



Saving Energy **Saving Money**

**Saving Your Personal
Time and Energy**

Speaker Info

- ▶ David Leidy
- ▶ 30 years with New York utility
 - 25 of those years dealt with commercial and industrial customers
 - Energy Audits
 - Bill Review and Rate Analysis
 - Rebate Programs & Sales Programs
- ▶ Currently with Usource (energy broker) as Business Development Manager

Presentation

- ▶ In an effort be green....this presentation will be made available electronically.
- ▶ Sign-up sheet available to have it sent to you electronically with some attachments.

Saving Energy & Money

▶ Saving energy may or may not



equate to saving money....



- What do you mean by that???
-more about that later....

- Main focus will be on the electric bill

Electric Bills

- ▶ Multiple line items on bills any more
 - Some you can do things about... others, such as mandate government surcharges you can't
 - Demand Charges
 - Kwh charges
 - These 2 items who can affect

Demand Charges

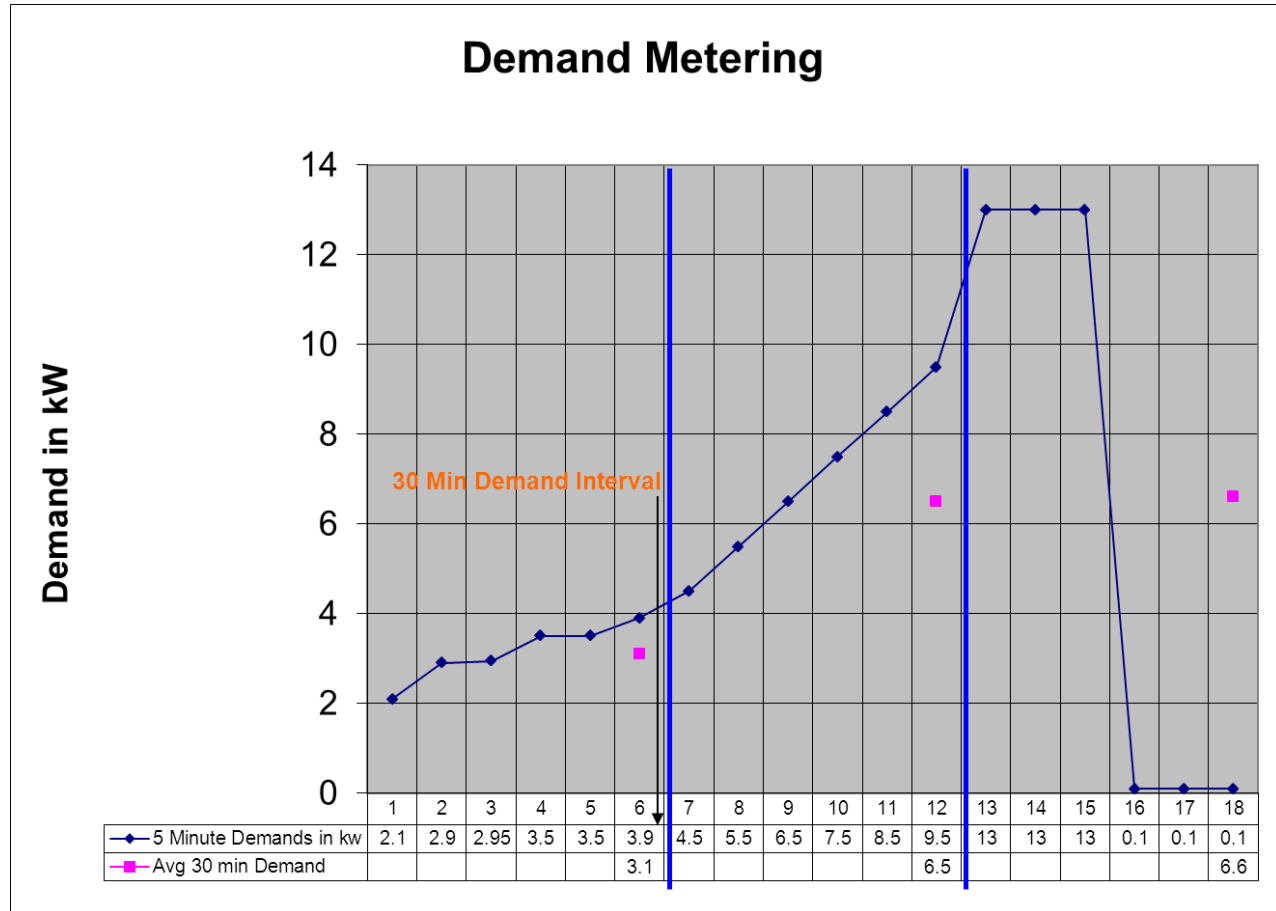
▶ Demand –

– What it is?

- Capacity Charge for generation
- How is it arrived at?
- Average draw of watts over a 15 or 30 minute window
- Highest record draw during billing cycle determines what you get billed for
- Pay attention to meter read dates if you have any major variation in demand month to month



Demand Metering



Reading Your Elec Bill

nationalgrid

SERVICE FOR

BILLING PERIOD

PAGE 2 of 3

Dec 28, 2010 to Jan 26, 2011

ACCOUNT NUMBER

PLEASE PAY BY

AMOUNT DUE

16135-84009

Feb 19, 2011

\$ 74,079.50

Choosing an Energy Supplier You can choose who supplies your energy. No matter which energy supplier you choose, National Grid will continue to deliver energy to you safely, efficiently and reliably. We will also continue to provide your customer service, including emergency response and storm restoration. National Grid is dedicated to creating an open energy market that lets you choose from a variety of competitive energy suppliers, who may offer different pricing options. For information on authorized energy suppliers and how to choose, please visit us online at www.nationalgridus.com/energychoice



Customer Charge			200.00
Dist Chg On Peak	0.01154654	x 89600 kWh	1,034.58
Dist Chg Off Peak	0.00401654	x 116200 kWh	466.73
Transition Charge	0.0003	x 205800 kWh	61.74
Transmission Charge	0.01328	x 205800 kWh	2,733.02
Distribution Demand Chg	3.92	x 863.1 kW/kVA	3,383.35
Energy Efficiency Chg	0.00433	x 205800 kWh	891.11
Renewable Energy Chg	0.0005	x 205800 kWh	102.90
High Voltage Metering	-1.0 %	x \$ 25087.77	-250.88
Total Delivery Services			\$ 8,622.55

Supply Services

SUPPLIER National Grid





Basic Service Variable	0.07878688	x 205800 kWh	16,214.34
Total Supply Services			\$ 16,214.34

2.07 cents in /kwh charges

9.95 cents/kwh

U SOURCE

How do you go about saving energy?

- ▶ Look at number of hours which equipment runs
 - Lights 
 - Motors
 - Compressors
 - Computers 
 - Refrigeration equipment
 - Exit Signs

Inventory Your Equipment

Wood Products Manufacturer Commercial Equipment Use - Motors

<u>Application</u>	<u>Qty</u>	<u>HP</u>	<u>Nominal Effic.</u> <small>(If unknown, enter 0.8)</small>	<u>Hours/yr</u>	<u>kWh/yr</u>	<u>kW</u>	<u>Annual Cost</u>
Sample	1	10	0.8	500	4662.5	9.3	\$463.92
			0.8		0	0.0	\$0.00

Inventory Your Equipment

Executive Summary

Wood Products Manufacturer
New Town Mass

0

4656666-0990

Average Cost per kWh: \$0.10
Average Cost per Therm: \$1.88

Electric Energy

Electric Items	Annual kWh	Peak kW	Calculated Annual Cost
Electric Heating & Cooling	0	0.0	\$0.00
Motors	0	0.0	\$0.00
Refrigeration	0	0.0	\$0.00
Kitchen	0	0.0	\$0.00
Exterior Lighting	0	0.0	\$0.00
Interior Lighting	138	0.1	\$13.73
Office Equipment	0	0.0	\$0.00
Miscellaneous	0	0.0	\$0.00
TOTALS	138	0.1	\$13.73

Natural Gas Energy

Natural Gas Items	Therms	Calculated Annual Cost
Natural Gas Heating	0	\$0.00
Natural Gas Cooking	0	\$0.00

Lights

- ▶ Normally on from the time you come into the building until you leave....lots of hours of use
- ▶ Areas of limited use
 - Good candidates for occupancy sensors



Lights

- ▶ Older fixtures replace
 - Old magnetic core and coil ballast should be replaced
 - T-12 lamps/bulbs should be replaced with T-8's or T-5's which are much more efficient
- ▶ Exit Lights – are on 8,760 hours per year....replace with LED type



Calculate Savings

Customer

Location: 65 Country Club Road, Oneonta

Existing Fixtures & Lamps

Quantity	Type		
25	4 lamp t-12	192	Watts

Proposed Fixtures & Lamps

Quantity	Type		
25	4 lamp t-8 electronic ballast	126	Watts

Watts Saved/Fixtu

of Fixtures

Total Watts Saved

Dollar Savings

watts X hrs/wk X wks/yr ÷ 1000= kwh/year

kwh/yr X \$/kwh = \$ Saved/yr

U>SOURCE

Motors

- ▶ Look at hours of operation
- ▶ When a motor fails and needs replacement...select most energy efficient one which works for that application
- ▶ Match motor size to work done
 - Many times a motor maybe oversized for the work it has to do



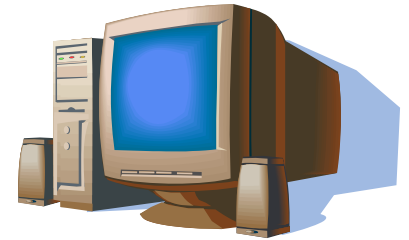
Compressors

- ▶ This is another area where many businesses are unaware of the true operating cost and the impact on their business.
- ▶ To speak more about this is
 - Jeff Wright
 - Compressor Energy Services

Computers

▶ Monitors

- New LED monitors use much less than old CRT type....take up less space also
- Turn off when not in use

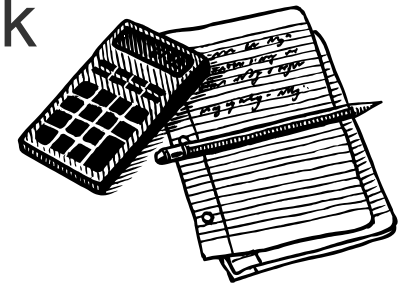


▶ Computer CPU

- Turn off at night unless absolutely necessary to have running at night
- Remember there are 8,760 hours in a year and a typical employee works 2,080 hours per year.
 - The PC could be sitting there 6,000 hours a year doing nothing but increasing your electric bill

Energy Audit

- ▶ Have a simple energy audit done in order to
 - Inventory energy using equipment in building
 - Helps identify which areas you should go after first to have the biggest and quickest payback
 - Sample audit available on spreadsheet



Reference Material

THIRD EDITION

How to Reduce Your Energy Costs

The Energy Efficiency Guide



for Businesses, Industry,



Government and Institutions



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U SOURCE

This book summarizes many of the items reviewed today.

It is available through Advanced Publications, Boston MA.

U SOURCE

Meter Data Services

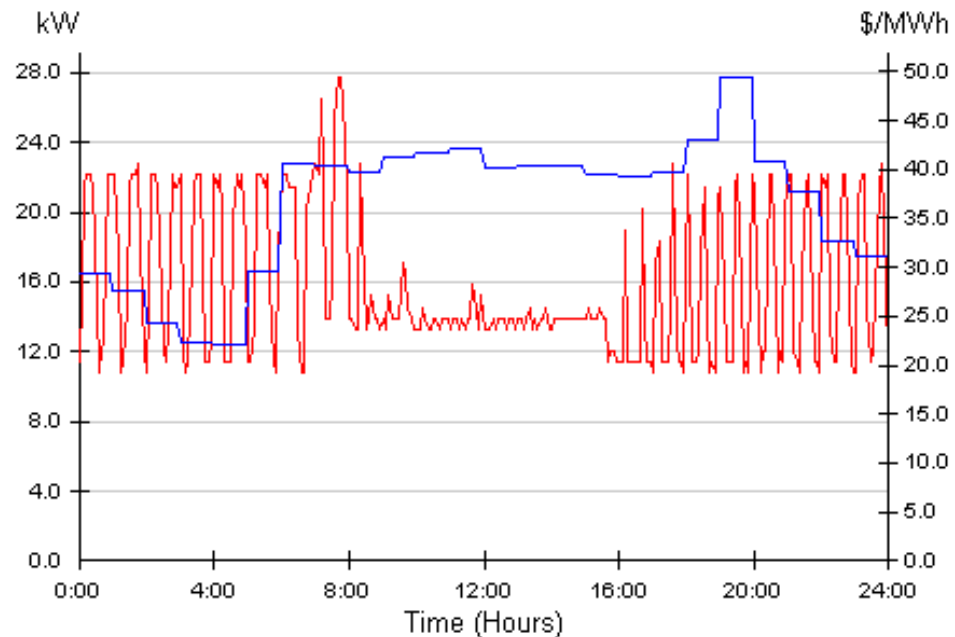
- ▶ Many utilities offer a service where you can get meter data real time or day after
- ▶ Gives you more immediate feedback on changes you make in your plant
- ▶ Some go under name of Energy Profiler Online



Energy Profiler Online

► Profile of a days use

Profile for Selected Accounts on Friday, 10/07/2011



■ CAPITL LBMP (\$/MWh)
■ Development (kW)

Utility Rates

▶ Off peak rates

- Do you have equipment which runs infrequently and could be run off peak?
 - May lower your daytime demand
 - Some utilities have NO demand charge during off peak hours.

▶ Incentive Rates

- New business rates- discounts for new loads or retaining load
- Check with local utility reps

Rebates

- ▶ Rebates for energy efficient equipment
 - Replacement
 - New
 - Idea is to bring newer technologies in with lower payback periods
- ▶ Rebates may be available through local utility or state agency
- ▶ You have probably been contributing to the fund for these rebates, makes sense to get some of your money back



Deregulated States

- ▶ You can now shop for a supplier
- ▶ This can save you money if done properly
- ▶ Be careful when you shop....
- ▶ It is buyer beware

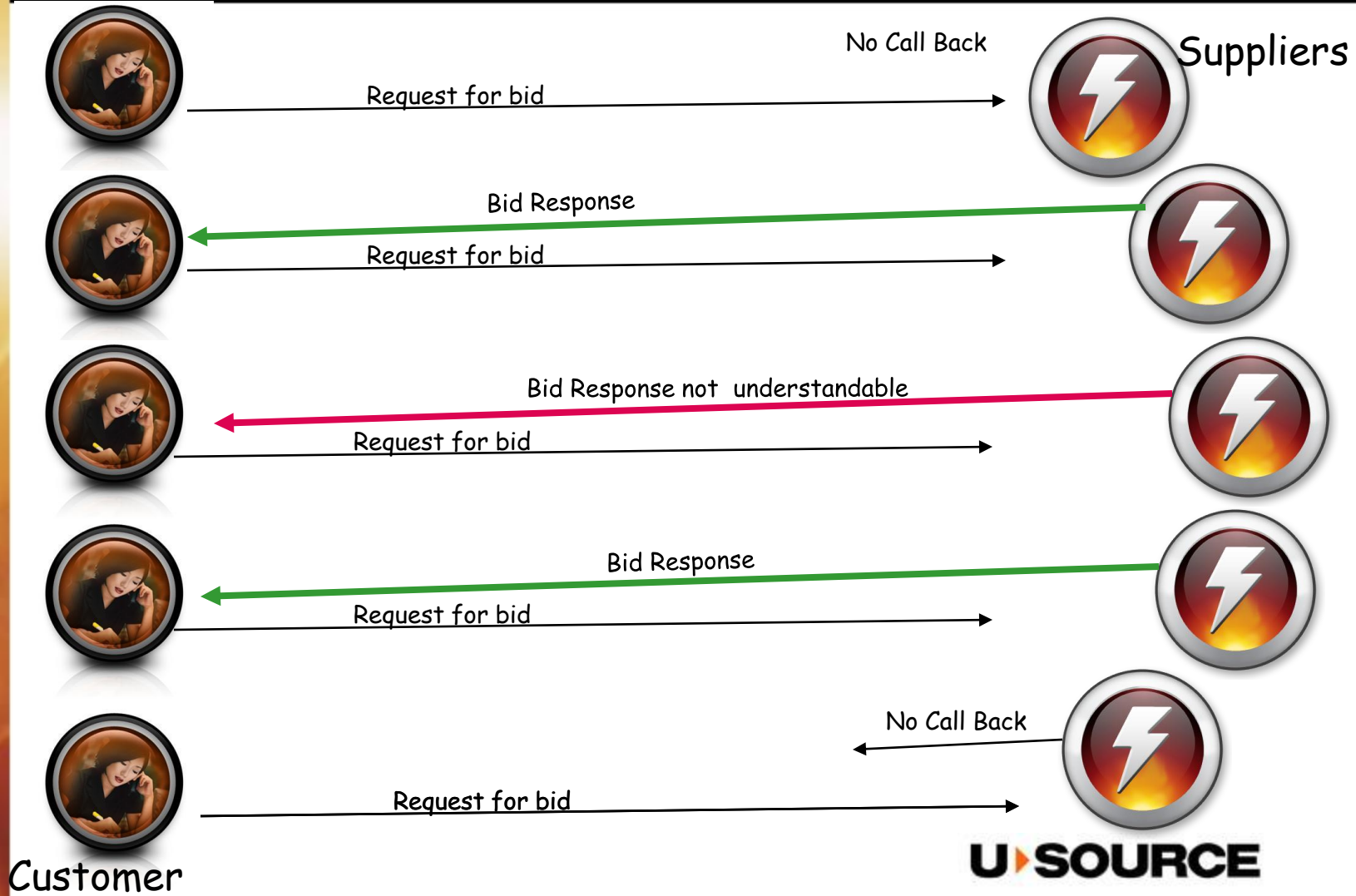
Save Time, Save Money

- ▶ You can save your personal time and save money.
- ▶ Shopping for electricity and natural gas can be extremely time consuming and frustrating if you don't know all the pitfalls that are out there.

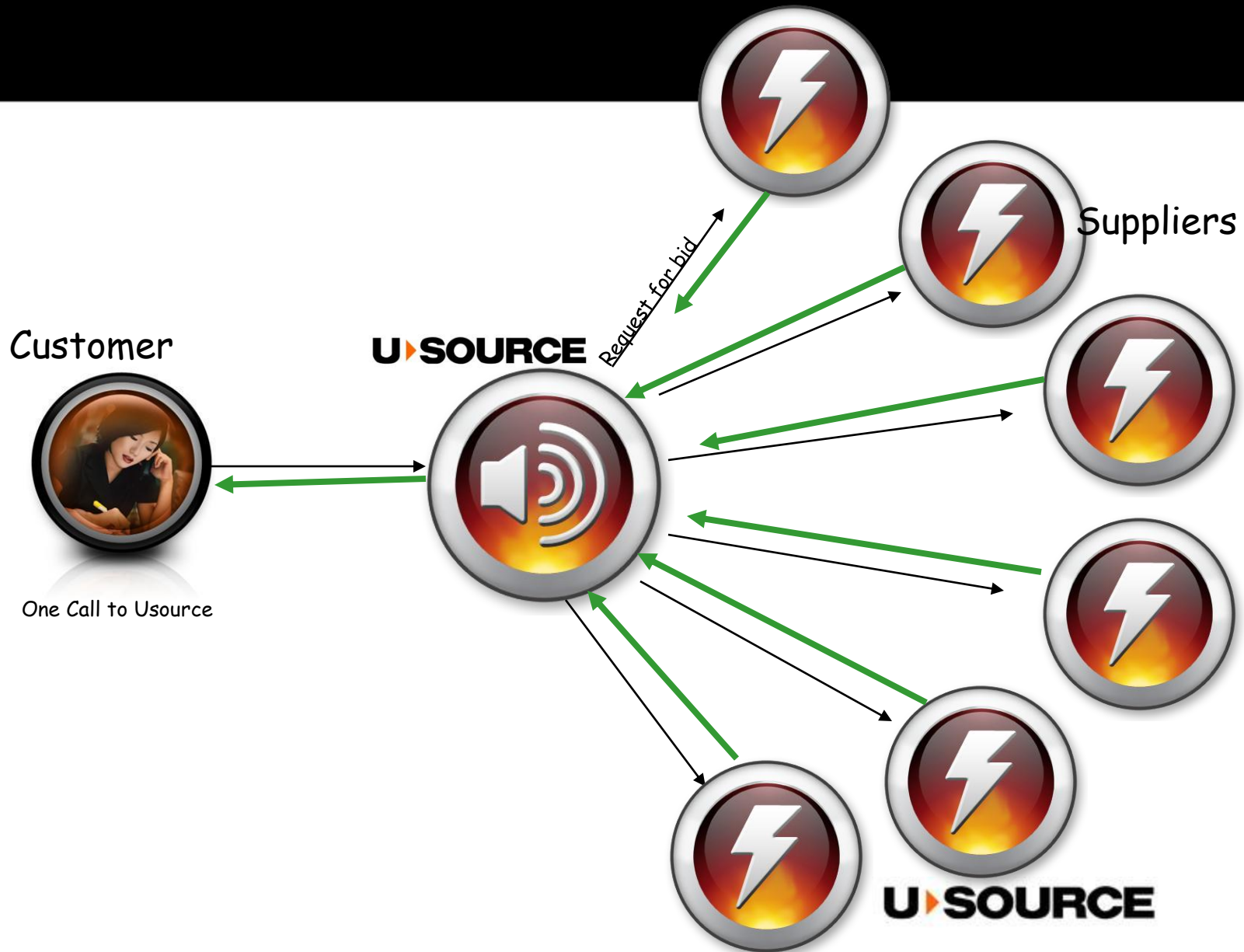
Usource - Who We Are

- ▶ Energy Management and Procurement Firm (founded 2000)
- ▶ Customer advocate with suppliers
- ▶ One of the largest consultant/broker in the US with more than 1,200 clients, 10,000 accounts and \$500 million per year of energy under management
- ▶ Provides services in all deregulated “electricity” states with commercial operations in 15 states
- ▶ Wholly owned subsidiary of Unitil (NYSE:UTL) a \$400 million publicly traded energy company

Task of contacting multiple suppliers



One Call gets you started



Represent You in the Competitive Energy Markets

- ▶ Develop a customized energy strategy
- ▶ Obtain best prices via a blind auction platform
- ▶ Continuously monitor the markets
 - Identify & recommend the best buying opportunities
- ▶ We get results
 - Create intense competition for your business



We sit on your side of the table

Customized Energy Strategy

- ▶ Jointly developed energy strategy
 - Based on your business drivers & risk tolerance
 - Not what suppliers wish to sell
- ▶ Our energy experts are an extension of your staff



We work with you

Customized Energy Strategy

- ▶ Usource handles solicitation development
 - Data gathering
 - Historical loads, expected changes [swing]
 - Supplier identification
 - Contract review & evaluation
 - Credit assembly
 - You provide, suppliers approve ahead of time



Strategy in place + Good market conditions = Go to bid

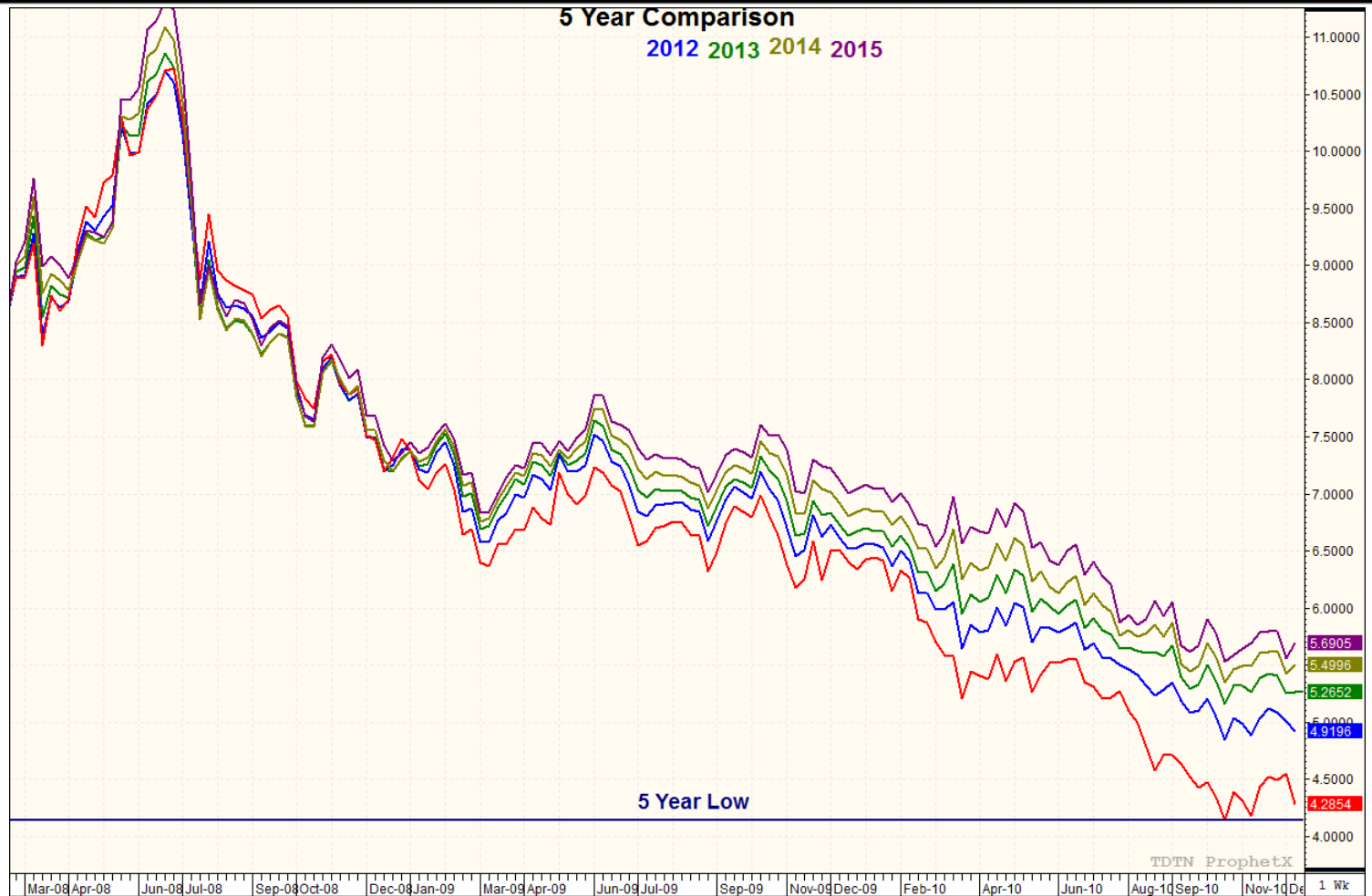
Bid Auction Platform

Supplier	Months	Start	End	Bid (1)	Bid (2)	Swing	Credit	Terms
Supplier 1	11	Jan-08	Dec-08	0.07990	0.00700			
	23	Jan-08	Dec-09	0.08210	0.00740	+/- 25%	Approved	15
Supplier 2	11	Jan-08	Dec-08	0.07511	0.00892			
	23	Jan-08	Dec-09	0.07723	0.00912	+/- 10%	Approved	20
Supplier 3	11	Jan-08	Dec-08	0.07828	0.00791			
	23	Jan-08	Dec-09	0.08009	0.00849	+/- 25%	Pending	15
Supplier 4	11	Jan-08	Dec-08	0.07390				
	23	Jan-08	Dec-09	0.07690		+/- 10%	Approved	20

BID (1) Fixed Price Electricity

BID (2) Index Priced Electricity

Continuous Market Monitoring



Why Usource

- ▶ Secure the best energy deal for you now & in the future
 - Unrivaled market experience, knowledge & tools
 - Dedicated energy experts with 150 years of combined experience
 - Proprietary state-of-the-art platform
 - Access to all energy suppliers
- ▶ Proven track record
 - Extensive client base → ~\$500mm energy
 - High customer loyalty → 95%+
 - Large, financially stable company

Contact Information

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QUESTIONS??

Thank you for your time!