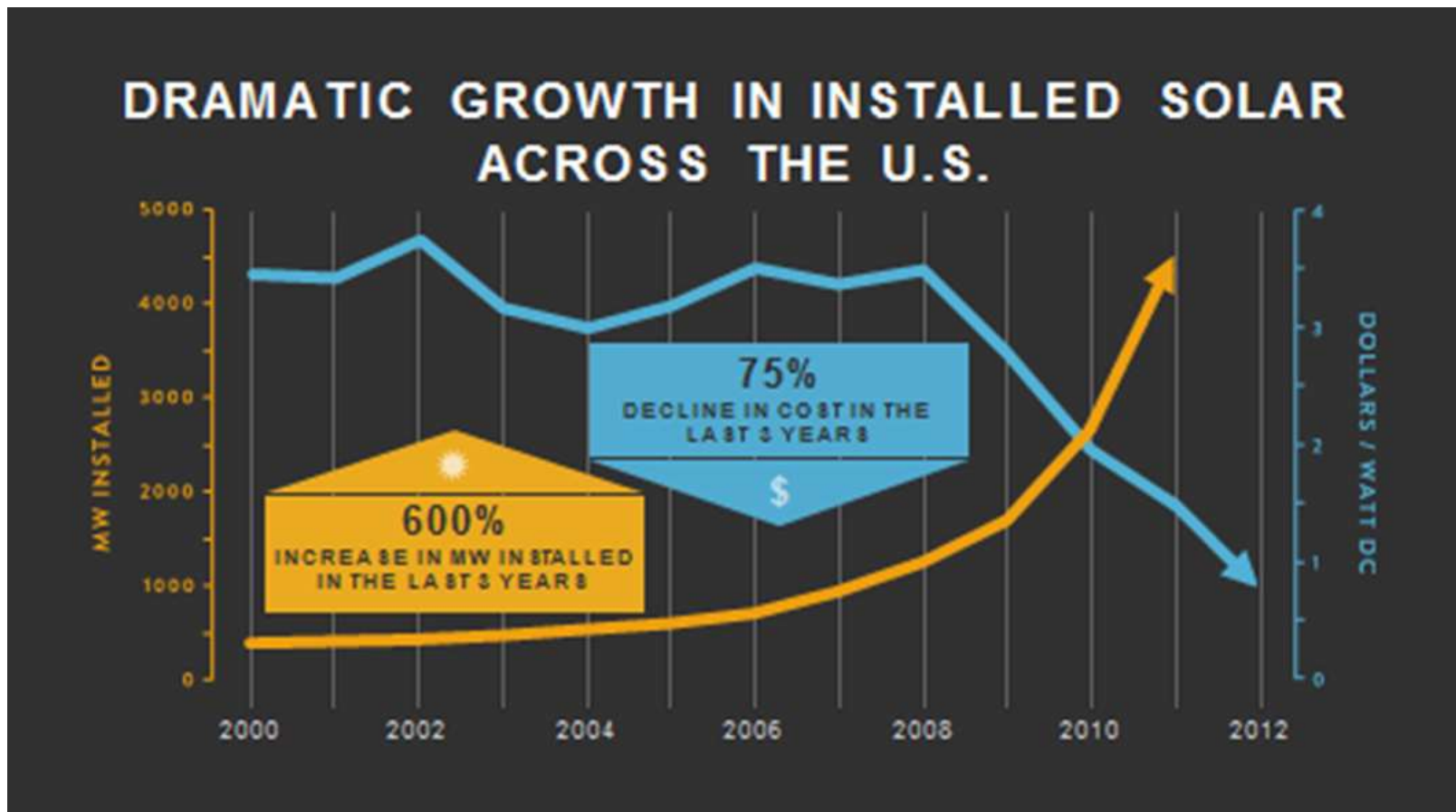




Rethinking Policy to Scale Up Clean Energy

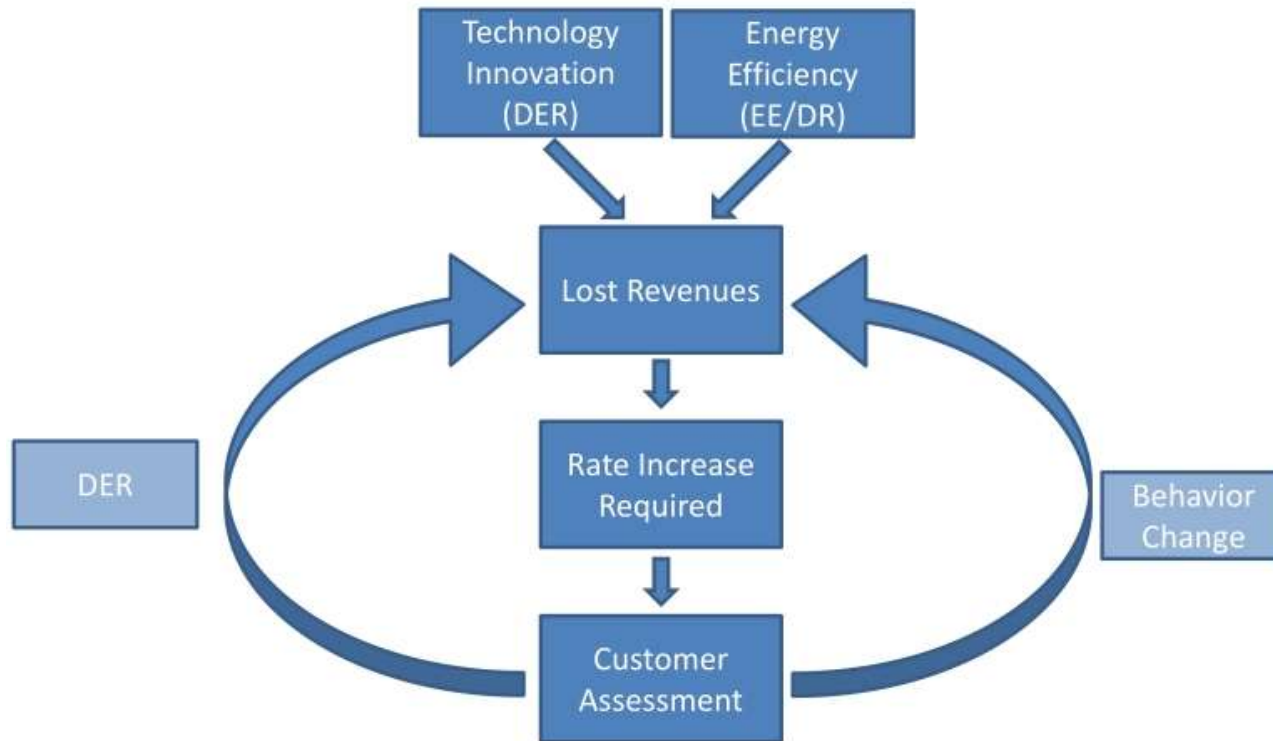
Sonia Aggarwal
Energy Innovation
September 16, 2013

No longer a social choice... it's market- and consumer-driven



We must work together to find creative solutions

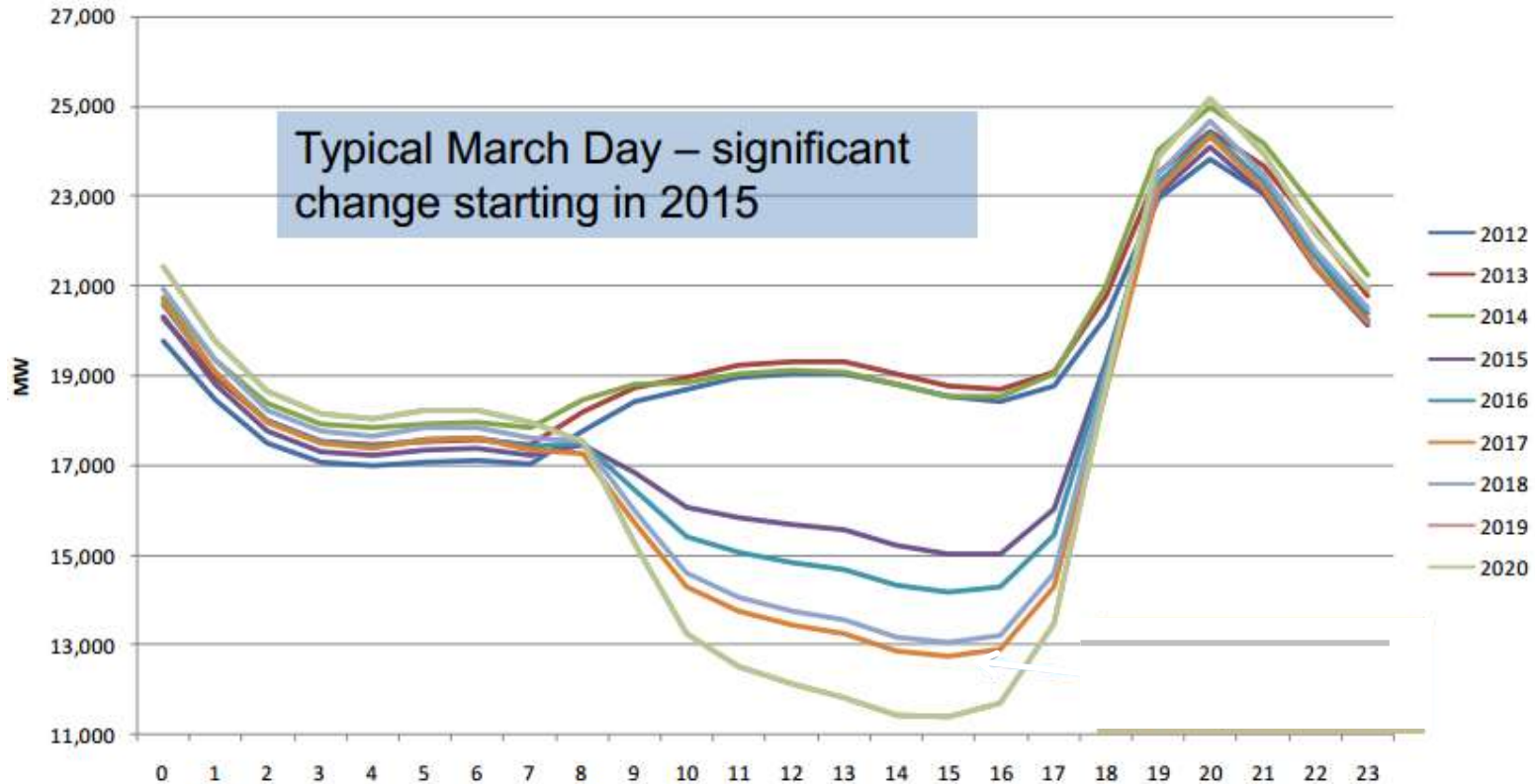
Vicious Cycle from Disruptive Forces



From Edison Electric Institute's report: *Disruptive Challenges*

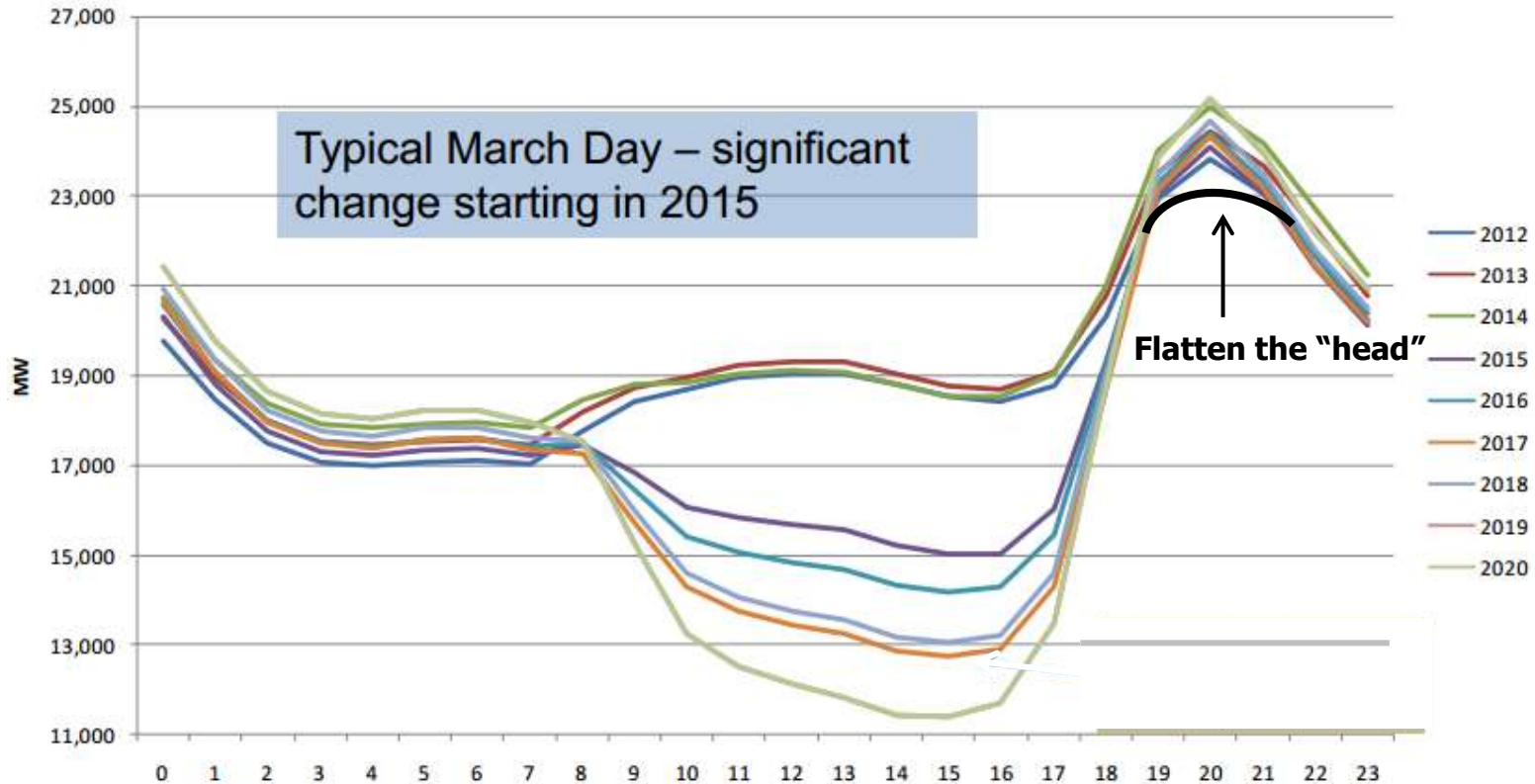
Our power system is **falling behind**

CAISO Net Load --- 2012 through 2020



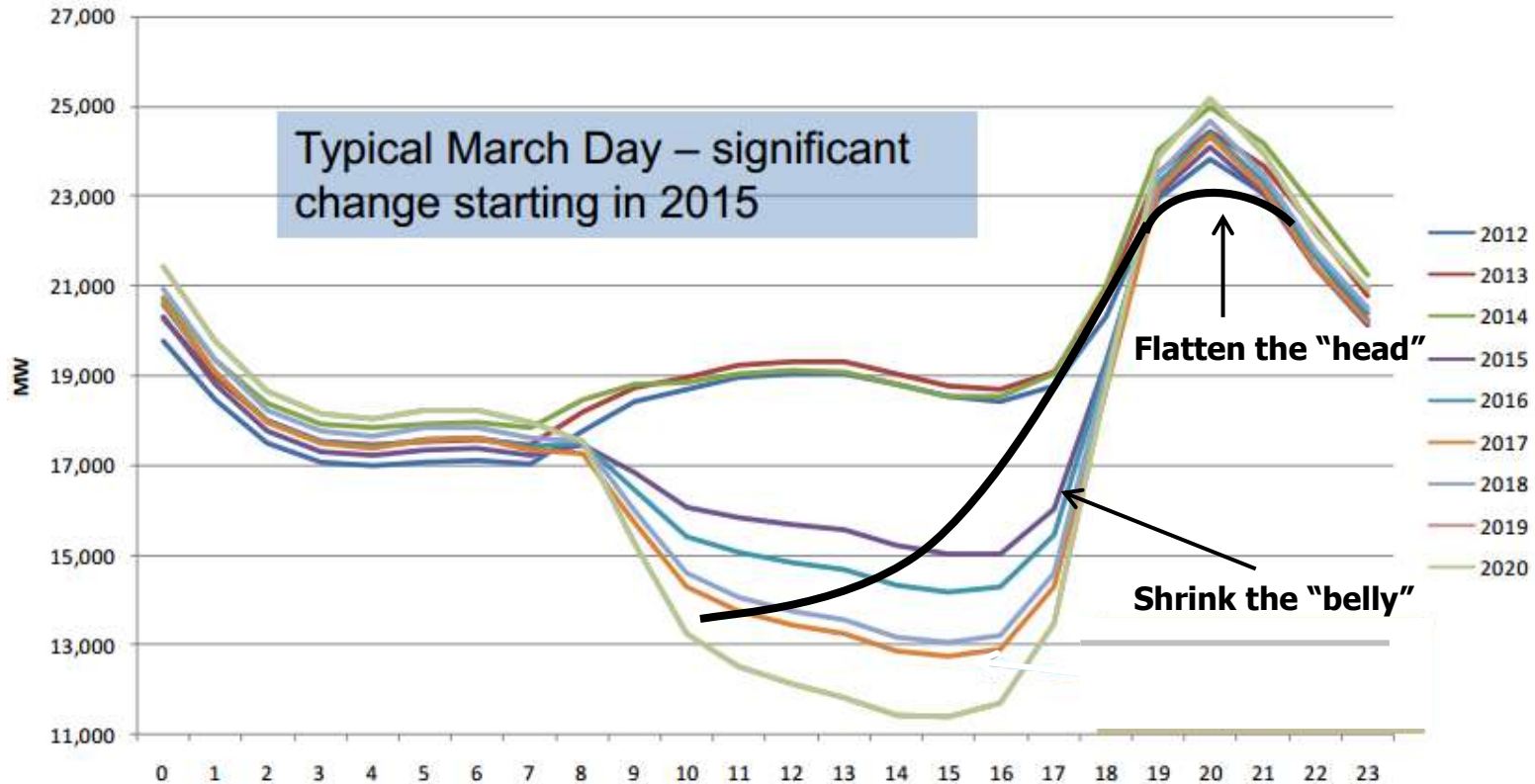
Our power system is **falling behind**

CAISO Net Load --- 2012 through 2020



Our power system is **falling behind**

CAISO Net Load --- 2012 through 2020



Back to **first** principles

| | GENERATION | TRANSMISSION | DISTRIBUTION | DEMAND-SIDE | OPTIMIZATION |
|-------------------------------|-----------------------------|------------------------------------|--------------------------------|--|--------------|
| VERTICALLY INTEGRATED UTILITY | Utility | | | | |
| SMART INTEGRATOR (EXAMPLE) | Utility calls on... | | Utility maintains distribution | Utility drives efficiency via independent service provider | ISO/RTO |
| | Independent Power Producers | Independent Transmission Providers | | | |
| FULLY RESTRUCTURED MARKET | Independent Power Producers | Transmission Company | Distribution Company | Independent Service Providers | ISO/RTO |

KEY Regulated monopoly Market driven Hybrid



Smart solutions will meet **three** goals

GOALS

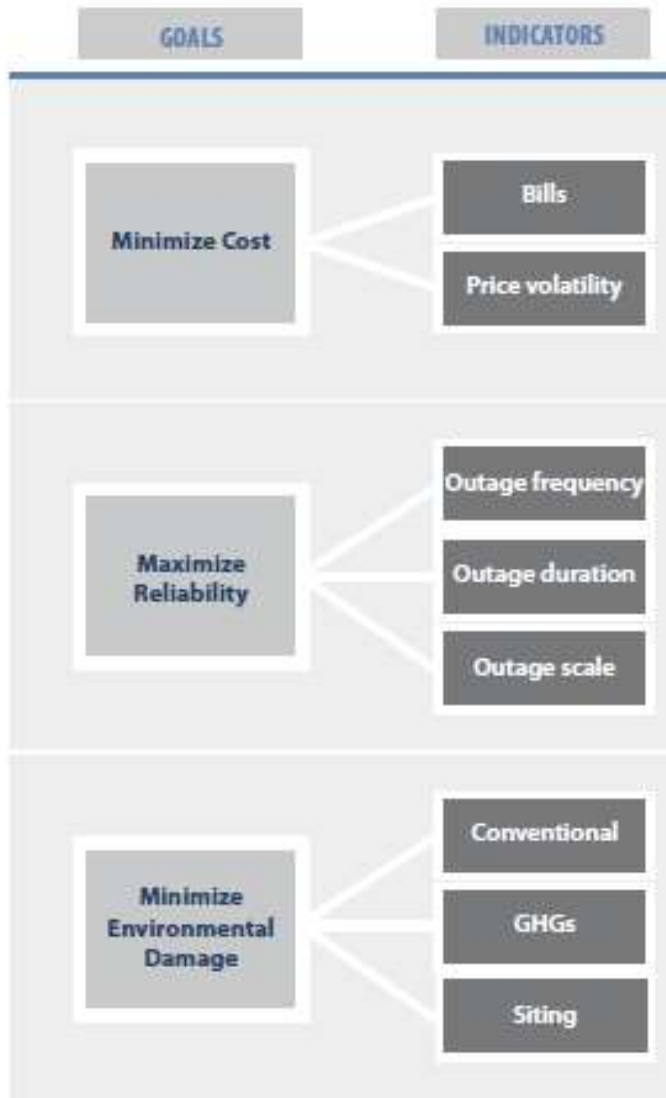
Minimize Cost

Maximize
Reliability

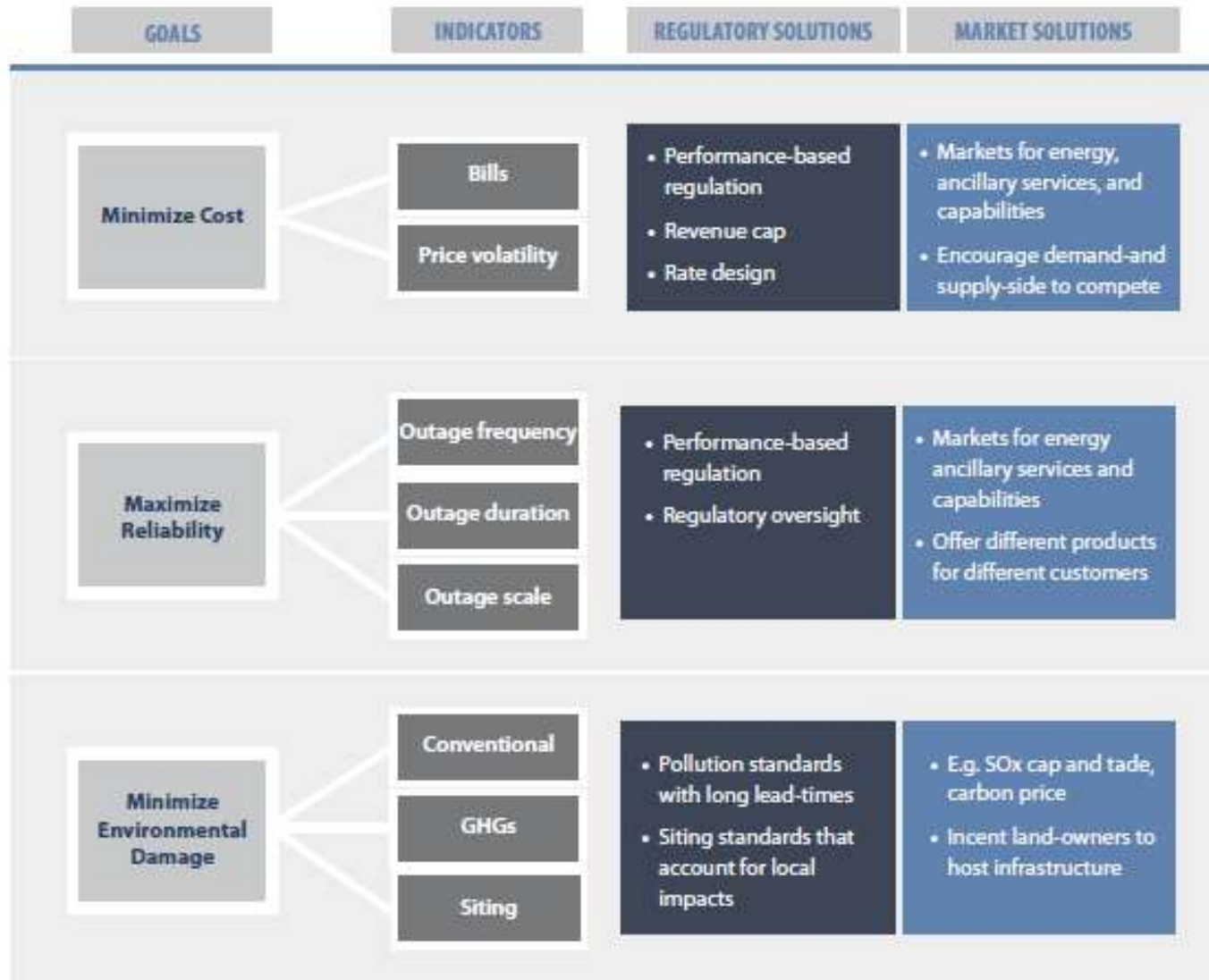
Minimize
Environmental
Damage



Smart solutions will meet **three** goals



Smart solutions will meet **three** goals



America's Power Plan

Utility and Regulatory Models for the Modern Era

By Ron Lehr

Policy Implications of Decentralization

By James Newcomb, Lena Hanson, Virginia Lacy, and Mathias Bell

Removing Investment Barriers and Managing Risk

By Todd Foley, Richard Caperton and Uday Varadarajan

Planning for and Investing in Wires

By John Jimison and Bill White



America's Power Plan

Supporting Generation on Both Sides of the Meter

By Joe Wiedman and Tom Beach

Aligning Power Markets to Deliver Value

By Mike Hogan

Renewable Energy and Transmission Siting

By Carl Zichella and Johnathan Hladik

Rethinking Policy to Deliver a Clean Energy Future

By Sonia Aggarwal and Hal Harvey



America's Power Plan: Sample Reviewers and Contributors

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