TEXAS COMBINED HEAT AND POWER INITIATIVE
www.texaschpi.org
P.O. Box 1462
Austin, Texas 78767
512.705.9996

Combined Heat & Power (CHP), also known as cogeneration, supplies 20% of the electricity in Texas. CHP uses well-known technologies that can be deployed quickly and cost-effectively in a wide variety of industrial, institutional and commercial applications. And similar to the commonly known renewable energy sources, CHP consumes very little water. By all accounts, CHP It is the most efficient way to generate power from fuel including natural gas, waste or byproducts, biogas, or biomass. Typically, power generation is an inherently inefficient process that creates heat but with CHP the heat is used to displace fuel instead of evaporating cooling water as is required with conventional power generation.

Texas leads the nation in CHP generation with about 16 GW, or 20% of total US capacity. Texas added 10,000 MWe of CHP capacity between 1995 and 2002 and the bulk of this was comprised of large (100+ MWe) systems located at industrial sites. However, economic and policy barriers have limiting further gains, especially of smaller CHP systems. We believe the state is at a cross roads where the implementation of smart policies supportive of CHP could stimulate another burst of CHP development and significant growth in industrial and commercial projects.

Growth in CHP is needed because it is a dispatchable, distributed resource that reduces energy consumption, provides impressive air emission savings, saves water, improves energy reliability and security, and makes Texas businesses more competitive in world markets.

TXCHPI estimates that the existing CHP capacity reduces water consumption by 28 billion gallons or 85,000 acre-feet per year. And there is potential for much more. A study commissioned by the 80th Legislature determined that there is potential for another 13 GW of economical CHP capacity which would save an additional 37 billion gallons of water annually which is approximately the same size of Lake LBJ.
Policy changes led to rapid increases in wind energy. As mentioned, currently there is little CHP development activity, but with energy policy changes the full potential for CHP can be realized.

Last Session, Sen. Estes was the Senate sponsor of a bill that creates a permit by rule for CHP systems and we believe that this will help reduce project permitting costs and help cast new light on CHP in Texas.

To take the next steps, we suggest that the following policy changes be investigated for your Committee report:

- A change to the Texas Utility Code that would allow for thermal energy to be sold to more than one customer which would lead to more development of CHP.
- Implementation of a natural gas incentive program modeled after the existing Energy Efficiency Incentive Program.
- Recognition of off-site air emission reductions when permitting CHP facilities
- Implementation of a CHP a portfolio standard modeled after the renewable portfolio standard.
- A Self Generation Incentive Program for industry that includes all types of self-generation and waste heat recovery.
- Guidelines for evaluating CHP when building or remodeling critical government buildings as required by existing emergency preparedness law.

The TXCHPI stands ready to assist your efforts so that CHP can be a part of the solution when assessing the impact of current and anticipated drought conditions on electric generation capacity in Texas.

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HEAT TX CHPI POWER

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CHP: The Power of Texas

Combined heat and power (CHP) is a type of distributed generation technology that is **efficient**, **reliable**, **clean**, and **cost-effective**. Because it uses conventional technology that is readily available, CHP holds enormous potential to **create jobs** and improve the competitiveness of Texas business. Appropriate public policies can double statewide CHP capacity to over 35,000 MW and **boost Texas industry** and **natural gas demand**.

TXCHPI members focus on improving the regulatory and market conditions to help Texas industry adopt more CHP. Specifically, the Initiative promotes:

- ★ **Job Growth** - Promote economic prosperity by boosting Texas industry and domestic natural gas demand.
- ★ **Energy Efficiency** - Maximize output and reduce fuel costs. CHP is the most efficient way to generate power from fossil fuels.
- ★ **Energy Security** - Improve resiliency of power grid during natural disasters and extreme temperatures.
- ★ **Environmental Benefits** - Because of its high efficiency, CHP cuts emissions by half and requires no water for cooling.

About the Initiative

The Texas CHP Initiative champions combined heat and power (CHP) as the most effective, economical, and environmentally-sensible energy option for Texas. The Texas CHP Initiative is an industry-led group that includes manufacturers, suppliers, project developers, project adopters, engineering firms, architects, and electricity consumers. The Texas CHP Initiative registered as a 503(c)(6) organization with the Texas Secretary of State in 2007.

The Initiative supports economic prosperity and job growth through greater adoption of CHP in industrial, commercial, and institutional settings:

Cogeneration | Waste Heat Recovery | District Energy

Paul Cauduro
Executive Director
512-705-9996
paulc@texaschpi.org

Rich Herweck
President
972-979-4737
txchpi@texaschpi.org

Policy Priorities

Enhance the Energy Security Law Pertaining to CHP

Supplied by secure Texas natural gas, CHP can greatly increase energy security in critical buildings and infrastructure. Let's build on existing law by having SECO provide common sense guidelines regarding CHP evaluations.

Streamline Air Permits for CHP Projects

Reciprocating engines and combustion turbines across the state provide vital services in oil and gas, water, and industrial settings. Air quality regulations should not discriminate against the use of these same technologies when used in clean CHP applications, like they do today.

Promote Greater Efficiency for Texas Natural Gas

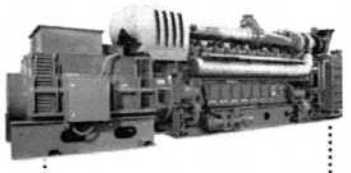
While the PUCT provides incentives for electric efficiency, Texas needs to incentivized efficiency in the other half of the market – natural gas. A tradable natural gas combined heat and power energy credit program will increase the high efficiency use of natural gas.

Expand Incentives Available through the PUCT's Energy Efficiency Incentive Program

The PUCT's program has worked successfully for over a decade. Expanding incentives offered through the current efficiency program will increase adoption of advanced energy technologies, including CHP, which will help lower utility bills and make businesses across the state more competitive.

Promote Adoption of More Distributed Generation

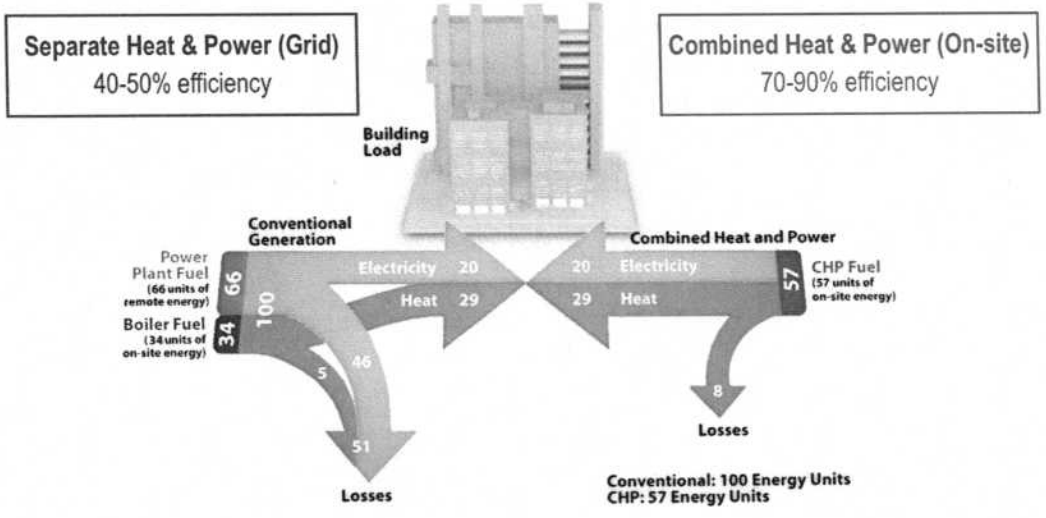
Texas is over-reliant on centralized generation. This reduces reliability and increases costs. Increased use of distributed generation technologies, like CHP, can enhance the security our power grid, while making Texas industry more competitive and reducing emissions.



CHP Basics

Combined heat and power (CHP) is a type of distributed generation located at a building or facility. CHP generators can operate 24 hours a day to provide the primary source of both electricity, and heating and cooling needs using proven, cost-effective technologies.

CHP uses secure Texas natural gas supplied by underground pipelines. When the electricity grid goes down, even for days or weeks, CHP systems have proven to be much more reliable than conventional diesel backup generators. In addition, CHP systems deliver very low to zero emissions with attractive economic payback periods, making it the efficient, reliable, clean-energy alternative.



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