

Federal CHP Market in the Southeast

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Southeast CHP Initiative Kickoff

September 26, 2002

Atlanta DOE Regional Office

Why CHP in Federal Sector?

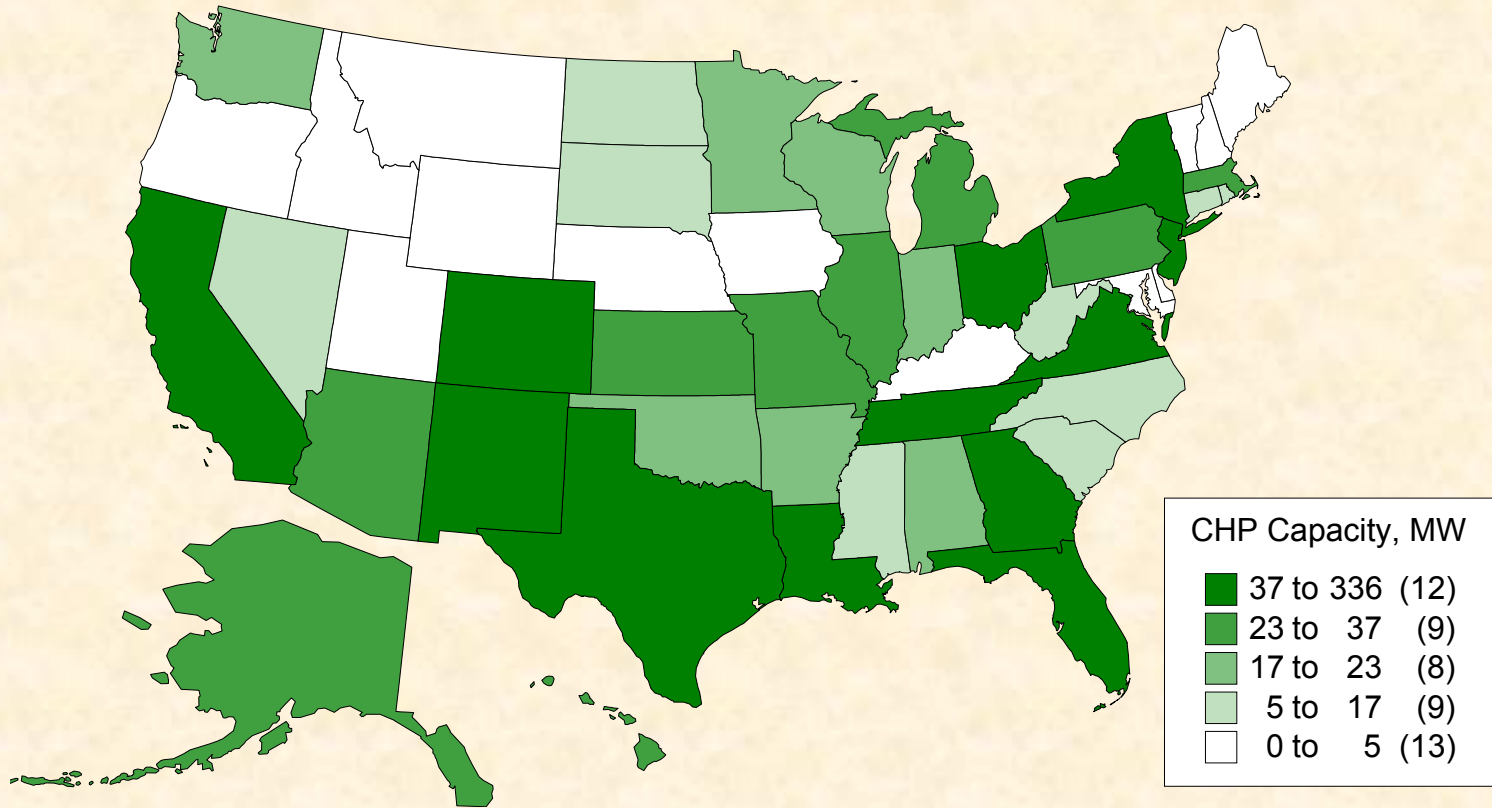
“Leadership by Example”

- **Meet federal goals to save money, energy, emissions**
- **Commercially available today--
-Proven but underutilized**
- **Increase energy security**
- **Federal agencies interested— but access is not easy**

What is Federal CHP Potential?

- **Market Assessment of CHP at Federal sites (2002)**
 - Reports on FEMP & ORNL web sites
 - Full analysis online at www.ornl.gov/femp/pdfs/chp_market_assess.pdf
- **Base Case: Sites with simple payback in less than 10 years = 1500-1600 MW (gas Recip-ICE or Gas Combustion Turbine)**

Federal CHP Potential Nation-Wide: 1500-1600 MW (with payback <10 yrs)



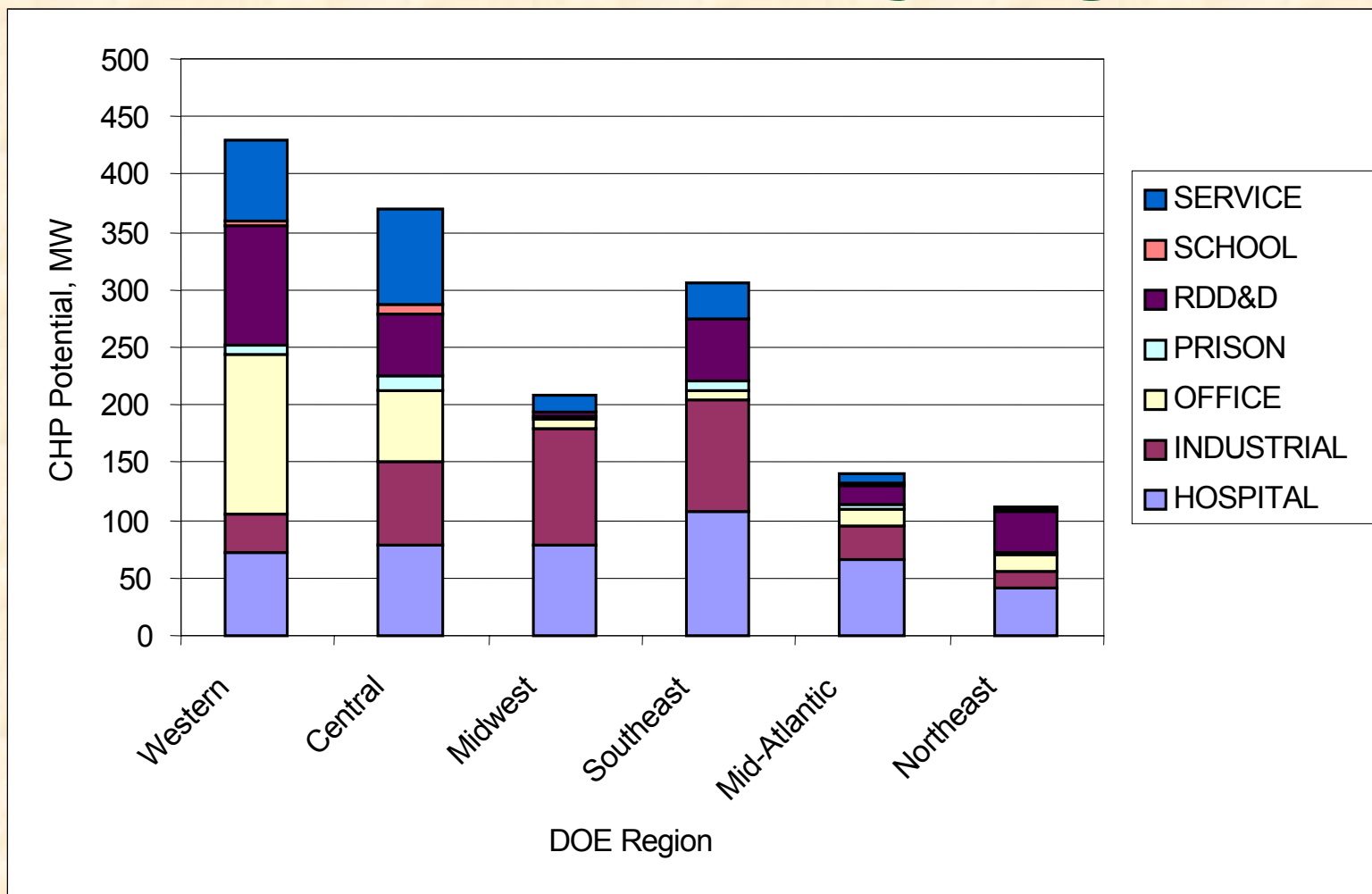
Assessment: 1570 MW of Federal CHP Offers:

- ✓ \$170 million/year in energy cost savings
- ✓ Avg. simple payback <8 years
- ✓ 50 trillion Btu/yr of source energy savings
- ✓ 4 million metric tons/yr of avoided CO2
- ✓ Increase reliability/security representing 13% of total federal electricity purchased (2000)

- e.g. this is significant!



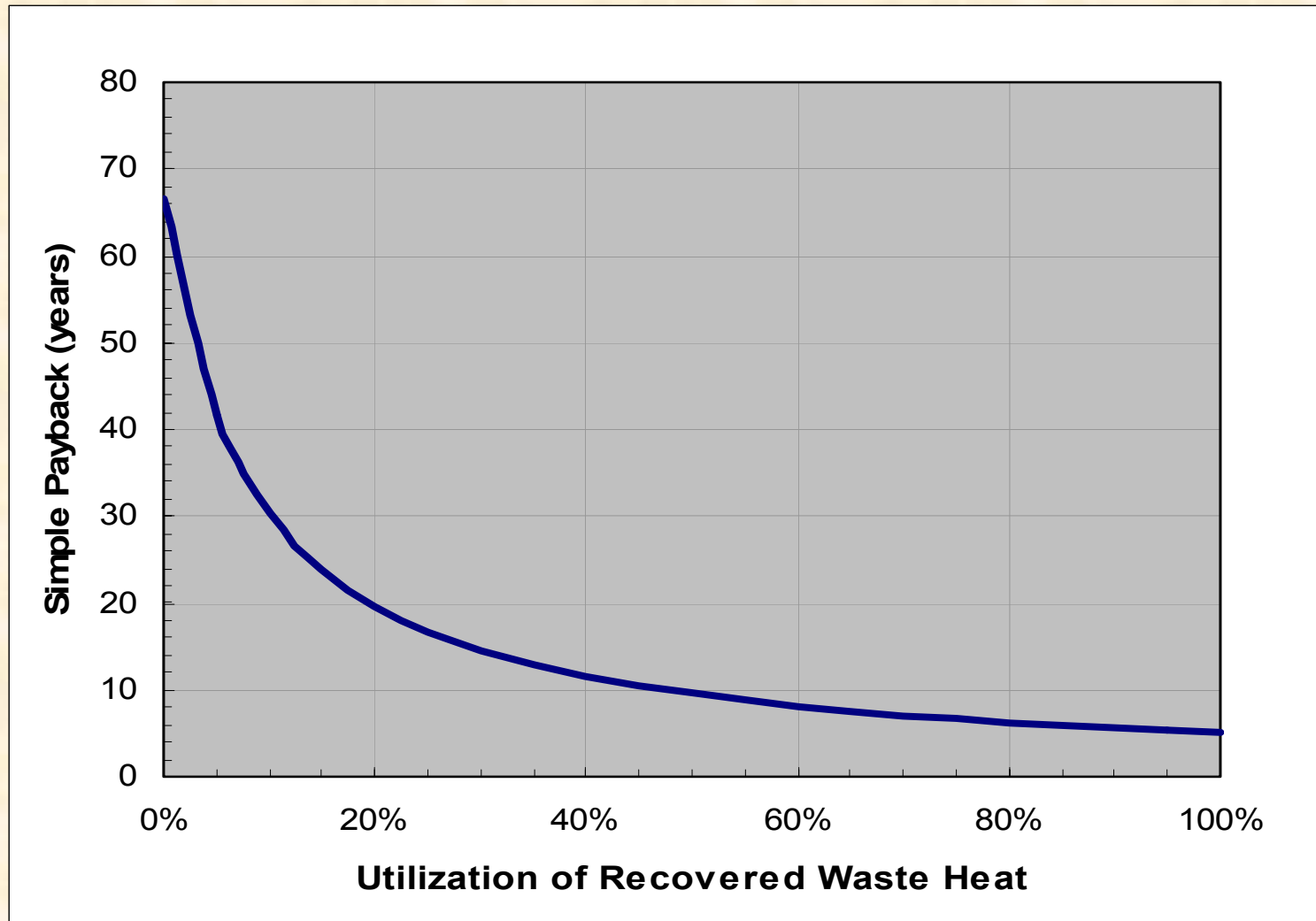
FEMP CHP Market Assessment: CHP Potential by Region



Southeast and Federal CHP

- ***Need high efficiency—optimize use of waste heat***
- ***Large, energy intensive sites, hospitals, military bases, offer best opportunities***
- ***Approx. 300 MW of Federal potential; energy security/upgrades improve economics***
- **Low electric rates and uncertainty over future gas/fuel prices are obstacles to broad CHP deployment**

CHP Economics: Sensitive to Waste Heat Use



FEMP DER-CHP Strategy

- Focus on markets with highest potential for success
- Help interested agencies make informed DER-CHP decisions
- Move good projects to deployment

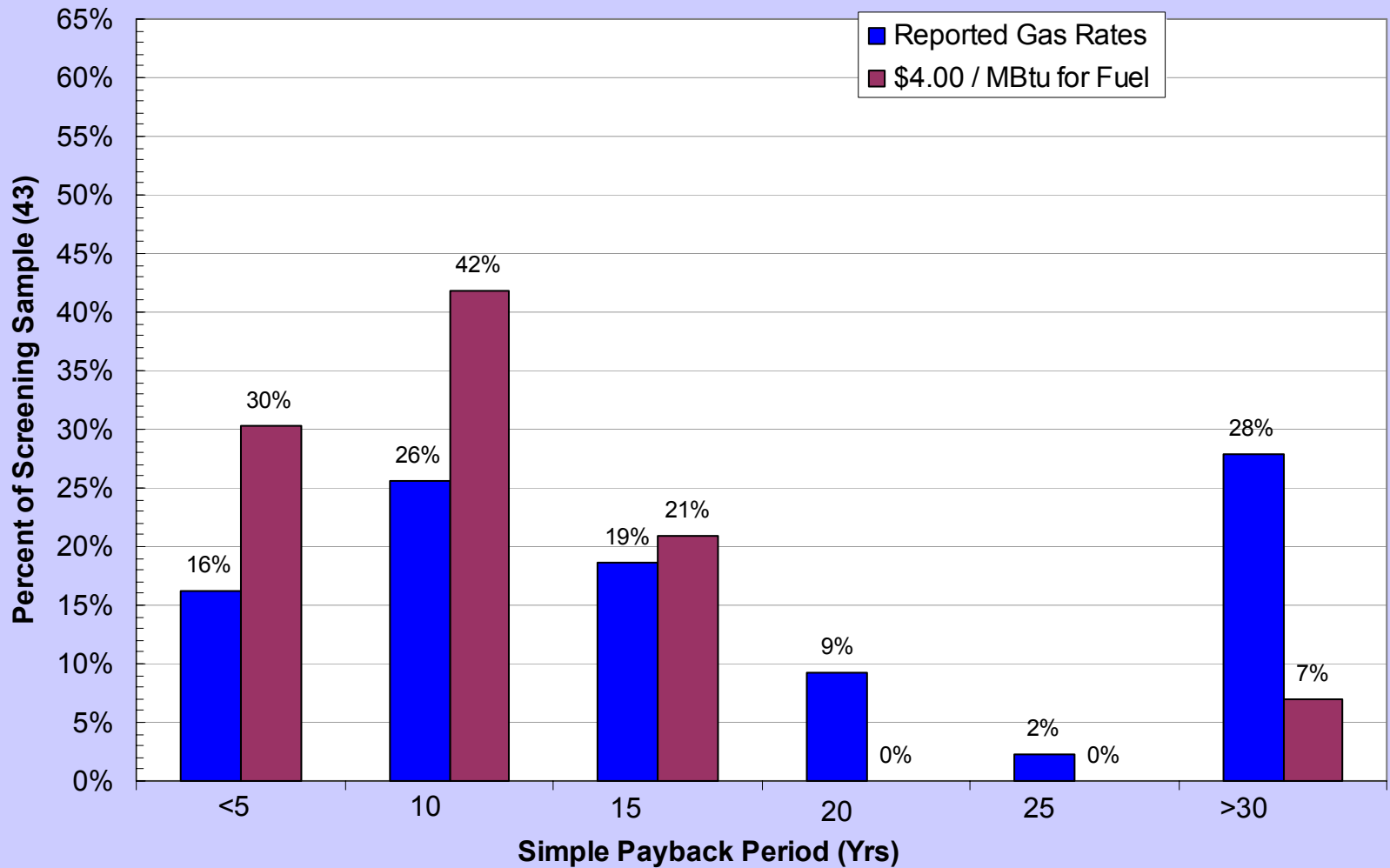


OAK RIDGE NATIONAL LABORATORY
U. S. DEPARTMENT OF ENERGY



Screening Results

Simple Payback Periods
ARO Only
100% Waste Heat



Federal agencies can call DOE-FEMP for assistance with CHP

- **DOE can help agency sites**
 - Determine if they have CHP potential- free screening
 - Understand options with commercial technology
 - Ensure best-value configurations go into their projects
 - Help avoid surprises (e.g., exit fees)

FEMP CHP Contacts

- Your Regional DOE Office– (404) 562-0555
Steve Hortin, Terri Roberts and
Lisa Hollingsworth (FEMP)
- DER/CHP Programs at FEMP HQ:
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- Keith Kline, ORNL ADD CHP team
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Klinekl@ornl.gov

Web-based Info:

- **Calls for Projects (TA/funding) and upcoming DER Workshops for federal facilities:**
http://www.eren.doe.gov/femp/techassist/der_resources.html
- **Full CHP Market Assessment Report:**
www.ornl.gov/femp/pdfs/chp_market_assess.pdf
- **DOE Websites:**
FEMP <http://www.eren.doe.gov/femp/>
Distributed Energy and Electricity Reliability
<http://www.eren.doe.gov/power/>