



Growing and Transforming Distributed Energy Markets – CHP Market Trends



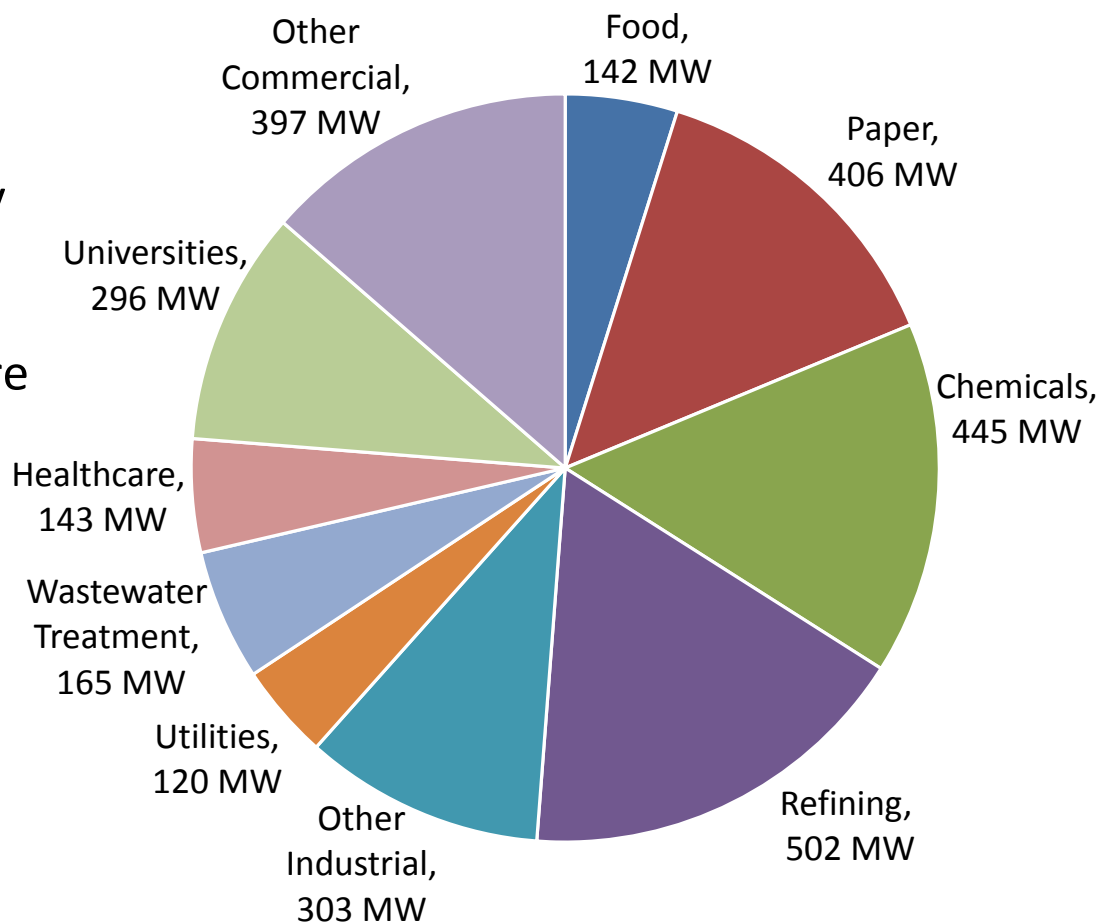
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Current CHP Market

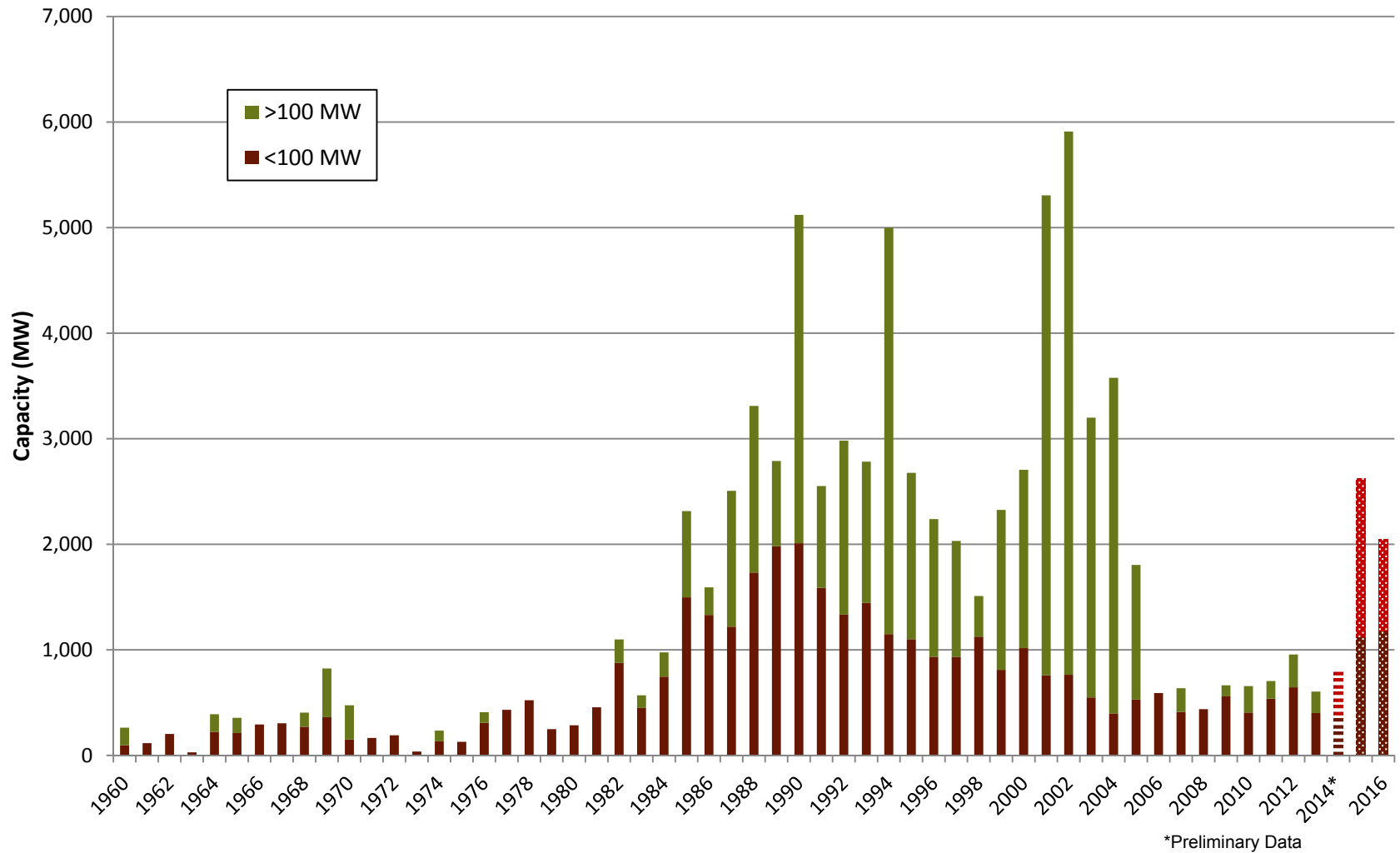
- About **82.7 GW** of installed CHP at over 4,300 industrial and commercial facilities
- Historically over 80% of capacity in industrial applications
- Changing market to include more commercial/institutional applications
- 70% of capacity is natural gas fired
- 2% of CHP capacity currently owned by utilities

CHP Capacity Additions, 2010-2013



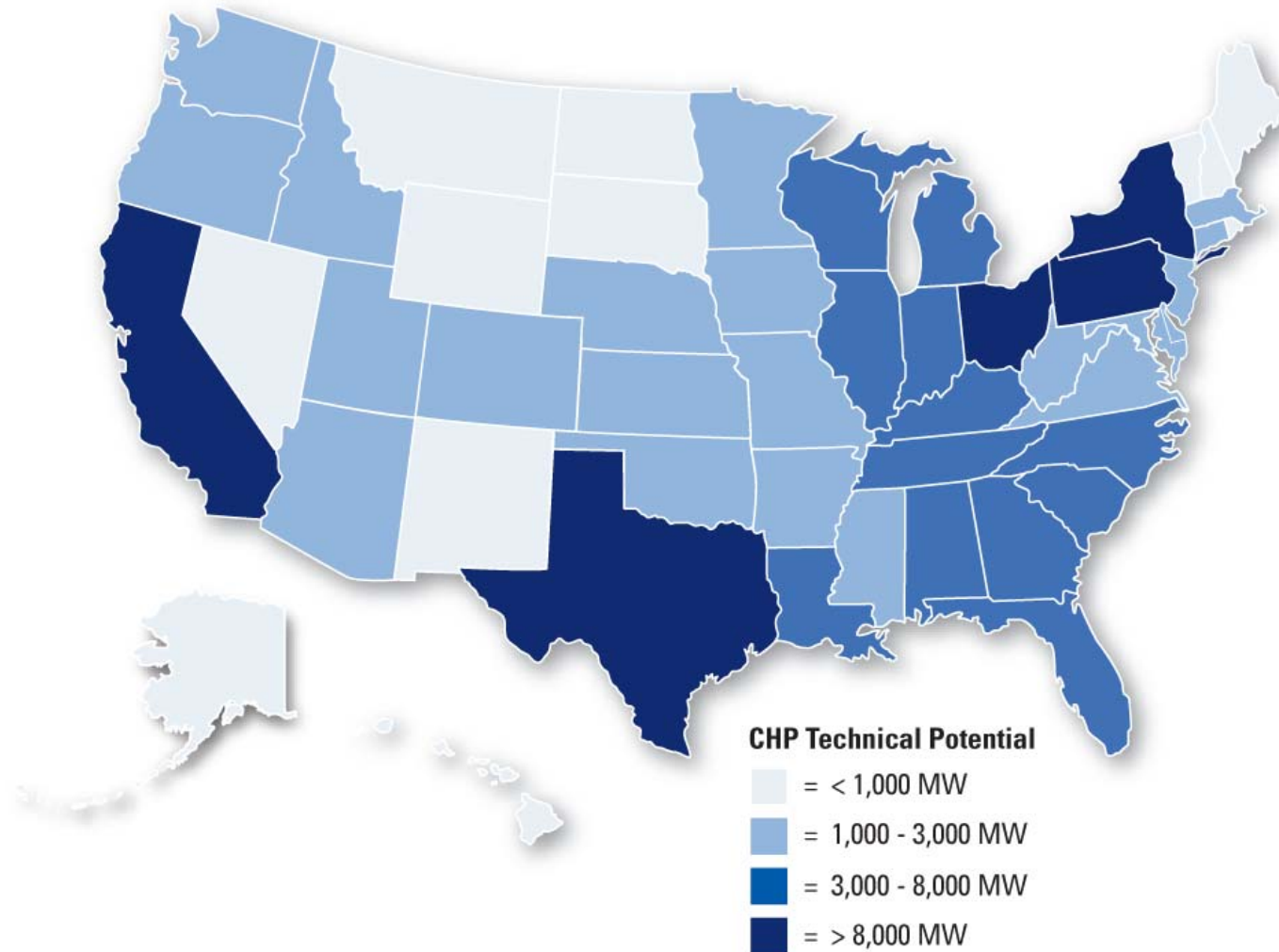
Source: DOE/ICF CHP Installation Database (U.S. installations as of December 31, 2013)

CHP Annual Additions since 1960



Source: DOE/ICF CHP Installation Database and ICF Internal Tracking

The Potential for Additional CHP Is Nationwide



Source: ICF Internal Estimates

Key Drivers for CHP

- Outlook for natural gas supply and price in North America
 - *Returning industries*
- Opportunities created by environmental drivers
 - *ICI Boiler MACT*
 - *Clean Power Plan*
- Need for energy reliability and resiliency
- Benefits of CHP recognized by Federal and State policymakers
 - *White House Executive Order: 40 GW by 2020*
 - *Increasing state interest*



CHP Emerging Trends

- Interest in CHP's reliability/resiliency benefits & its use in microgrid projects
- Smaller, packaged CHP systems (e.g., NYSERDA CHP Acceleration Program)
- Relaxing of state sales laws allowing for CHP systems to sell to adjacent facilities (e.g., CA, TX, NJ)
- Consideration of additional tax incentives for CHP, including the extension of the federal ITC, and expansion of the ITC to include WHP
- Increasing commercial/institutional interest in CHP & utility interest
- CHP opportunities in the Clean Power Plan
- Water-conserving benefits of CHP (e.g. in California and other drought prone states)

Questions & Contact Information



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