



American Council for an Energy-Efficient Economy

# Encouraging Combined Heat and Power (CHP) for Utility System Benefits

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**ACEEE**

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**MEDSIS Workshop**

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# The American Council for an Energy-Efficient Economy (ACEEE)

- ACEEE is a 501(c)(3) nonprofit that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors
- 50 staff; headquarters in Washington, D.C.
- Focus on end-use efficiency in industry, buildings, & transportation
- Other research in economic analysis; behavior; energy efficiency programs; & national, state, & local policy
- Funding:
  - Foundation Grants (52%)
  - Contract Work & Gov't. Grants (20%)
  - Conferences & Publications (20%)
  - Contributions & Other (8%)

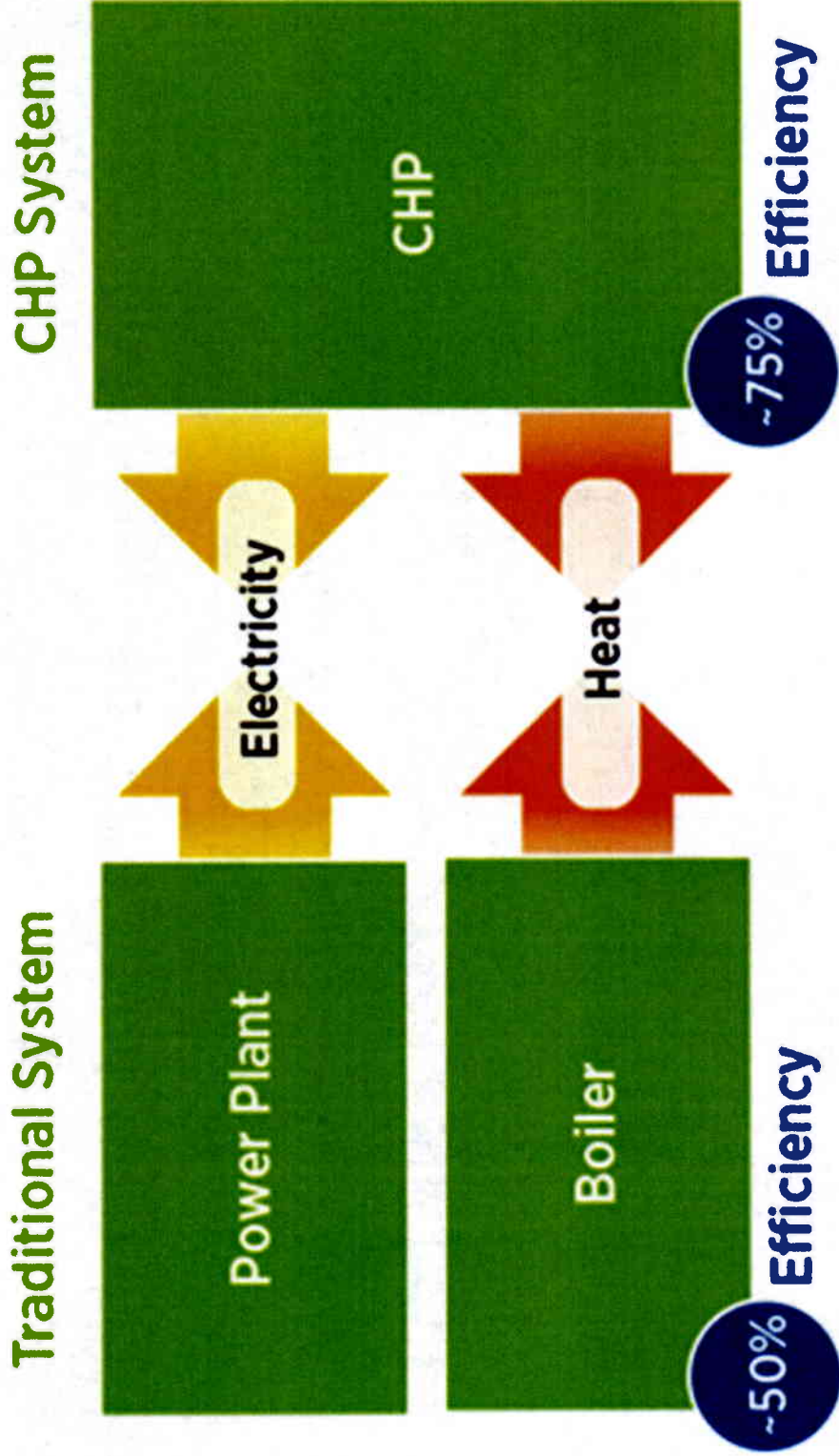




# Overview of Key Points

- District of Columbia has the potential to achieve system benefits from CHP
- More than one policy approach can maximize the benefits of CHP
- Well-designed policies effectively encourage CHP in several states
- DC PSC and Pepco can take action to encourage CHP in their jurisdiction

# CHP is more efficient generation



Source: US DOE



# DC has 14 MW of installed CHP

Combined Heat and Power  
Installations in District of  
Columbia

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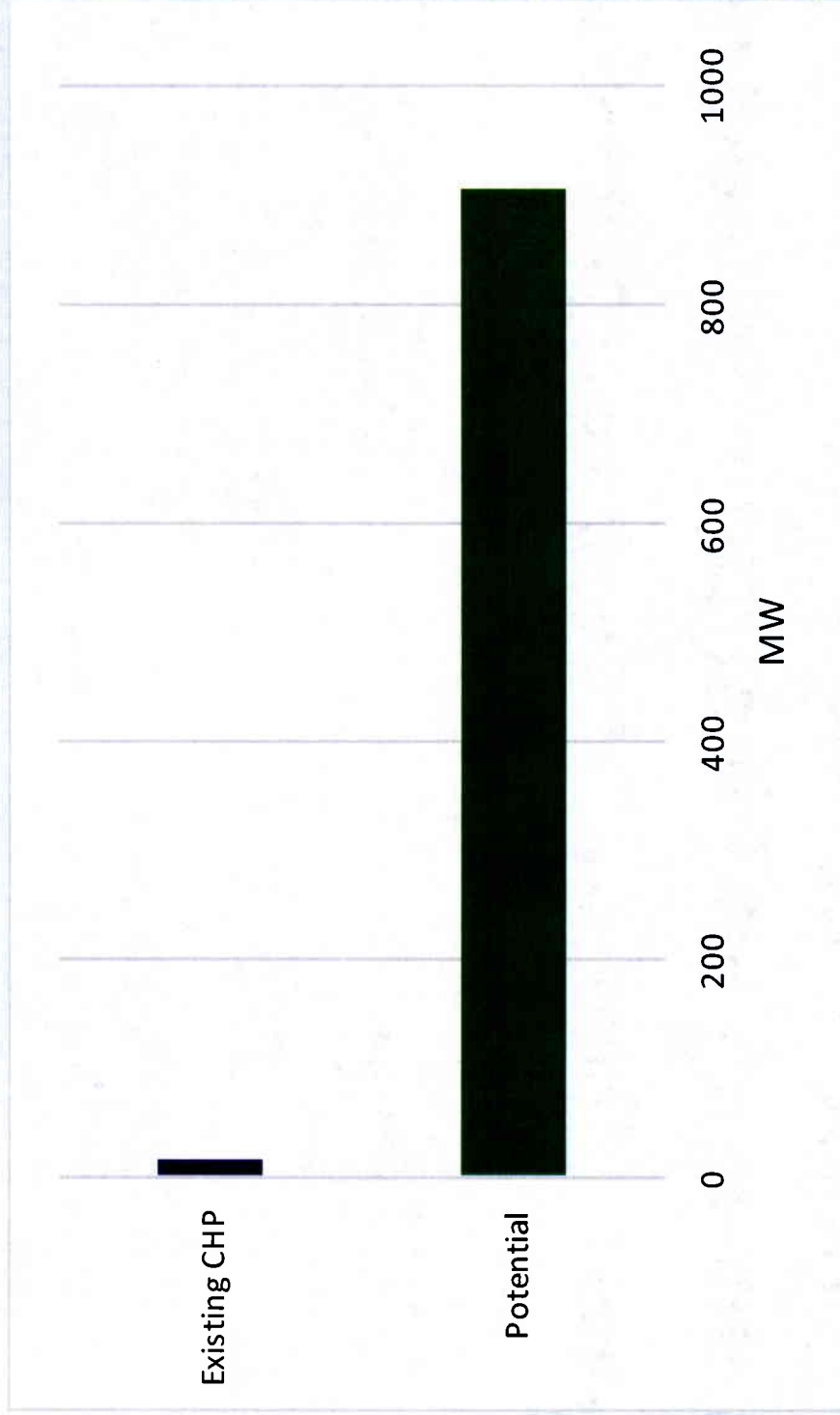
Choose a state

City	Organization Name	Facility Name	Application	SIC4	NAICS	Op Year	Prime Mover	Capacity (KW)	Fuel Class-Primary Fuel
Washington	General Services Administration (GSA)/ Smithsonian	GSA Smithsonian Central Plant Cogen	General Gov't.	9100	92119	2001	CT	10,000	NG-Natural Gas
Washington	Washington Convention Center / Pepco Energy	Washington Convention Center	General Gov't.	9100	92119	2003	BPST	4,000	WAST- Steam
Washington	Aegis Energy Services	National Archives Building	General Gov't.	9100	92119	2010	ERENG	225	NG-Natural Gas
Washington	PEPCO Energy	British Embassy	Military / National Security	9721	928120	2010	ERENG	250	NG-Natural Gas

# ACEEE visits GSA's CHP plant...



# DC has the potential to do much more

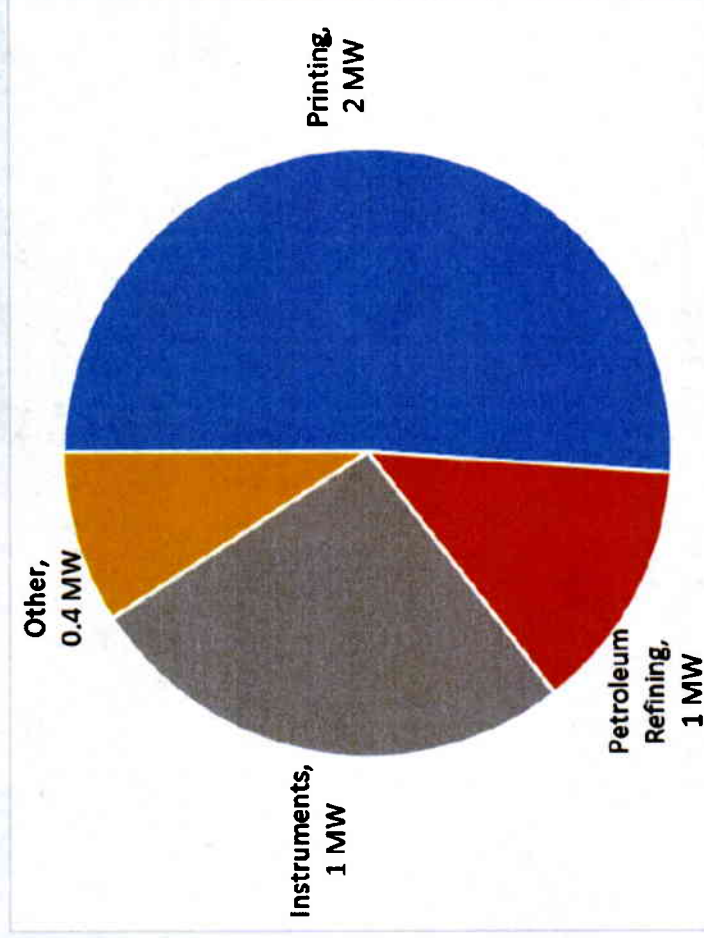


Source: Data from US DOE CHP Installation Database (as of December 31, 2014)

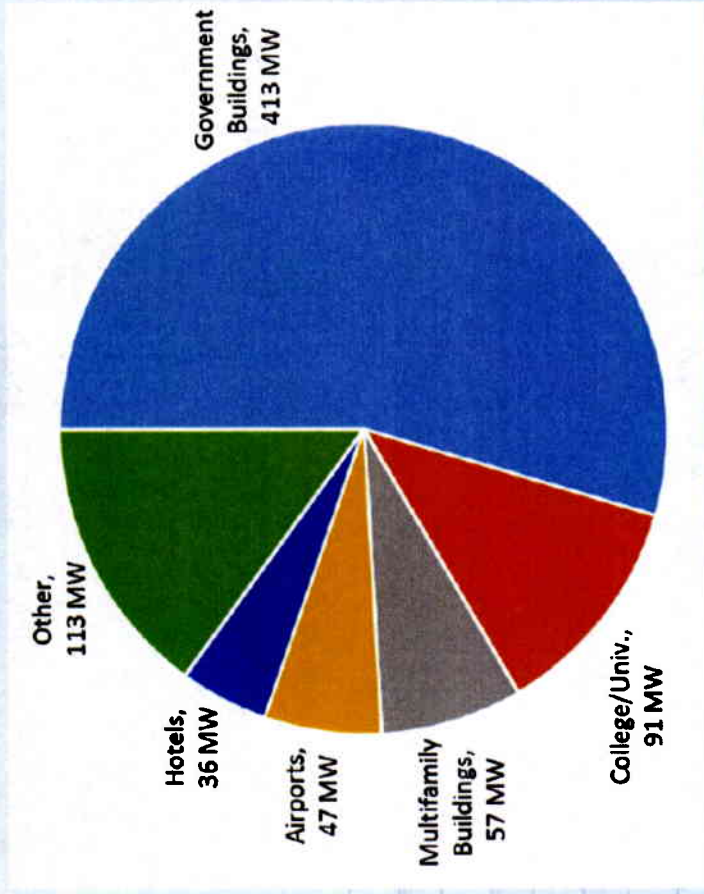


# Most of DC's potential in commercial and institutional sector

**Industrial CHP potential  
4 MW**



**Commercial CHP potential  
757 MW**



Source: US DOE, CHP Technical Potential in the United States, March 2016



# Benefits of CHP to the overall utility system

- Fuel efficiency and operating cost savings
- Reduced emissions (CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub>)
- Avoided T&D losses
- Avoided infrastructure investments
- Improved reliability and resiliency
- Market-based opportunities (economic dispatch, ancillary services, etc.)
- Support for grid flexibility and RE integration