



UGI HVAC ENTERPRISES, Inc.

A Look Inside the CHP Development Process

Drexel University

May 5, 2014



UGI HVAC Enterprises, Inc.

- Fully owned subsidiary of UGI Corporation
- OUR FOCUS:
 - HVAC
 - Plumbing
 - Refrigeration
and Electrical Services

The banner features the UGI logo at the top left, a photograph of a technician working on a furnace, and the slogan "We Keep You Comfortable". Below this, the text "Welcome to UGI HVAC" is displayed. To the left of the main text is a graphic with the words "ENGINEERING & DESIGN". Below the main text, a list of service areas is presented with circular icons: "My service needs are for:" followed by "RESIDENTIAL" (house icon), "COMMERCIAL/INDUSTRIAL" (factory icon), and "ENVIRONMENTAL ROOMS" (server room icon). A paragraph of text at the bottom left describes the company's commitment to superior energy-related and comfort services for homeowners, commercial, industrial, and institutional property managers.

UGI HVAC service providers offer superior energy-related and comfort services to homeowners and commercial, industrial, refrigeration, and institutional property managers. How can we help you today?

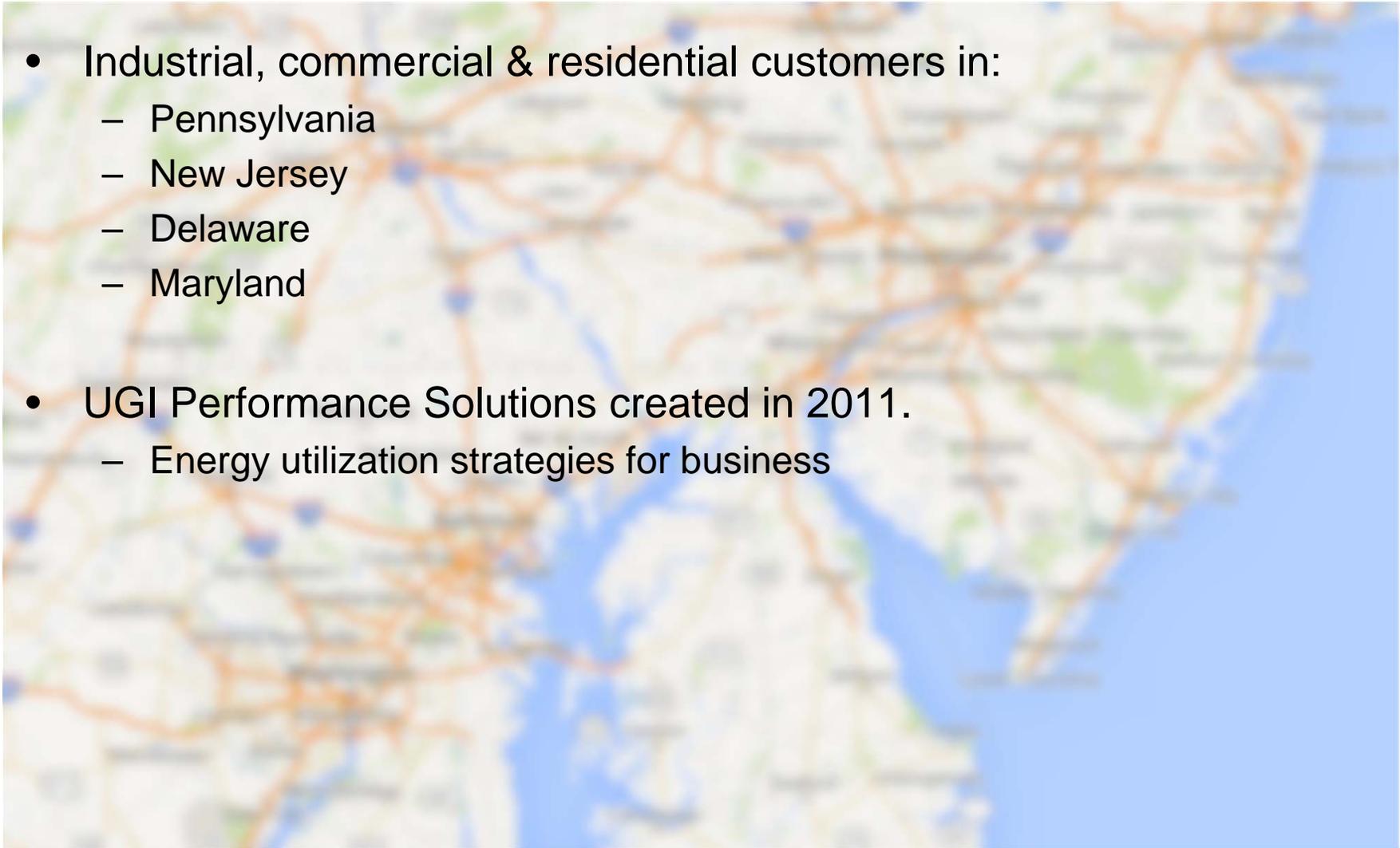
My service needs are for:

- RESIDENTIAL
- COMMERCIAL/INDUSTRIAL
- ENVIRONMENTAL ROOMS



UGI HVAC Enterprises, Inc.

- Industrial, commercial & residential customers in:
 - Pennsylvania
 - New Jersey
 - Delaware
 - Maryland
- UGI Performance Solutions created in 2011.
 - Energy utilization strategies for business





UGI HVAC-Regional Focus

- Projects with 10 MW or less on-site demand
- Smaller projects, less complex
 - Integration with the Electric Grid
 - Expedited permitting process
- Greater diversity
 - Across market segments and geography
 - Load factor reduces utility Contribution In Aid of Construction (CIAC)

Project Review By Industry Segment

	Market Segment	Projects	Dollars Represented (\$000,000)	Total MW/Segment
	Health Care	3	\$19.8	8.0
	Hospitality	4	\$9.5	3.8
	Higher Education	3	\$11.7	4.5
	Municipal	2	\$6.6	3.0
	Commercial	2	\$12.3	5.45
	Industrial	2	\$38.0	14.8
	Financial	2	\$1.6	5.2
	Total	18	\$99.5	44.8

CHP Project Development

- 1- to 3-year sales cycle
- Complex sale – no assurance of success
- Attributes:
 - ROI
 - Process support
 - Resiliency
- Capital investment
- Project Development Agreement (PDA)

DID YOU KNOW?

- Installed CHP capacity in the U.S. exceeds 82 gigawatts.
- There are more than 4,100 industrial and commercial CHP facilities.
- That's 8 percent of the U.S.'s current generating capacity.



Project Development Agreement (PDA)

- EDUCATION - EDUCATION - EDUCATION
- Project development
 - Determine energy requirements
 - Internal process review
 - Analyze key electric and HVAC systems
 - Project future energy demand
 - Complete Over-the-Top design
 - Present to customer with target IRR/Payback
 - PDA agreement signed

Typical Terms of PDA

- Customer/Developer agreement on project cost for Engineering Analysis
- Applications submitted for federal, state or utility grants.
- System integration analysis completed
- Project schedule completed.
- Decision to proceed.
- Contract executed.
- Line of credit negotiated and secured.

Customer Adoption of CHP Applications

Impediments:

- Sale complexity
- Customer uncertainty
- Smaller customers less sophisticated
- Difficulty committing resources
- Understanding “Life of Grant” programs and incentives

Customer Adoption of CHP Applications

Approaches:

- *(Complex sale)* Customer must have full understanding of operation and system integration-contractor must deliver the goods
- *(Uncertainty)* Avoid “black box” treatment of incentives
- *(Less sophisticated customers)* More hand holding by developer
- *(Resource commitment)* Promote parity with other federal, state incentives- role for both State and Federal action
- *(Industry adoption of technology)* Those who implement a properly designed CHP System will become more competitive - job preservation and creation



UGI HVAC Policy Recommendations

- Up to a 20% development grant – projects 10 MW or less five year commitment to the grant program
- \$10/MWH credit for new CHP production – similar treatment as SRECs (Recognition of societal benefits and demand reduction)
- Avoid “black box” process for incentives and grants
- Support emerging federal legislation: tax parity for CHP with Solar



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