



NARUC Winter Conference 2005



Residential & Small Commercial Price Response: Real, Verifiable, Here to Stay

February 15, 2005

Frank Magnotti

President and COO, Comverge Enterprises Group

Residential & Small Commercial Price Responsive Programs: Perceptions



- Cannot provide enough load response to make a difference
- Demand response is not quick, reliable, and verifiable like supply is
- Residential & Small Commercial ratepayers don't respond to price signals
- The technology only exists in pilot stage and is too expensive to reasonably deploy



NARUC
Winter Conference 2005

- **Cannot provide enough load response to make a difference**

Significant realizable results being achieved today

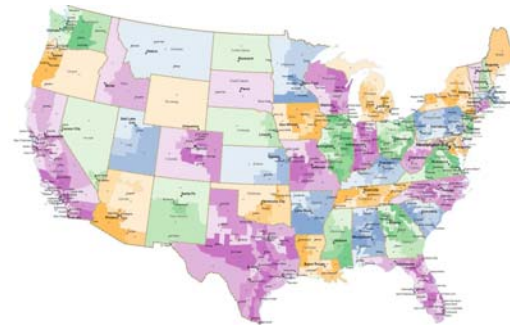
- Demand response is not quick, reliable, and verifiable like supply is
- Residential & Small Commercial ratepayers don't respond to price signals
- The technology only exists in pilot stage and is too expensive to reasonably deploy



Comverge's Large Scale Programs

Programs Greater than 100 MW

- Southeastern Region
 - FPL; FPC; Oglethorpe; Duke; Gulf Power
- Northeastern Region
 - PEPCO; BGE; PSEG; JCPL
- Midwestern Region
 - ComEd; Buckeye; NSP; DTE
- Western Region
 - SCE; SMUD



Comverge is the supplier to over 90% of these Programs
– **5 Gigawatts**

Major Turnkey/Virtual Peaking Capacity (VPC) Programs

- Utah Power, SDG&E, HL&P, ISO-NE I, ISO-NE II, Gulf Power

Comverge is the owner/operator of 100% of these Programs
– **400 Megawatts**



NARUC
Winter Conference 2005

Penetration Rates for Major DLC Programs

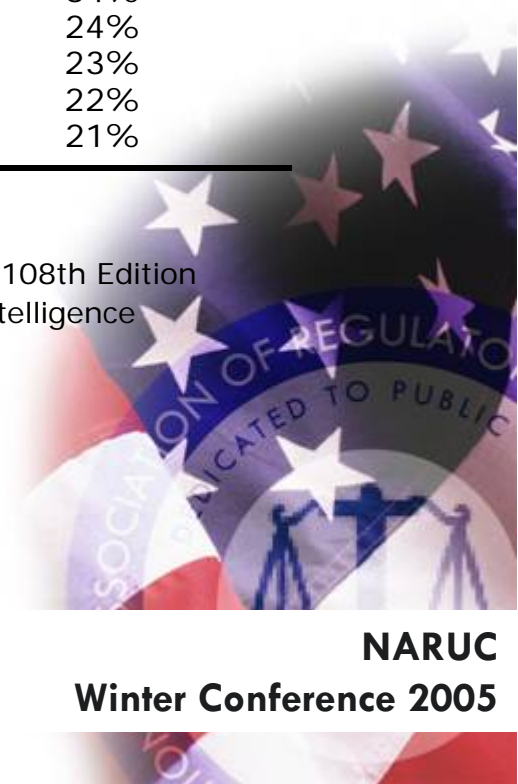
Selected Residential DLC Programs

Utility	DLC Program Participants	Total Residential Customers	Implied Penetration
Progress - Florida Power	800,000	1,301,374	61%
Buckeye Power	150,000	325,621	46%
Cobb EMC, Georgia	55,000	124,710	44%
Vectren	40,000	116,979	34%
Pepco	150,000	628,600	24%
Xcel Energy (NSP area only)	265,000	1,167,634	23%
Baltimore Gas & Electric	225,000	1,001,000	22%
SMUD	100,000	474,413	21%

Data Compiled using the following sources:

Company Websites and SEC filings, 1996 Directory of Electric Utilities, McGraw-Hill's 108th Edition (2000) Directory of Electric Power Producers and Distributors, Comverge Industry Intelligence

Large % of Customers Participate in Program



**NARUC
Winter Conference 2005**

- Cannot provide enough load response to make a difference

Significant realizable results being achieved today

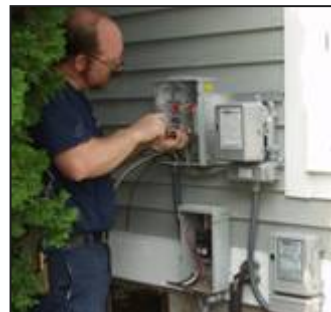
- **Demand response is not quick, reliable, and verifiable like supply is**

Utah Power: 50 MW in under 50 seconds

- Residential & Small Commercial ratepayers don't respond to price signals
- The technology only exists in pilot stage and is too expensive to reasonably deploy



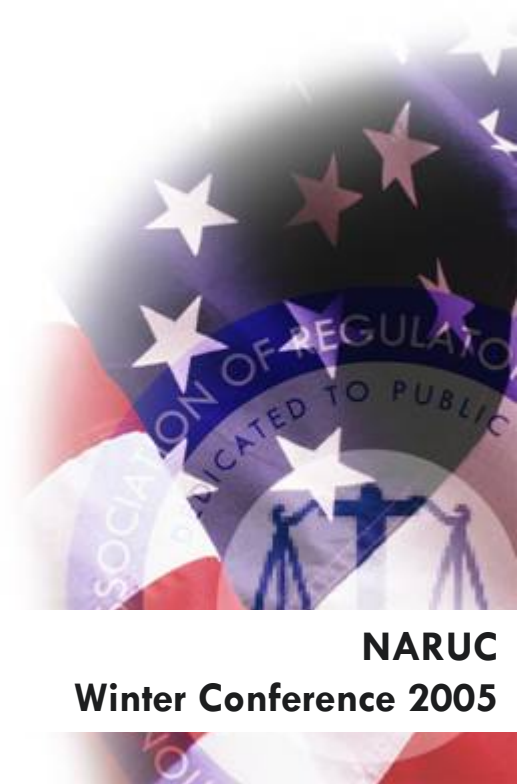
“Nega-watt” Project Components



M&V Sentry™

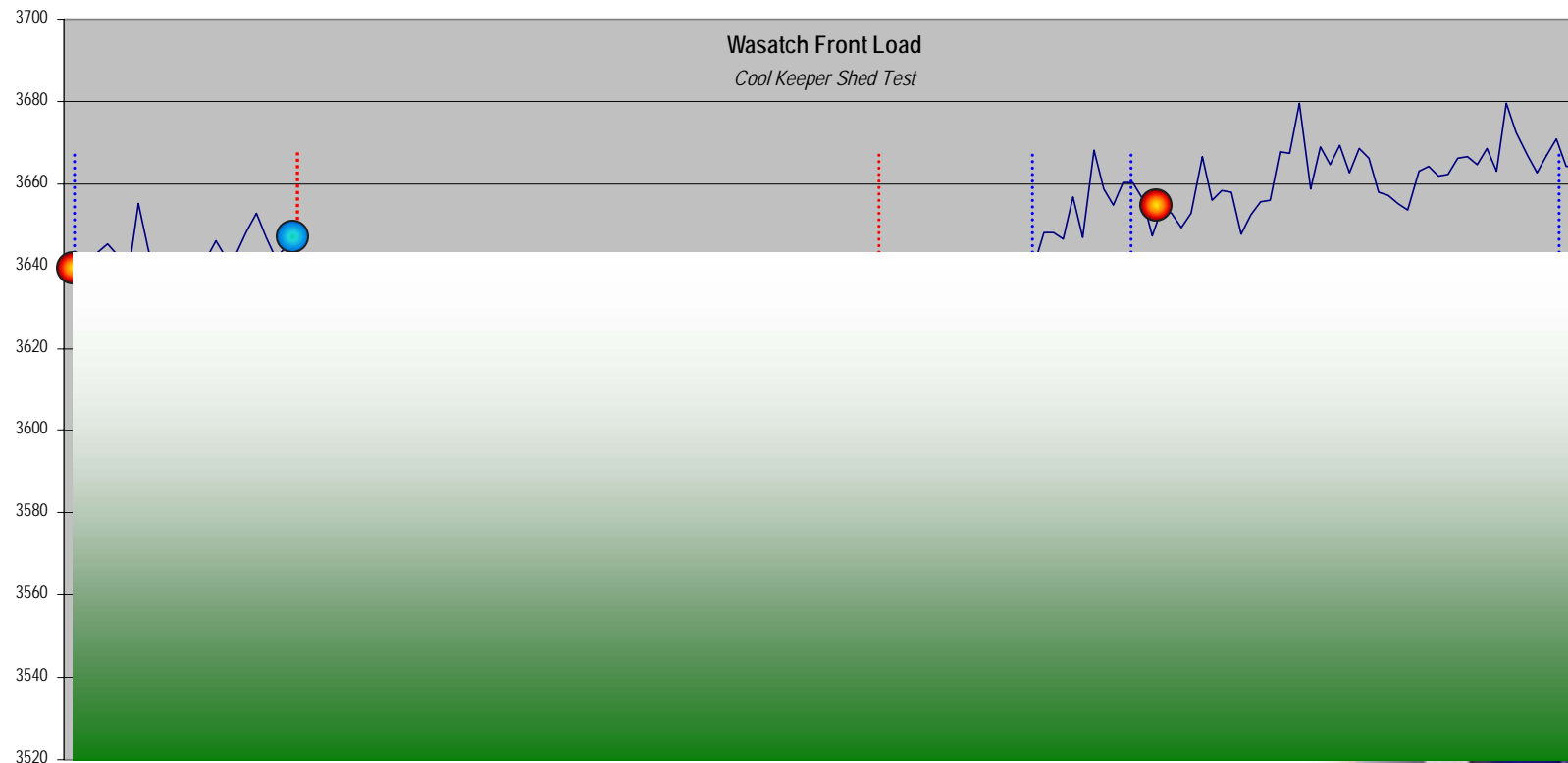


Same Contractual & Verification Standards as Supply



NARUC
Winter Conference 2005

Utah Power Sheds Load: On Demand



100% cycling test

- Control Strategy was 100% shed held for ½ hour.
- ADI Strategy gives graceful return to normal operations
- Note payback period at end of event
- Event is 14:30 to 15:00
 - Results based on Wasatch front in Salt Lake system load 3,645 to 3,599 at 97 degrees
 - Load represents drop of 1-2% of entire total load

- Cannot provide enough load response to make a difference

Significant realizable results being achieved today

- Demand response is not quick, reliable, and verifiable like supply is

Utah Power: 50 MW in under 50 seconds

- **Residential & Small Commercial ratepayers don't respond to price signals**

More than twice the demand reduction with price response

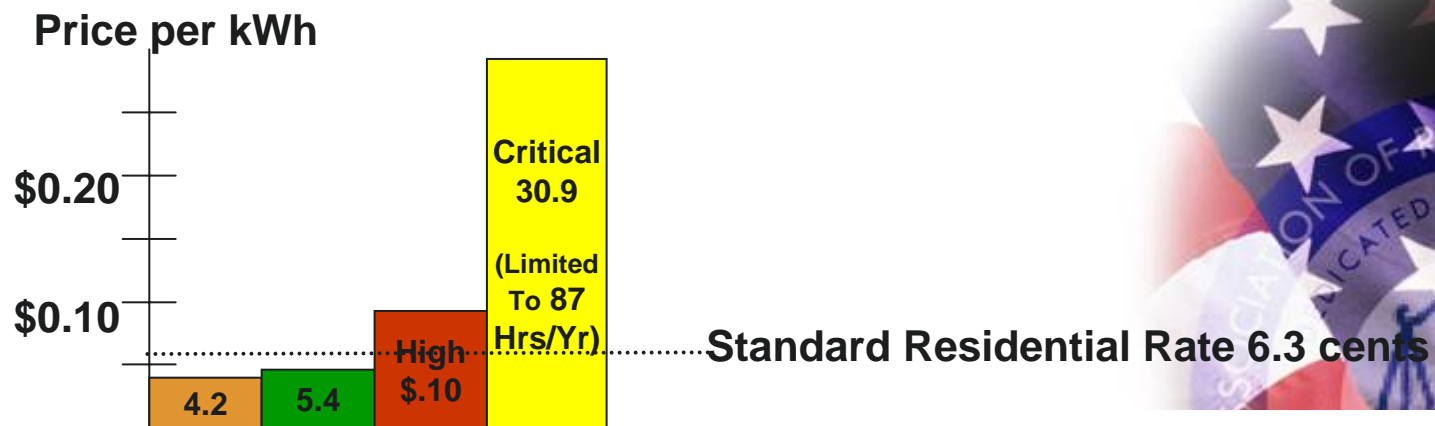
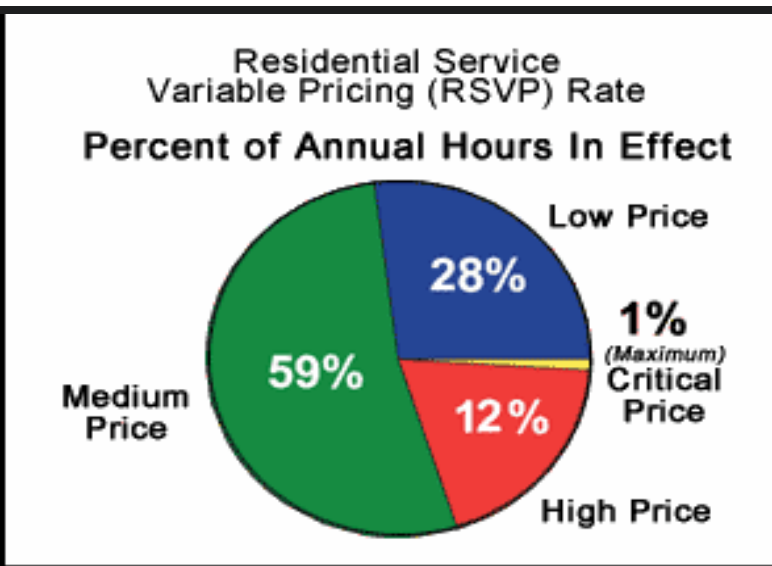
- The technology only exists in pilot stage and is too expensive to reasonably deploy



Gulf Power Implements Critical Peak Pricing...

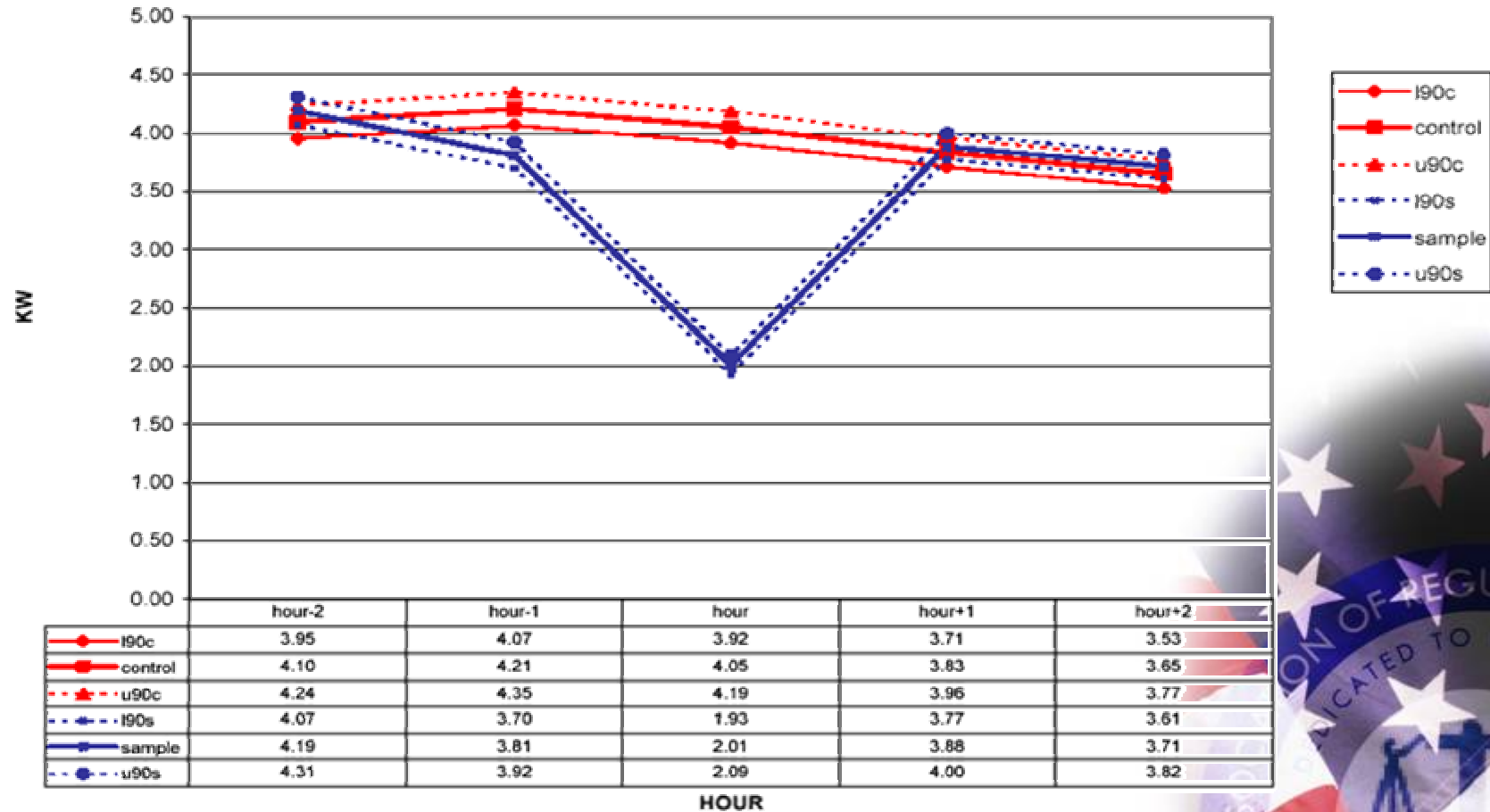
GoodCents <i>SELECT</i>	
Participation Charge \$4.95/Month	
Standard Residential Rate 6.3 cents/kWh	
<u>Price Per kWh*</u>	
LOW	4.2 cents
MEDIUM	5.4 cents
HIGH	10.0 cents
CRITICAL	30.9 cents

*All prices are as of 06/07/02, excluding customer and/or participation charges and any applicable taxes. These prices are subject to change.



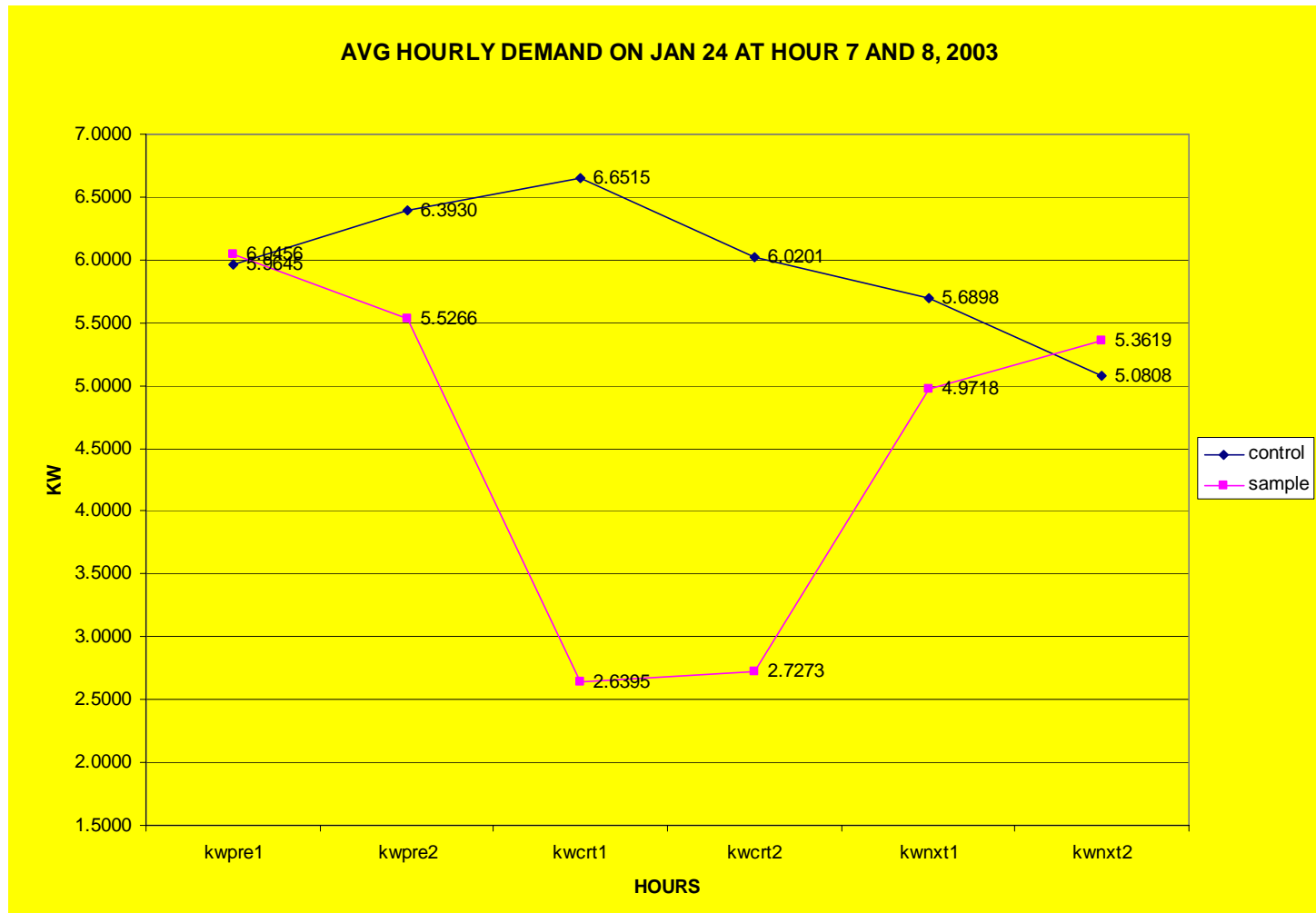
... And Gets Results

GRAPH 1. PER CUSTOMER AVG KW FOR 2002 (DURATION=1)



Over 2kW Average Reduction

Results cont'd...



4 kW Shift During Critical Winter Peak

Multi-Tenant Deployments



Technology deployed in 12 countries
 Phoenix (Metering Only)
 Manhattan (Price-Responsive Demand)
 Pensacola (To Be Deployed in 2005)



**NARUC
 Winter Conference 2005**

- Cannot provide enough load response to make a difference

Significant realizable results being achieved today

- Demand response is not quick, reliable, and verifiable like supply is

Utah Power: 50 MW in under 50 seconds

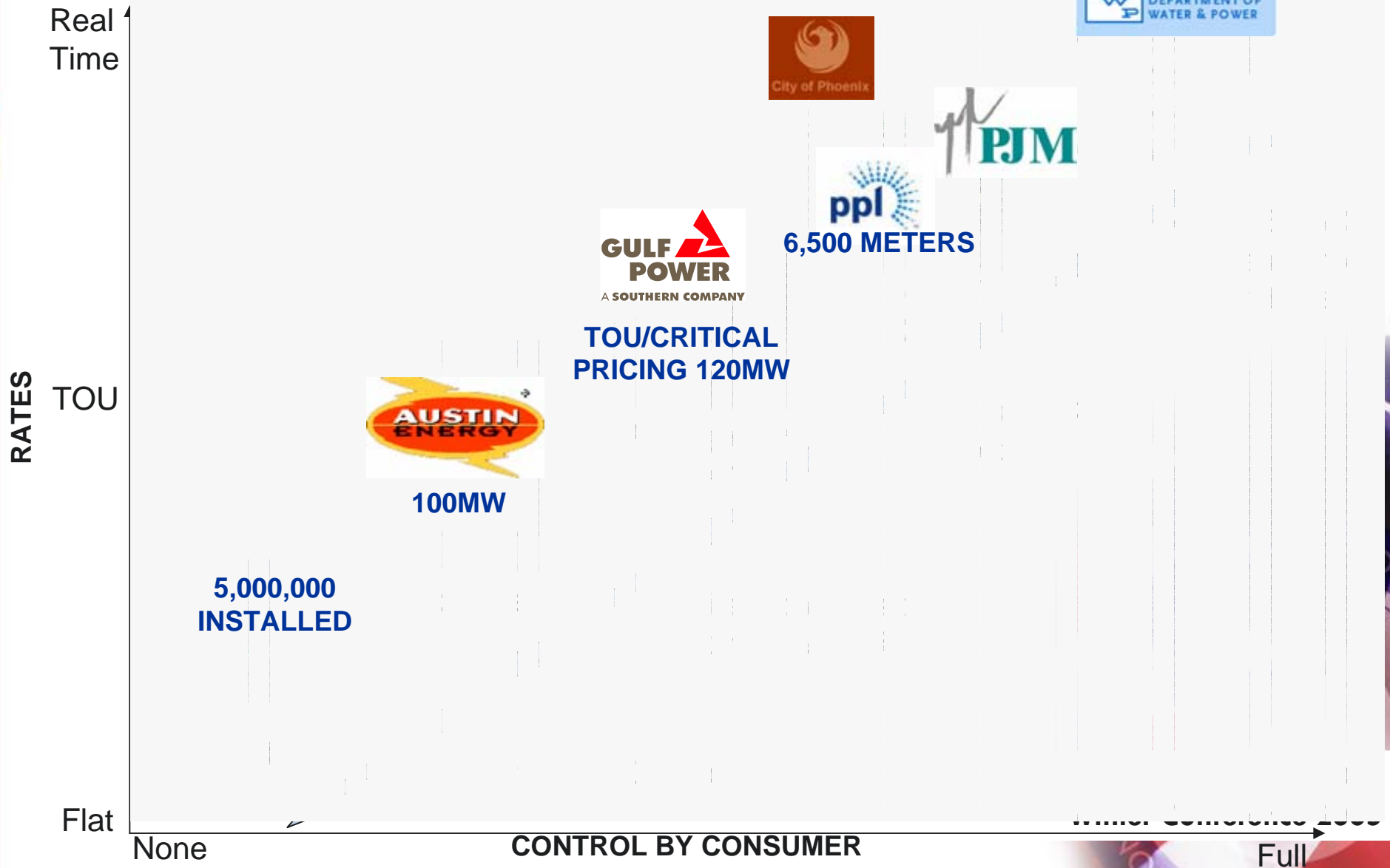
- Residential & Small Commercial ratepayers don't respond to price signals

More than twice the demand reduction with price response

- **The technology only exists in pilot stage and is too expensive to reasonably deploy**

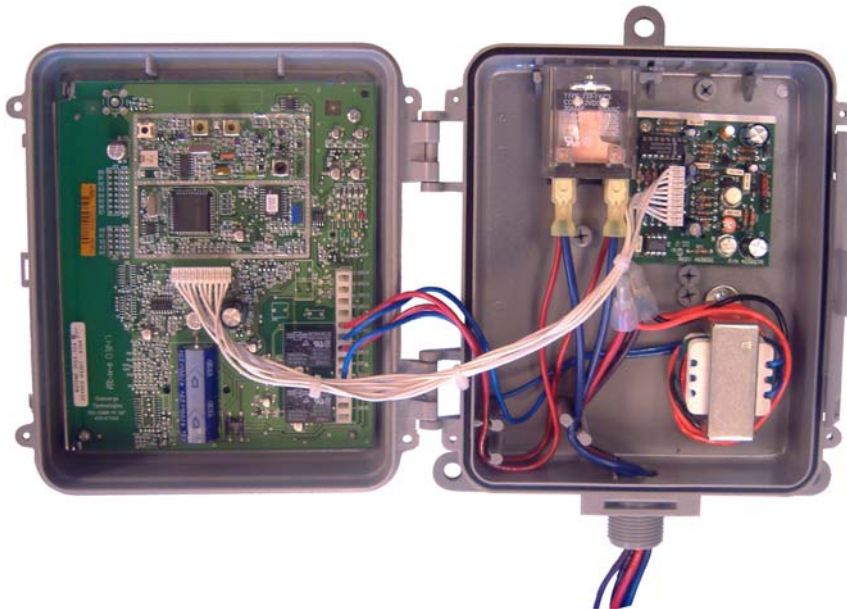
Orders for over 80,000 price responsive thermostats booked

Product Spectrum

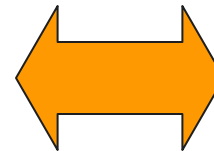


Migrateable Technology

Enhanced DCU



SuperStat™ Premium



Enables migration from direct load control to price responsive programs



- Cannot provide enough load response to make a difference

Significant realizable results being achieved today

- Demand response is not quick, reliable, and verifiable like supply is

Utah Power: 50 MW in under 50 seconds

- Residential & Small Commercial ratepayers don't respond to price signals

Results prove customers do participate

- The technology only exists in pilot stage and is too expensive to reasonably deploy

Orders for over 80,000 price responsive thermostats booked



Price and Demand Response Programs

- Provide real, quick, verifiable, and economical peak capacity
- Environmentally friendly – can delay the construction of new peak power plants



Before



After

- Essential piece of any renewable energy portfolio
- Need regulatory support to continue to keep our green-fields green



NARUC

Winter Conference 2005

Contact

Frank Magnotti

Comverge, Inc.

fmagnotti@comverge.com

973.884.5970

www.comverge.com



NARUC
Winter Conference 2005