



Capturing New CHP Opportunities – What EPA’s CHPP Brings to the Table

Claudia Tighe, Program Manager

U.S. EPA CHP Partnership

EPA's Clean DG Policy and CHP Webinar Series

March 18, 2010

What is the EPA CHP Partnership?

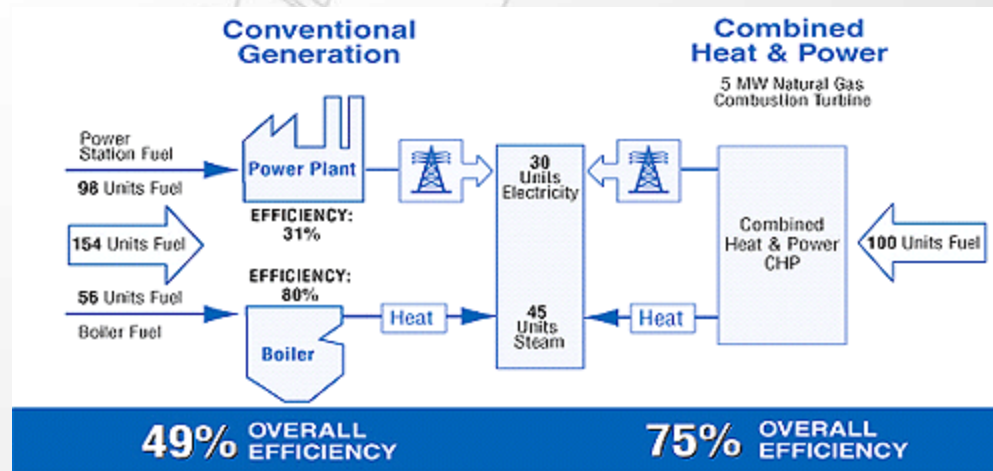
- Within EPA's Office of Air & Radiation Climate Protection and Partnership Division, we promote CHP as an energy efficient technology to reduce GHG emissions
- Voluntary program seeks to reduce the environmental impact of power generation by advancing the use of highly-efficient CHP
- Collaborate with private and public sectors to support the deployment of new CHP projects and to realize their energy, environmental, and economic benefits

Who Are the CHPP Partners?

- **More than 360 Partners**
 - End Users
 - Project Developers
 - Consultants/Engineers
 - Equipment Manufacturers
 - Utilities
 - Financiers
 - ESCOs
 - State and Local Governments

Why Does EPA Support CHP?

SHP v CHP



What Have We Achieved So Far?

- Through 2009, the CHPP has assisted **>460 CHP projects** representing **4,850 MW** of new capacity, resulting in annual emission reductions of **12.5 million** metric tons of CO₂ equivalent
 - These emissions reductions are equivalent to the emissions from 2.3 million passenger vehicles per year

How Does EPA's CHP Partnership Support CHP?

- Continue to raise awareness of:
 - successful CHP applications
 - concurrent government activities that make CHP applications attractive
- Support Partners in exploring CHP feasibility for their operations.
- Analyze barriers to raise market awareness.
- Provide Partner networking opportunities.
- Recognize Partner achievements.

EPA CHPP Tools and Resources

Education & Outreach	Technical Assistance	Publicity & Recognition
<ul style="list-style-type: none">• Project Development Technology & Policy Resource Documents• CHP Funding Database• Bimonthly Webinar Series	<ul style="list-style-type: none">• Initial Site Screening*• Technology/Vendor Lists*• Feasibility Studies*• Incentive/Policy Analysis*• CHP Emissions Calculator (CHPP approved)*	<ul style="list-style-type: none">• CHP Partner List*• CHP Partnership Logo Usage*• CHP Partner Certificate*• Annual Certificate of GHG Reduction*• ENERGY STAR CHP Award*

***Offered to our Partners only**

All Partnership tools and resources available on our Web site: www.epa.gov/chp



CHP Market Education and Outreach Resources

Basic CHP Information and Project Development Resources

- Basic CHP information
 - CHP Catalog of Technologies (www.epa.gov/chp/basic/catalog.html)
 - Biomass CHP Catalog of Technologies (www.epa.gov/chp/basic/catalog.html)
 - Information on multiple benefits of CHP (www.epa.gov/chp/basic/index.html)
- CHP Project Development Handbook and other resources (www.epa.gov/chp/project-development/index.html)

CHPP Funding Database

- Track financial, utility rate, and regulatory treatment incentives and provide detailed information on how to access revenue streams that financially reward, or monetize, environmental benefits
- Updated bi-weekly, it presents incentives by type of project and type of incentive

(<http://www.epa.gov/chp/funding/index.html>)

State Policy Resources


- Identify and evaluate policies to support CHP
 - National Clearinghouse for states developing energy and environmental strategies
 - Fact sheets, studies, and other research tools on policy opportunities

Web site: www.epa.gov/chp/state-policy/index.html

Strategic Market Resources

- The CHP Partnership has targeted some of its analysis and outreach efforts to increase awareness and adoption in several strategic market sectors:
 - Hotels/Casinos
(www.epa.gov/chp/markets/casinos.html)
 - Wastewater Treatment Facilities
(www.epa.gov/chp/markets/wastewater.html)
 - Utilities
(<http://www.epa.gov/chp/markets/utilities.html>)
 - Ethanol
(www.epa.gov/chp/markets/ethanol.html)

****More coming soon**
(including Hospitals and Schools)



Technical Assistance for Partner's Candidate Sites

Technical Assistance for Partner Candidate Sites

- Partnership can help Partners:
 - Identify opportunities for cost-effective CHP
 - Assess goals, drivers, and potential barriers for a project
 - Direct energy users to tools and resources
 - Determine next steps for project technical assistance

More information at:

www.epa.gov/chp/partnership/tech_assistance.html

Types of Technical Assistance Offered to Partners

- Spark spread screening
- Level 1 feasibility study
 - Samples available at: www.epa.gov/chp/project-development/stage2.html
- Third-party review of feasibility/design studies
- Technology/vendor list
- Incentive/policy analysis
- Energy and emissions savings calculations

The CHP Emissions Calculator

- Calculates anticipated **CO₂**, **SO₂**, and **NO_x** emissions
- Compares a specific CHP system to separate heat and power
- Requires as few as 3 inputs; can customize up to 29 fields
- Outputs
 - Metric tons of carbon equivalent (MMTCE)
 - Acres of trees planted
 - Emissions from cars

Annual Emissions Analysis						
	CHP System	Displaced Electricity Production	Displaced Thermal Production	Emissions Reduction	Percent Reduction	
9	NO _x (ton/year)	29.01	209.81	6.09	195.89	86%
10	SO ₂ (ton/year)	0.11	542.78	4.41	547.09	100%
11	CO ₂ (ton/year)	21,203	92,200	4,876	75,773	78%
12	Carbon (metric ton/year)	5,810	25,146	1,330	20,665	78%
13	Fuel Consumption (MMBtu/year)	364,159	940,211	60,945	636,938	64%
14	Acres of Forest				20,665	
15	Number of Cars				12,316	

This CHP project will reduce emissions of Carbon Dioxide (CO₂) by 75,773 tons per year
This is equal to 20,665 metric tons of carbon equivalent (MTCE) per year

This reduction is equal to the carbon absorbed by 20,665 acres of forest

OR

This reduction is equal to the carbon absorbed by 12,316 cars off the road

Can be accessed at:

www.epa.gov/chp/basic/calculator.html

Publicity and Recognition

CHP Partners List

- Profile on the **Partnership Web site** with information about each Partner

Name ↕	Partner Services	State
Abbott Laboratories	End-user	IL
Aegis Energy Services Inc.	CHP Project Developer	MA
Affiliated Engineers	Consultant/Engineering	NC
Aircogen Limited	ESCO	GA
Allegiance Energy Systems	CHP Project Developer	NY
Alliant Energy Generation	CHP Project Developer	IA
Alternative Energy Solutions	Equipment Manufacturer	KS
American DG Energy Inc.	CHP Project Developer	MA
Antares Group, Inc.	Consultant/Engineering	MD
Archer Daniels Midland Company	End-user	IL
Arizona State University	End-user	AZ

Alliant Energy Generation	
Contact Name	Randy Portz
Title	President, IEA
E-mail	RandyPortz@alliantenergy.com
Address	201 Third Avenue SE, Suite 300 Cedar Rapids, IA 52401
Phone	(319) 786-2712
Fax	
Partner Services	CHP Project Developer
Web Site	http://www.alliantenergygeneration.com <small>[EXIT Disclaimer]</small>
CHP-Related Web Page	
Sample Projects	
Partner Profile	
<p>Alliant Energy Generation (AEG) provides generation and cogeneration services, including its core competencies: development, finance, construction management, ownership, operations and maintenance, and asset management. Headquartered in Oakbrook, Illinois, AEG owns 400 MW of distributed and merchant generation assets and currently has 460 MW of new generation under construction. Serving its customers on-site energy generation for more than 20 years, AEG believes it takes a multi-talented team to compete in the electric generation business and has brought the critical core competencies together in-house.</p>	

All Partners listed at:

www.epa.gov/chp/partnership/partners.html

Variety of Publicity Opportunities

- Communication
 - Presenting at conferences and workshops with CHP Partnership
 - Presentations on Bi-Monthly Webinar Series
 - Networking at the Annual Partnership Meeting
- Partners may include CHP Partnership logo in sales, marketing, and advertising materials
- Partners receive a welcome kit with program information, as well as a Partner Certificate

Public recognition Web site:

www.epa.gov/chp/public-recognition/index.html

Annual Certificate of Greenhouse Gas Reduction for Reporting Partners

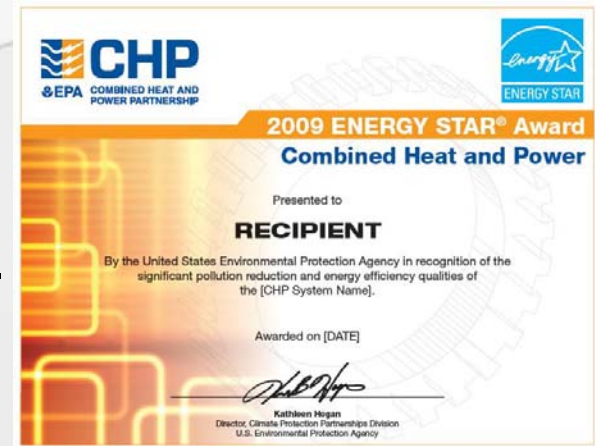
- Shows carbon reductions associated with Partner's projects, as well as equivalent benefits in avoided car emissions



The image shows a sample of a 2009 Certificate of Greenhouse Gas Reduction. At the top left is the CHP logo, which includes the EPA logo and the text 'CHP COMBINED HEAT AND POWER PARTNERSHIP'. Below the logo is a title bar that reads '2009 Certificate of Greenhouse Gas Reduction'. The main body of the certificate is centered and contains the following text: 'Presented to', 'Company Name', 'By the United States Environmental Protection Agency Combined Heat and Power Partnership in recognition of the company's contribution to efficient domestic energy production.', 'To date, the high efficiency of the company's operational CHP project(s) produced an estimated X million metric tons of carbon equivalents* less than typical separate heat and power. This includes 2009 annual reductions of Y million metric tons of carbon equivalents*, resulting in:', 'Emissions reductions equivalent to the emissions from Z passenger vehicles', a signature line with a handwritten signature, and the name 'Susan Widowine, Chief, Energy Supply and Industry Branch, CHP Partnership'. At the bottom, there is a small asterisked note: '*The 2009 Certificate of Greenhouse Gas Reduction is an estimate of the overall carbon emission reductions of your operational projects based on typical model CHP system efficiencies and is intended for outreach and educational purposes only.'

ENERGY STAR CHP Awards

- Performance-based award with review of one year of operating data
- Recognizes projects that require at least 5 percent less fuel than state-of-the-art separate heat and power generation
- When a system qualifies for an award, EPA:
 - Sends a letter to recipient acknowledging achievement
 - Develops announcement, posted on the CHPP Website, describing the system's energy and environmental excellence.
 - Presents framed award to recipient at an event attended by their peers



More information and how to apply:
www.epa.gov/chp/public-recognition/awards.html

Joining the CHP Partnership

- Letter of Intent (LOI) to Join Partnership
 - Free to join
 - LOI available on our website at <http://www.epa.gov/chp/partnership/how-to-join.html>
- Partner agrees to:
 - Designate CHP Liaison
 - Provide annual updates on CHP projects to EPA, to help EPA determine climate benefits
- EPA will:
 - Support Partner with tools and resources to accelerate CHP project development,
 - Recognize Partner CHP accomplishments and associated benefits

Contact Us

Claudia Tighe

CHP Partnership

U.S. EPA

[*tighe.claudia@epa.gov*](mailto:tighe.claudia@epa.gov)

Neeharika Naik-Dhungel

CHP Partnership

U.S. EPA

[*naik-dhungel.neeharika@epa.gov*](mailto:naik-dhungel.neeharika@epa.gov)

CHPP Helpline

Phone: 703-373-8108

E-mail: [*chp@epa.gov*](mailto:chp@epa.gov)

www.epa.gov/chp

