

# Industrial Energy Efficiency Resources

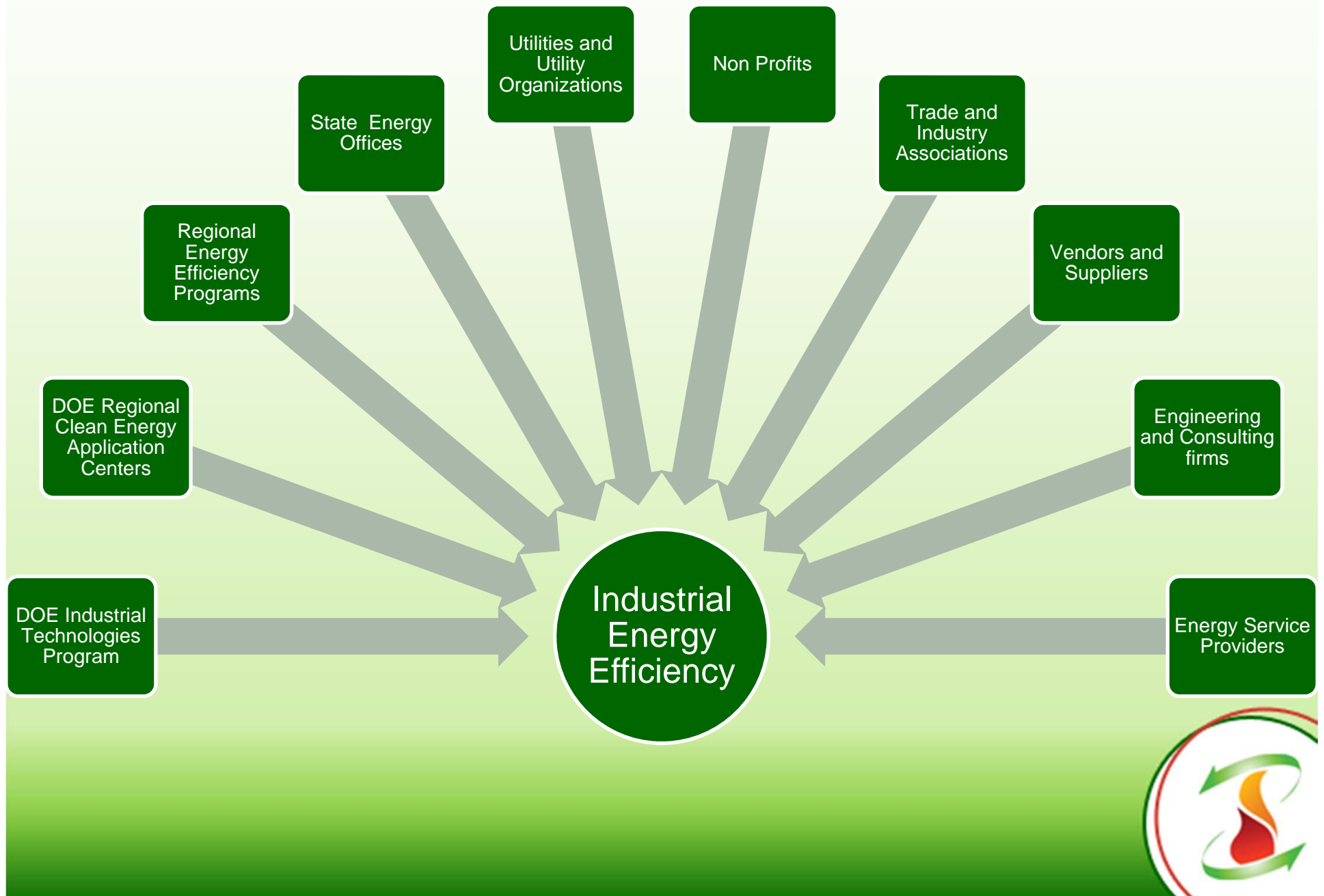
Presentation to the Western Governor's  
Association March 17, 2011



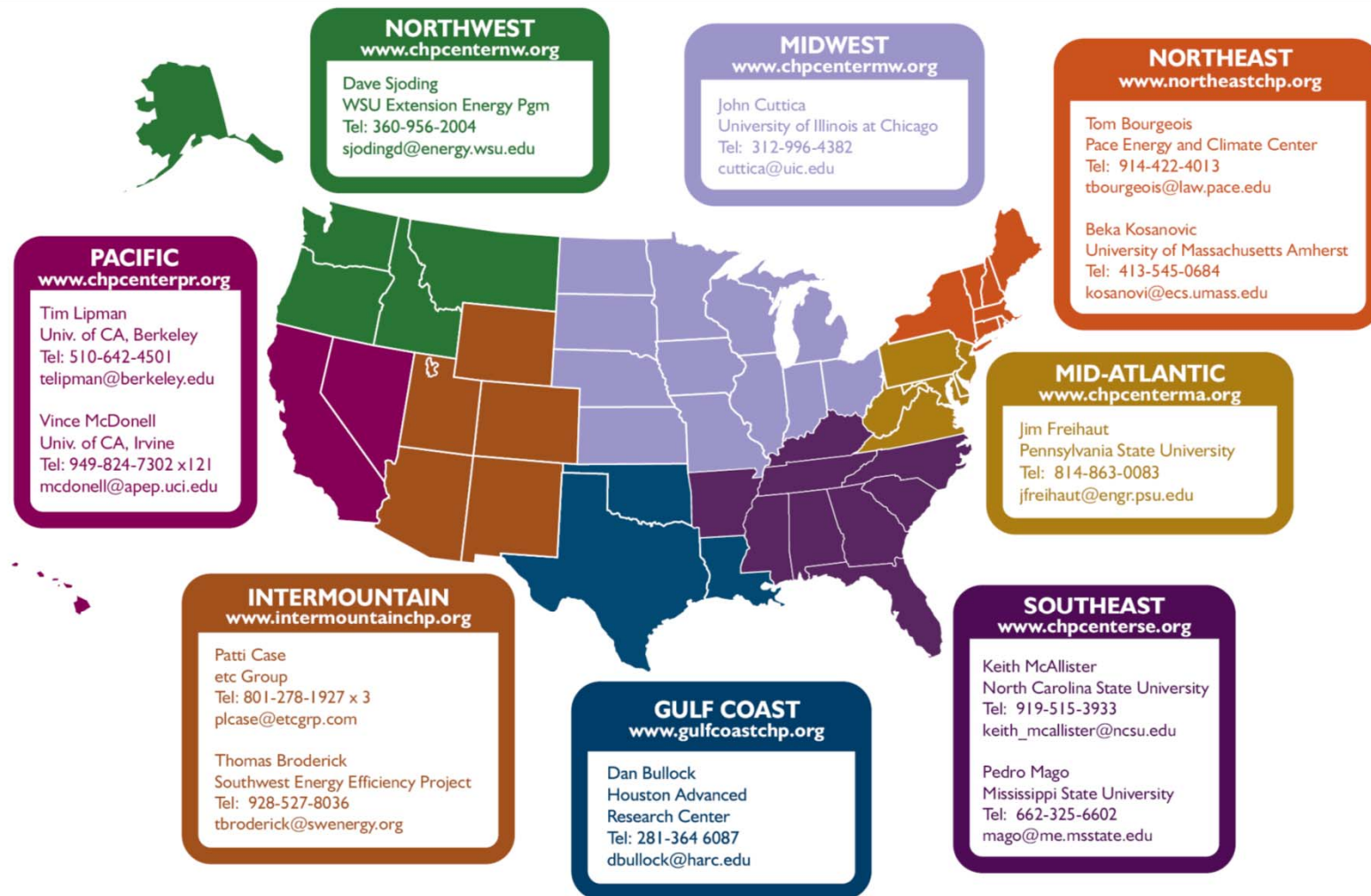
U.S. DEPARTMENT OF ENERGY  
**Clean Energy Application Centers**



**ETC Group**  
ENERGY ENGINEERING FOR A SUSTAINABLE FUTURE™



# DOE Clean Energy Application Centers – 8 Regions



For more information: [www1.eere.energy.gov/industry/distributedenergy/racs.html](http://www1.eere.energy.gov/industry/distributedenergy/racs.html)

# Clean Energy Technologies

**CHP**



The sequential production of electric and thermal power from a single dedicated fuel source

**Waste Heat Recovery**



Captures heat otherwise wasted in an industrial process and utilizes it to produce electric power. These systems may or may not produce additional thermal energy

**District Energy**



Central heating & cooling plants that incorporate electricity generation along with thermal distribution piping networks for multiple buildings (campus / downtown area)

# Mission

- Each center is charged with:  
*Helping facilitate the adoption of efficient and well-designed CHP, waste heat recovery, and district energy*
- Each center determines the best way to do that for their region
- Always a combination of:
  - Education and Outreach
  - Technical Assistance
  - Informing Policy



# What We Actually Do

- Inform prospective end users on the benefits, business models, & resources available for their specific application
  - Workshops, trainings, webinars, guides, websites, advice
- Help potential projects “take the next step”
  - Free project feasibility screenings
  - Help on permitting issues, tariffs/rate assessments, equipment questions, convincing upper management, 3<sup>rd</sup> party review of proposals...
- Promote CHP as an effective clean energy **policy** solution:
  - Educate state policymakers and regulators, remove barriers



# Sample Policy Success:

## - Arizona



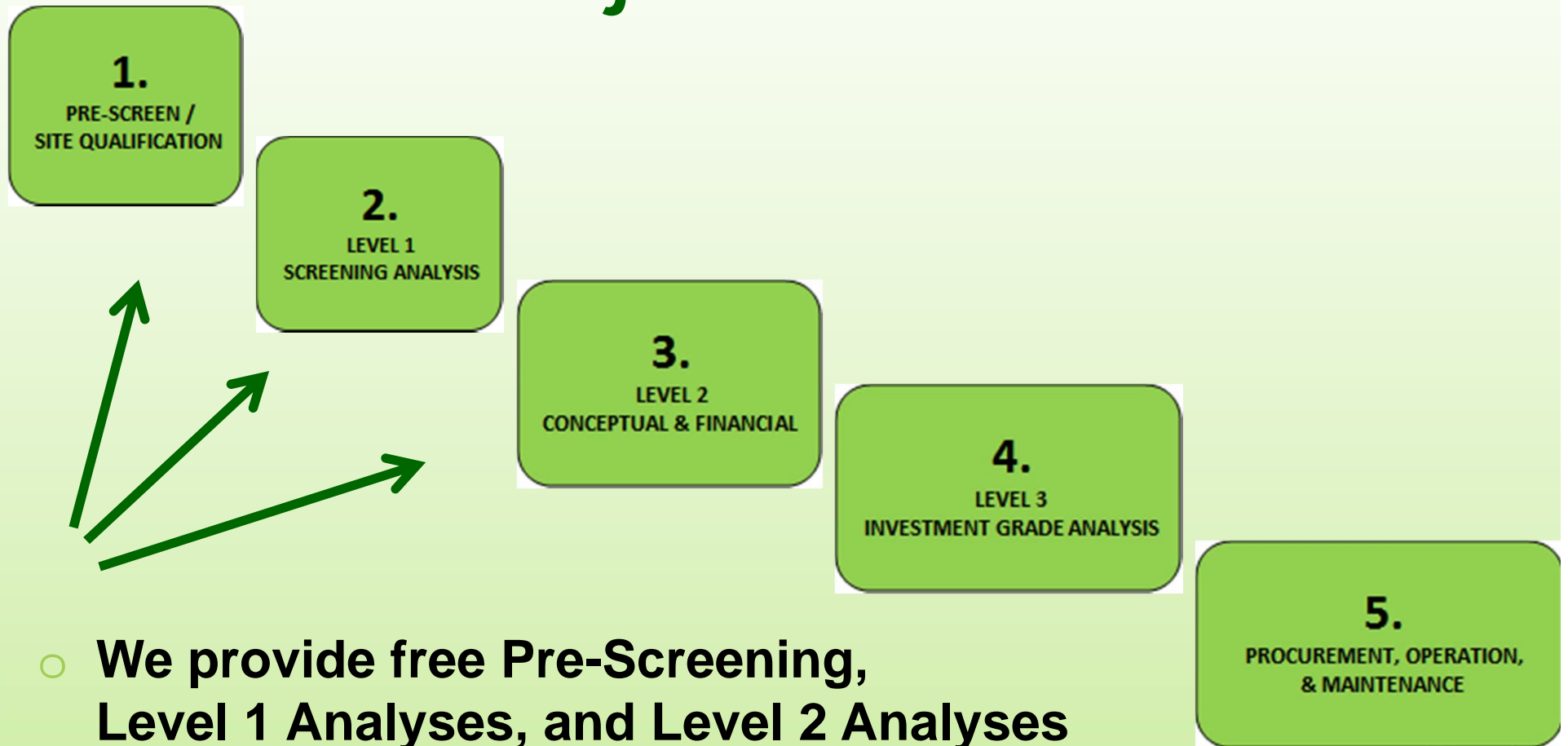
**WIN**

- CHP is eligible in Arizona's new electric efficiency resource standard (22% by 2020)
- ...And in the gas efficiency standard (6% by 2020)
  - **Intermountain RAC** educated commissioners/ staff about its inclusion
  - Now working on getting a pilot program





# Technical Assistance for Potential Projects



- We provide free Pre-Screening, Level 1 Analyses, and Level 2 Analyses
- We advise businesses on all other steps





# Sample Technical Assistance:

## - Washington State

### ○ Grays Harbor Paper Mill

- 18.5 MW boiler/steam turbine system
- Biomass fueled (wood waste)
- Thermal energy utilized in the plant process

### ○ Paper Mill gets revenue:

- Onsite power displaces utility power
- Excess power sold to the utility
- Green tags sold to the utility

### ○ Northwest RAC participation:

- Assisted in developing a lease purchase agreement (*Local utility owns equipment (leases to paper mill)*)



# Other Public Sector Resources

(a by no means comprehensive list)

## National

- American Council for and Energy Efficient Economy (ACEEE)
- Alliance to Save Energy (ASE)
- Consortium for Energy Efficiency (CEE)
- Industrial Energy Technologies Conference (IETC) TAMU Energy Systems Laboratory

## State and Regional

- Southwest Energy Efficiency Project
- Northwest Energy Efficiency Alliance
- Texas Industries of the Future
- Midwest Energy Efficiency Alliance
- Manufacturing Extension Partnerships



# Other Private Sector Resources

(again just a sample)

## Trade and Industry Associations

Hydraulic Institute Pump  
Systems Matter

International District Energy  
Association

Compressed Air Challenge

Northwest Food Processors  
Association

## Engineering and Consulting Firms

DOE Qualified Specialists

Utility DSM Program  
Consultants/Service Providers

Energy Star Partners

National Association of Energy  
Service Providers



# Thank You

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