

# Estimates of Michigan Baseload Industrial CHP Potential

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*3<sup>rd</sup> DG/CHP Regulatory Workshop: Effect of CHP Regulations on  
State Jobs and Consumer Benefits*

June 8, 2005

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# Purpose and Need

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- **Purpose:** To assess the potential for industrial CHP to meet portions of Michigan's emerging baseload needs.
- **Need:** To provide CHP supply estimates as inputs to the "Capacity Needs" modeling effort currently being conducted by the Michigan Public Service Commission

# Methodology

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- Focus on sites with higher CHP potential
  - Sites with existing steam needs being met by boilers that are:
    - High pressure (150+ psi),
    - Large (100,000+ lbs/hr) and/or medium (25,999 to 99,999 lbs/hr) sized, and
    - Installed before 2000.
- Data Sources:
  - Michigan Permit Database, E-Grid, Midwest CHP Applications Center database, selected experts

# Methodology (continued)

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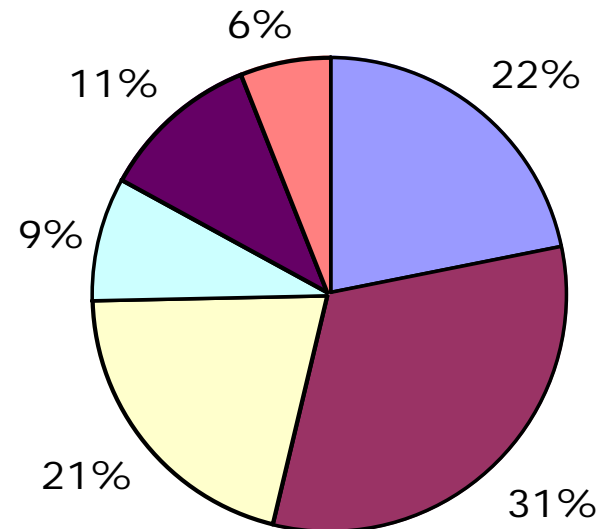
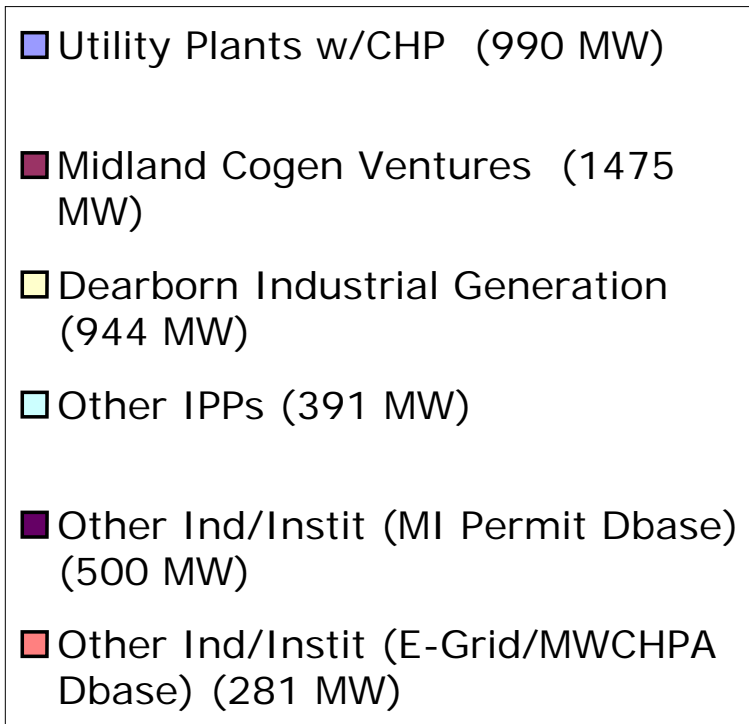
- Identified/sorted facilities with CHP currently
- Examined ratios of steam rates to MWs
- Identified/sorted facilities w/o CHP
- Estimated additional CHP potential
- Sorted additional CHP potential by sector, firm, fuel, & utility service territory
- Inputs now being used in capacity modelling

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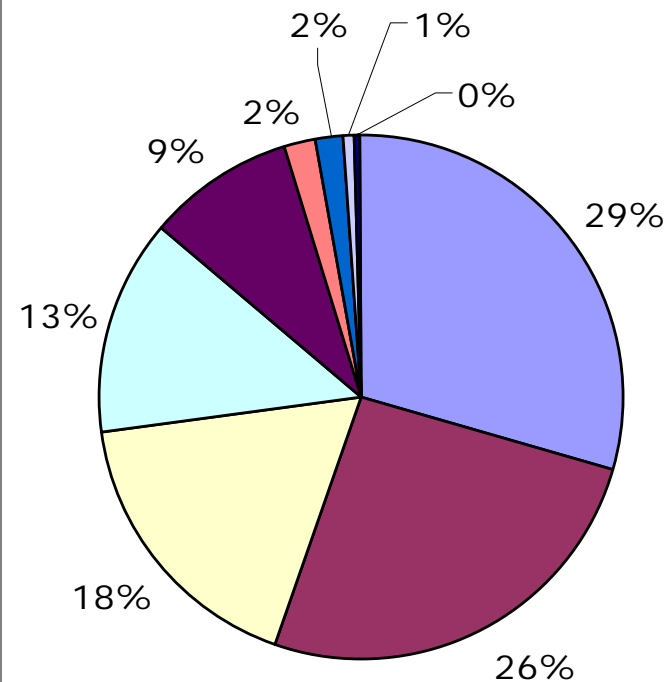
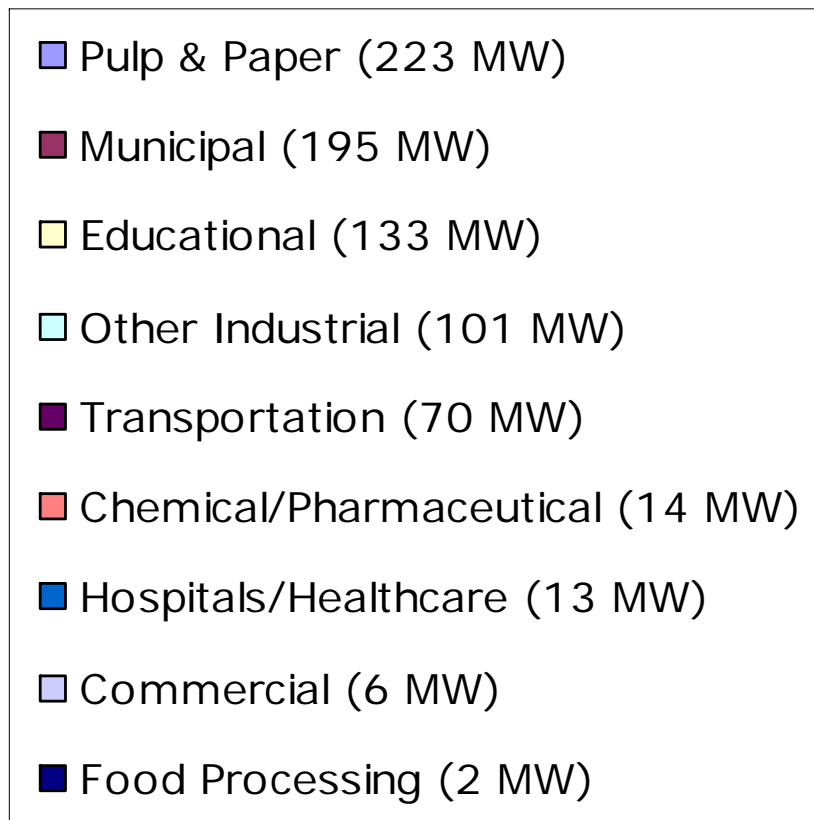
# Summary of Findings

# Current Michigan CHP Baseline (4580 MW)

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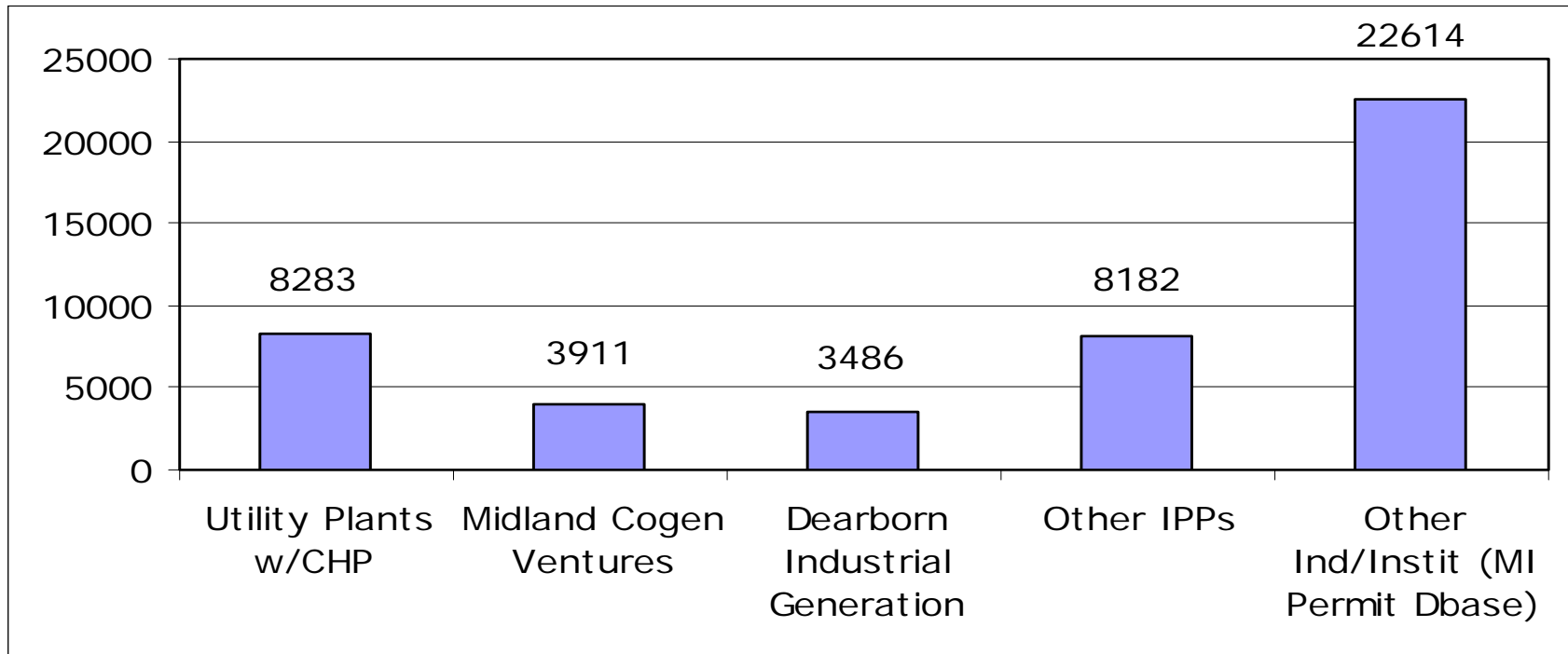


# Michigan CHP by Sector (w/o Utilities, IPPs, MCV, or DIG)



# Average Boiler Size:CHP Ratios (Installed Lbs/hr. per MW)

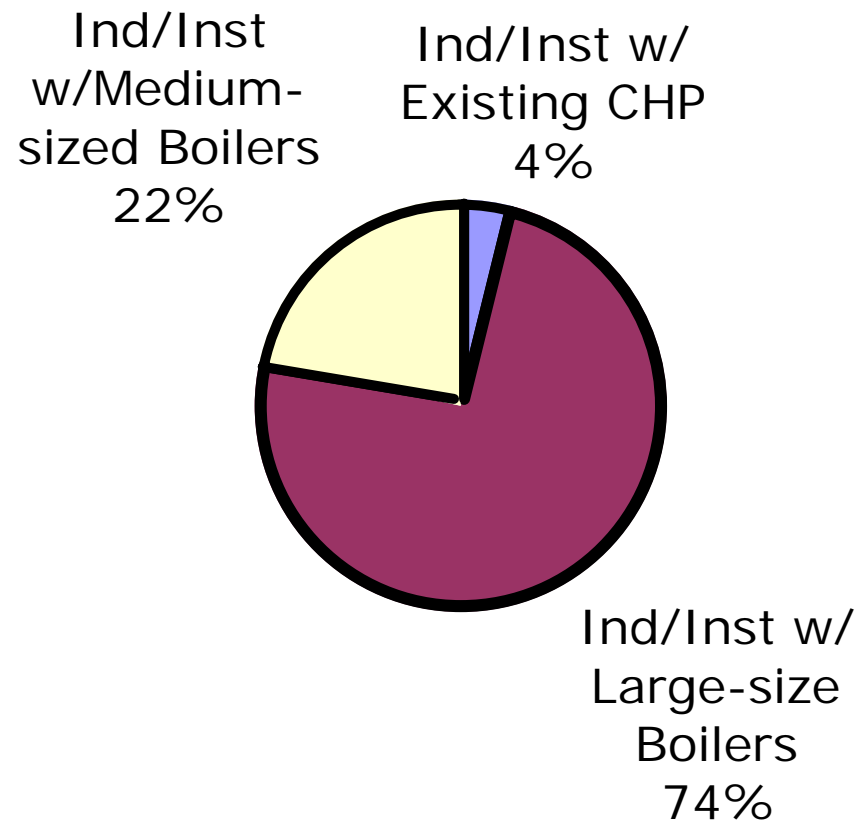
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# Capacity for 1471 MW of New CHP (at 20,000 Lbs/hr per MW)

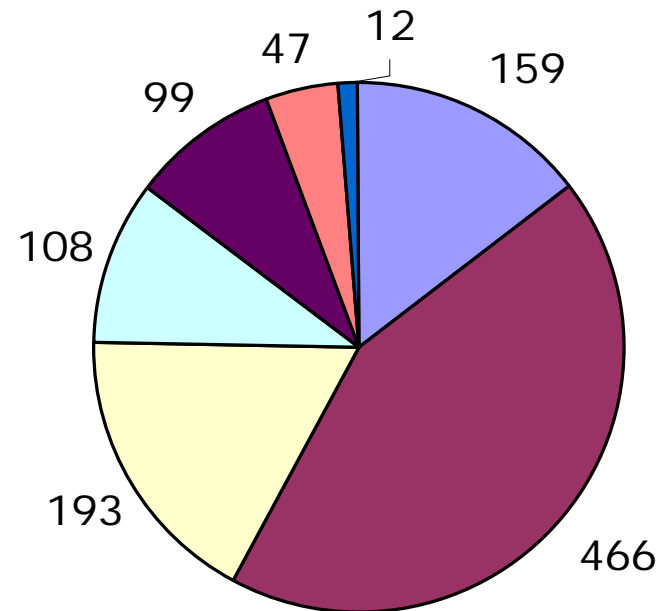
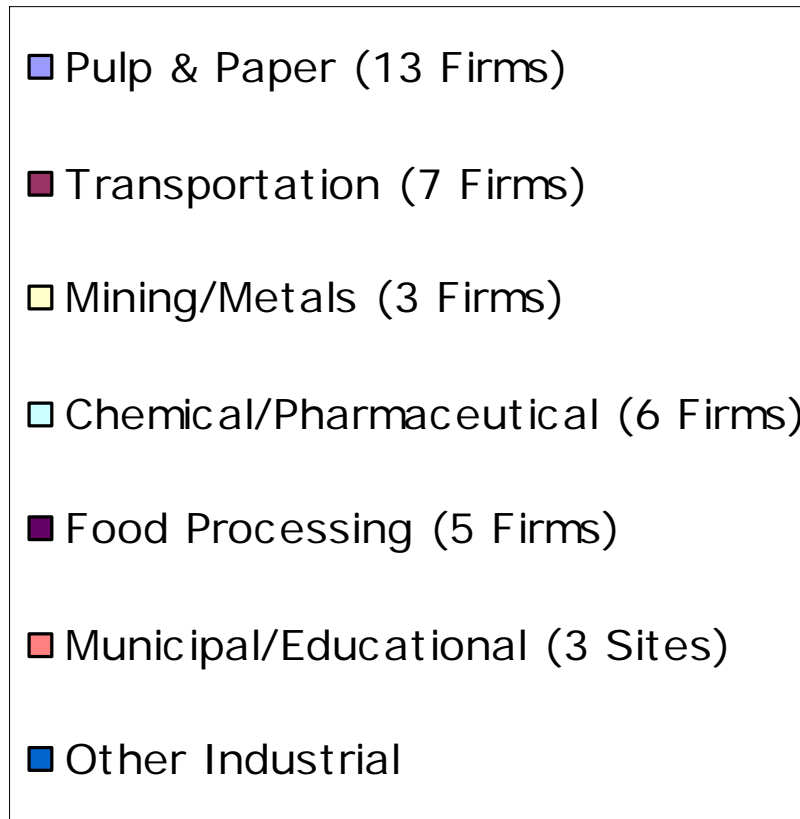
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# Capacity for 1085 MW of New CHP at Firms with Large Boilers

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(at 20,000 Lbs/hr per MW)



# In Summary

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- Michigan currently has 4500+ MW of CHP
- Working with < 40 large industrial companies with existing large boilers, Michigan has potential to add 1000+ MW of new CHP capacity
- Jobs retention/creation benefits could reach thousands from higher fuel use efficiencies and power savings/sales