

A New Utility Business Model

WHAT WE CAN LEARN FROM HISTORY?

1882
Edison's first power plant
85 customers

Early 1900s
Private utilities expand into U.S. cities

1930s
Rural areas lack electricity

1935 FEDERAL POWER ACT
Federal gov't can regulate power sales

1936 RURAL ELECTRIFICATION ACT
for underserved areas

1944 SUPREME COURT FPC VS. HOPE GAS
Ratemaking must balance consumer interests

Creation of rural and government-owned co-ops

2 REGULATED RATE-BASED MODELS EVOLVE:

IOUs Regulated, investor-owned utilities

POUs Publicly owned utilities (municipals and co-ops)

Late 1940s – 1970
Larger plants → lower costs → more consumption

CRISIS AND CHANGE

1965 NORTHEAST BLACKOUT

1970 CLEAN AIR ACT

1973-1974 OIL EMBARGO/U.S. ENERGY CRISIS

1978 PUBLIC UTILITIES REGULATORY POLICY ACT (PURPA)

LEADS TO NEW CONCERNS ABOUT...

- Reliability
- Environment
- High prices/shortages

→

A CATALYST FOR COMPETITION

- Wholesale transactions at market rates
- Develop domestic renewables
- Non-utility energy providers

1980s ECONOMIC EFFECTS OF THE 1970s LINGER...

Inflation + increased construction/labor + high labor costs & over construction = cost overruns & excess capacity

LOAD MANAGEMENT < \$ new power plant construction

1990s

1992 FEDERAL ENERGY POLICY ACT (EPACT)

1996 FERC ORDER #888

1999 FERC ORDER #2000

THE UPSHOT ? A MORE COMPETITIVE MARKET

- Competitive wholesale market
- Increased clean energy use
- Unbundling of services from transmission

2000s UTILITIES ADAPT TO CHANGE

Smart Grid modernization brings transparency, efficiency, load management

Renewable Portfolio Standards: now in **29** states

A SIGN OF THE TIMES:
Home Depot starts selling residential solar panels in 61 stores

TODAY

Bold reform initiatives in CA, HI, CA, TX, MN and NY: grid modernization, customer engagement, new revenue sources

POTENTIAL NEW BUSINESS MODELS:

- Platform provider of third-party energy services
- Integrated utility services model
- Smart integrator—distribution company, network operator, not commodity sales
- Hybrid