Industrial Technologies Program

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Industrial Utility Webinars

March 10, 2010

Areas Covered in this Webinar
- Incentives that are used to help commercial/industrial customers
- Differences between incentive and program types
- Using demand-response markets
- DOE ITP resource handbooks

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Speakers
- John Nicol, SAIC/Wisconsin Focus on Energy
- David Pirtle, PEPCO Holdings, Inc.
- Tom Hovde, Snohomish PUD
- Lindsay Bixby, BCS, Incorporated

APPA American Public Power Association

DEED

Sponsors
- DOE Industrial Technologies Program
- American Public Power Association
- APPA, Demonstration of Energy-Efficient Developments
- Western Area Power Administration

Western AREA POWER ADMINISTRATION

Questions?
Email rharry@bcs-hq.com

Financial Mechanisms for the Industrial Sector

John Nicol, PE
SAIC/RW Beck

March 10th, 2010

SAIC
From Science to Solutions

Session Agenda

- Presenter's Perspective
- Industrial Market Assessment
- Pro's and Cons of Financial Tools
  - Study financing tools
  - Project financing tools
- Financing tools and Technical Assistance
- Summary

Presenter's Perspective

- 25+ years promoting energy efficiency in commercial and industrial facilities
- Directed Wisconsin's Focus on Energy Industrial Sector program since the start in 2001. In 2010 the budget is $18 million to achieve savings of 97,000 MWH, 17 MW and 6,800,000 therms.
- Also providing strategic support to other efficiency programs including Ameren Illinois Utilities and the State of Hawaii

Industrial Market

- Higher degree of technical expertise
- Many capital budget opportunities
- Very diverse businesses, processes and sizes
- Global competitors – survival mode
- Some have corporate offices that may not be in program territory
- Volatility in ownership, staff levels and upper management
- Some have very high energy intensity which can lead to large savings – especially for processes

Market Barriers

1. Project identification ability
2. Ambiguous project information
3. Technical risk
4. Savings risk
5. Low ROI
6. Limited capital
7. Limited staff resources
8. No upper management commitment
9. Company culture

Market Barriers

1. Project identification ability
2. Ambiguous project information
3. Technical risk
4. Savings risk

Solution: Study financing tools

Study Financing Tools

- Study incentives
- Pulp and Paper Pumping Study grants
- Save Energy Now – Energy Saving Assessments
- Industrial Retro-commissioning

Study Financing Tools

- **Study incentives – 50% funding (max $7,500)**
  - **Pros: Partnering to reduce customer risk**
  - **Cons: Limited project motivation and potential vendor manipulation**

- **Pulp and Paper Pumping Study grants – 100% funding (max $10,000, $5/HP)**
  - **Pros: Customer has no expense. Gets customer and vendor attention.**
  - **Cons: Limited project motivation**

Study Financing Tools

- **Save Energy Now – Energy Saving Assessments – 100% funding**
  - **Pros: Independent expert analysis and largest energy intensive customers**
  - **Cons: Limited project motivation. Only appropriate for very large customers**

Study Financing Tools

- Retro-commissioning – funding dependent on projects implemented
  - Minimum required capital commitment
  - Full cost covered if enough savings is acheived
  - Compressed air
  - Refrigeration
- Pros: Partner with committed customers resulting in high project motivation
- Cons: More complex. Vendor selection and oversight process is critical

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Market Barriers

5. Low ROI
6. Limited capital
7. Limited staff resources

Solution: Project financing tools

Project Financing Tools

- Prescriptive incentives
- Custom incentives
- RFP Project grants
- Shared Savings
- RFP Staffing grants
- Emerging Technology Investments

Project Financing Tools

- **Prescriptive incentives**
  - Project incentive set per unit (ie: $/HP)
  - Good for standard common technologies
  - Program energy savings may be deemed
  - Hybrid: $/unit incentive, but energy savings is calculated – VFD incentives
- Pros: Vendors can use to sell. Program administration costs lower.
- Cons: Is less effective if there are broad customer variances (ie: hours). Program has less control over how many are installed.

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Project Financing Tools

- **Custom incentives**
  - **Project incentive based on energy savings**
  - **Pre-approval required**
  - **Good for complex or process specific technologies**
  - **Good opportunity to integrate program technical assistance**
- **Pros: Can impact more complex and usually bigger projects.**
- **Cons: Vendors less integrated.**

Project Financing Tools

- **RFP grants**
  - **Customer specifies incentive needed**
  - **Customer indicates why this incentive amount is needed**
  - **Can provide different criteria than custom (ie: shorter payback)**
  - **Competitive**
- **Pros: Usually much larger and longer term projects apply. Provides urgency and call to action for customer.**
- **Cons: More funds tied up with larger projects.**

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Project Financing Tools

- **Shared Savings**
  - **Project cost is paid out of savings**
  - **Savings is measured and verified**
  - **Pros: Allows customers to have a guaranteed positive cash flow. Program funds come back.**
  - **Cons: Program administration can be more complex. Some companies do not want to use this approach.**

Project Financing Tools

- **Staffing RFP**
  - **Customer specifies incentive needed to fund staff to manage a list of projects**
  - **Customer indicates why this incentive amount is needed**
  - **Competitive**
- **Pros: Provides mechanism to overcome staffing barrier. Helps prove benefit of energy focused staff.**
- **Cons: Program administration can be more complex.**

Project Financing Tools

- **Emerging Technology Investments**
  - Investment pool to fund near commercial emerging technologies
  - Equity or loan to emerging technology company
  - Technical and business due diligence before investing
  - Technical, business and marketing support after investing
- **Pros: Provides support to appropriate emerging technologies. Program funds are recycled.**
- **Cons: Program administration infrastructure needs to be carefully developed**

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Financing and Technical Assistance

- Financing projects enhances technical assistance.
  - Is a show of endorsement for technology
- Strong technical due diligence is critical to ensure that program funds are effectively used.
- Combining expert technical assistance and business/finance expertise can be powerful tool to influence projects.

Summary

- **Financial assistance for studies are important to overcome initial project barriers**
- **Financial assistance for projects can be enhanced by having a portfolio of different types of incentives or financing to better meet the specific needs of a customer**
- **Understanding the business cases for different types of industry is important to effectively meet their needs**

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Industrial Utility Webinar
Financial Mechanisms and Incentives for Implementing Energy Efficiency

March 10, 2010

David Pirtle
Regulatory Affairs Lead
Pepco Holdings, Inc.

Utility Business Overview

Power Delivery

	pepco (A PHI Company)	delmarva power (A PHI Company)		atlantic city electric (A PHI Company)
	Electric	*Electric*	*Gas*	*Electric*
Customers	▶ 753,000	▶ 513,000	▶ 121,000	▶ 539,000
GWh	▶ 26,488	▶ 13,477	▶ N/A	▶ 9,931
Mcf (000's)	▶ N/A	▶ N/A	▶ 18,300	▶ N/A
Service Area	▶ 640 Square Miles	▶ 6,000 Square Miles	▶ 275 Square Miles	▶ 2,700 Square Miles
	▶ District of Columbia, major portions of Prince George's and Montgomery Counties	▶ Delmarva Peninsula	▶ Northern Delaware	▶ Southern New Jersey
Population	▶ 2.1 million	▶ 1.3 million	▶ .5 million	▶ 1.0 million

Pepco & Delmarva EE & C Program Descriptions

Non-Residential Prescriptive Rebate Program

Provide incentives for selected common, cost-effective energy efficiency measures.

Non-Residential HVAC Efficiency Program

Motivate non-residential customers to select high efficiency options when purchasing HVAC systems through incentives for high efficiency unitary AC and heat pump equipment.

Custom Incentive Program

Any cost-effective non-lighting energy efficiency improvements that are not eligible for rebates through the Company's other non-residential DSM programs.

Building Commissioning and O & M Program

Improve the way customers commission, operate and maintain their facilities.

General Overview C&I Programs

Early Out of the Gate

- DC programs approved in March 2009, Maryland programs approved in August 2009 after a 2 year regulatory approval effort

Strategy

- Decoupling of revenues from electricity sales
- PJM Capacity Market integration (Maryland only)
- EM&V Statewide utility contractor, with PSC evaluator oversight
- Participation in the NEEP Regional EM&V Forum
- Prescriptive, HVAC and Custom programs were launched in September 2009
- O&M Commissioning Programs launched in January 2010

What is working

Prescriptive Program

- Lighting has Significant traction.. typical T12 to T8 retrofits and new fixtures
- VFD & Motors have strong participation likewise

Sample pricing of rebates

- New Fixture with HPT8 Lamps & Ballasts or T5/T5HO Lamps and Ballasts, (3 or 4, 4-ft Lamps) $30 Rebate
- Re-lamp & Re-ballast $25 Rebate
- De-lamp/Retrofit with HPT8 Lamps and Ballasts and Retrofit Kit (Existing 4-ft and 8-ft fixtures with 3 or 4, 4-ft or 8-ft Lamps) $40 Rebate

- Probe-Start to Pulse-Start Metal Halide > or = 150W $35 Rebate

- Occupancy Controls - Wall Mount (near or replacing wall switch) $25 Rebate

Slower Activity than Expected

Unitary HVAC Program

Covers split and pkg. AC and Heat Pumps ranging from 5.4 to 20 Tons

- Significant capital requirements during the recession hindering participation, plus we expect acceleration in the cooling season. Especially true in our Delmarva Power Maryland service area.

Sample pricing of rebates

- Tier 1 Incentives $35/Ton up to $70/Ton for higher efficiency Tier 2
- $200 for Dual Enthalpy Economizer Control (added to the above)

Just Starting

- Custom Program participation is less than expected, likely due to long lead time frame of engineering studies and complexity of the evaluation process. Additionally all Chillers have to go thru the Custom Program

- O&M Commission just started in January

C&I customers Feedback

Quick and easy applications, with well defined projects leads to emphasis on prescriptive programs

Anecdotal Theme get in, get out, get paid

Balancing act between data requirements and participation:

- Less data you require, typically leads to more participation, but then the less value that information tends to be.
- Must be balanced to meet state, and PJM EM&V reporting requirements

General Overview of Program Changes

- The Prescriptive Incentive program in DC close to budget. Need flexibility to shift funds from other programs, plus we're reviewing lower incentive rates

- Considering addition of food cooking equipment to the Prescriptive Incentive program. Presently reviewing cost effectiveness

- Determine if expanding variable frequency drive measures to include non-HVAC applications in Delmarva Power C&I businesses has merit and can be cost effective

Market integration of PJM earnings to offset costs for DSM surcharge

- **PJM Reliability Pricing Model (RPM) and Energy Efficiency Resource**
  PJM's capacity-market model. Implemented in 2007, based on making capacity commitments three years ahead, designed to create long-term price signals to attract needed investments in reliability in the PJM region.

- On March 26 2009, FERC approved PJM's filing to establish an opportunity for energy efficiency and conservation programs to participate in the RPM Base Residual Auction ("BRA") for capacity.

- On April 23, 2009, PJM's Markets and Reliability Committee approved the rules governing energy efficiency and conservation program participation in the capacity market.

- April 26, 2009 PJM approved Pepco & DPL's initial monitoring and verification plan for energy efficiency and conservation resources, permitting the Company to participate in the May 2009 PJM capacity auction for the 2012/13 PJM Planning Year.

- January 22, 2010 FERC approved auction for 2011/2012 delivery year.

Nominated Energy Efficiency (EE) Value

- EE Resource may commit to an FRR Capacity Plan for a maximum of up to four consecutive Delivery Years. Manuals 18-PJM Capacity Markets & 18B EM&V

- Window of EE Performance Hours
  Estimated PJM Average Demand (kW) reduction during
  Summer June–August, 2pm–6pm, M–F, Non-Holiday

- Demand reduction value during performance hours determined by sampling to meet a statistical accuracy and precision of no less than a one tailed 90% level of confidence (equal to 2 tailed 80%) and 10% relative precision

Pepco/DPL PJM EE Activities for Maryland only

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- Pepco Bid 44 MW, DPL 11 MW – a portion of the projected capacity value of its EE&C programs due to reduce uncertainties regarding the market receptivity of programs and financial risks

- The Pepco/DPL plan to bid any additional/shortfall in peak demand available from the programs into RPM 3rd Incremental Auction (Jan 2012) as total savings become more certain for delivery year 2012

Note: this does include DR/ILR DLC activities

Projected Market Earnings Estimates

- The market clearing price of these resources for Pepco was $133.37 per MW Day or approximately $2.2 million for the 2012/2013 PJM planning year.
- The market clearing price of these resources for DPL was $169.63 per MW Day or approximately $0.7 million for the 2012/2013 PJM planning year.
- Overall EE&C spending budgets for both Res and Non-Res is $20 million for Pepco and $7 million DPL.

EE resources are eligible to offer in the 11/12 DY

In addition, an Installation Period of June 07-May 08, Fully Installed for Summer 2008, would also be eligible for 11/12 DY.

Installation Period	Fully Installed by June	Eligible Delivery Years
June 2008 – May 2009	2009	2011/12, 2012/13
June 2009 – May 2010	2010	2011/12, 2012/13, 2013/14
June 2010 – May 2011	2011	2011/12, 2012/13, 2013/14, 2014/15
June 2011 – May 2012	2012	2012/13, 2013/14, 2014/15, 2015/16

Columbia Square (13th & F Associates L.P.)
555 13th Street, NW
Washington DC 20004

- Columbia Square replaced (40) existing motors with (40) new NEMA-rated premium-efficiency electric three-phase motors and installed (40) variable frequency drives (VFDs).

- The combination of new motors and VFD's created an annual energy savings of over 750,000 kilo-watt hours (KWH).

- Hines' energy saving efforts earned them a cash incentive of $98,815, which is the largest incentive paid out in DC since the program was launched.

Evening Star
1101 Pennsylvania Avenue, NW
Washington, DC 20004

- The building management staff began the application process for a Lighting Retrofit Project in August 2009.

- Total of 1,950 lighting fixtures and ballasts moving from antiquated T-12 to high-performance T-8 lamps. Exit signs were also replaced and upgraded to high efficiency LED technology and occupancy sensors were installed in 100 offices to automatically turn off lights when empty.

- In total, the retrofit will save 353,200 kWh annually and has received a cash incentive of $44,585 from the program.

Snohomish PUD Commercial & Industrial (C&I) Energy Services

DOE Industrial Technologies Program
2010 Webinair Series
March 10, 2010

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SNOHOMISH COUNTY PUD
PUBLIC UTILITY DISTRICT NO. 1

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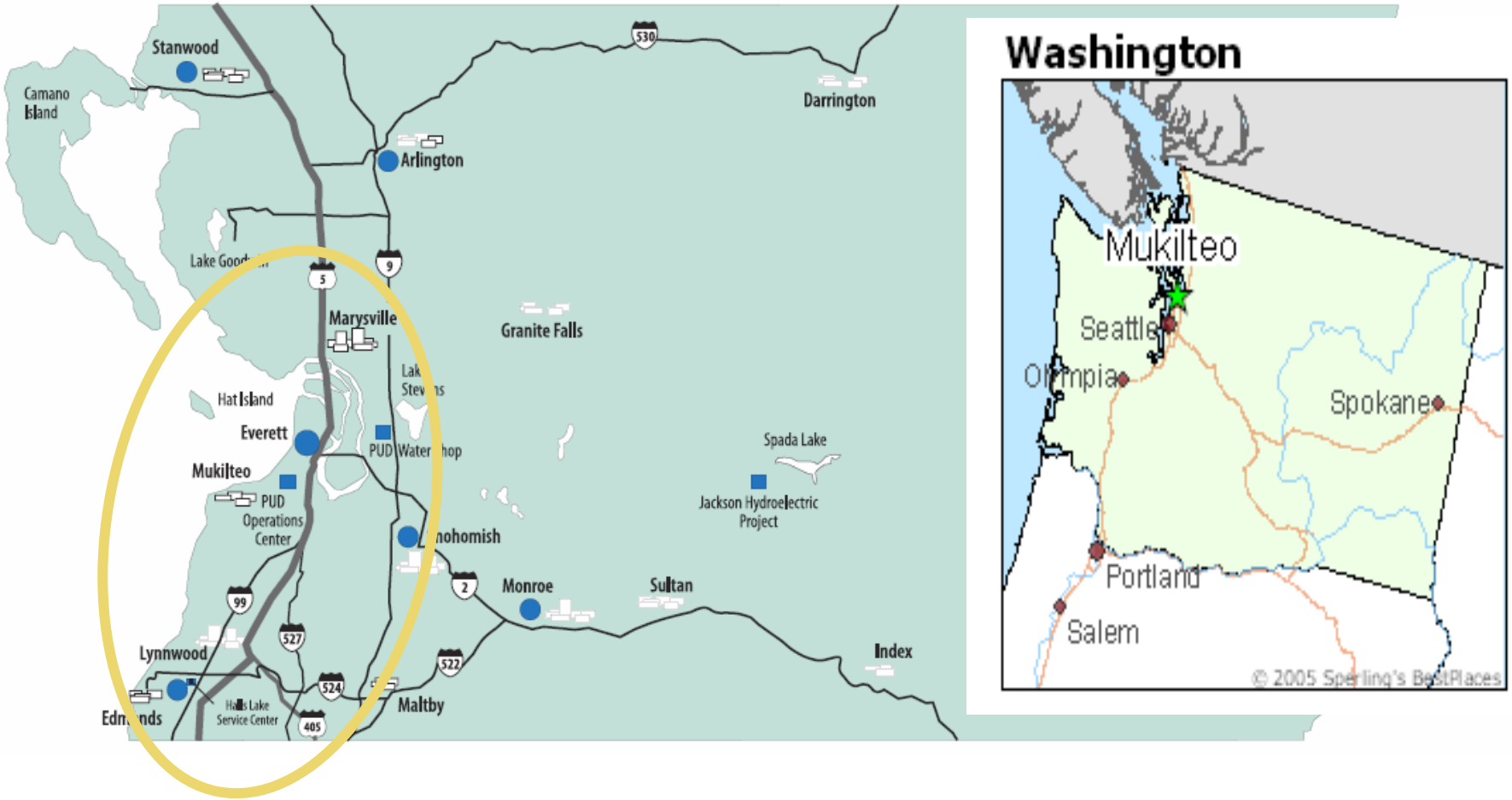
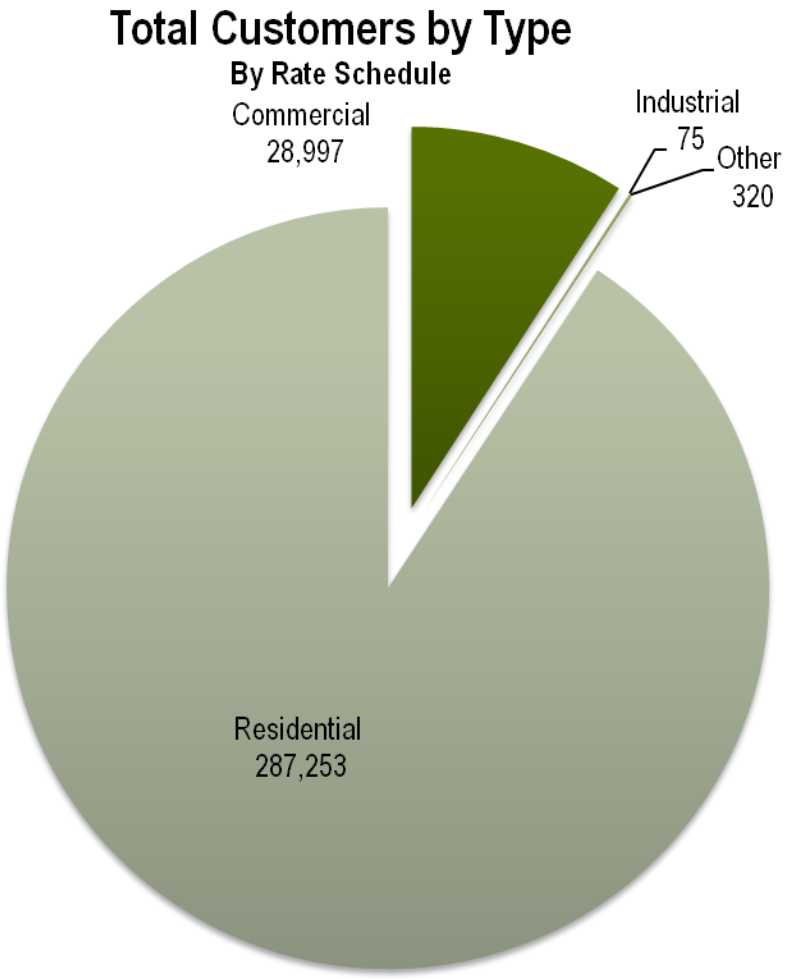
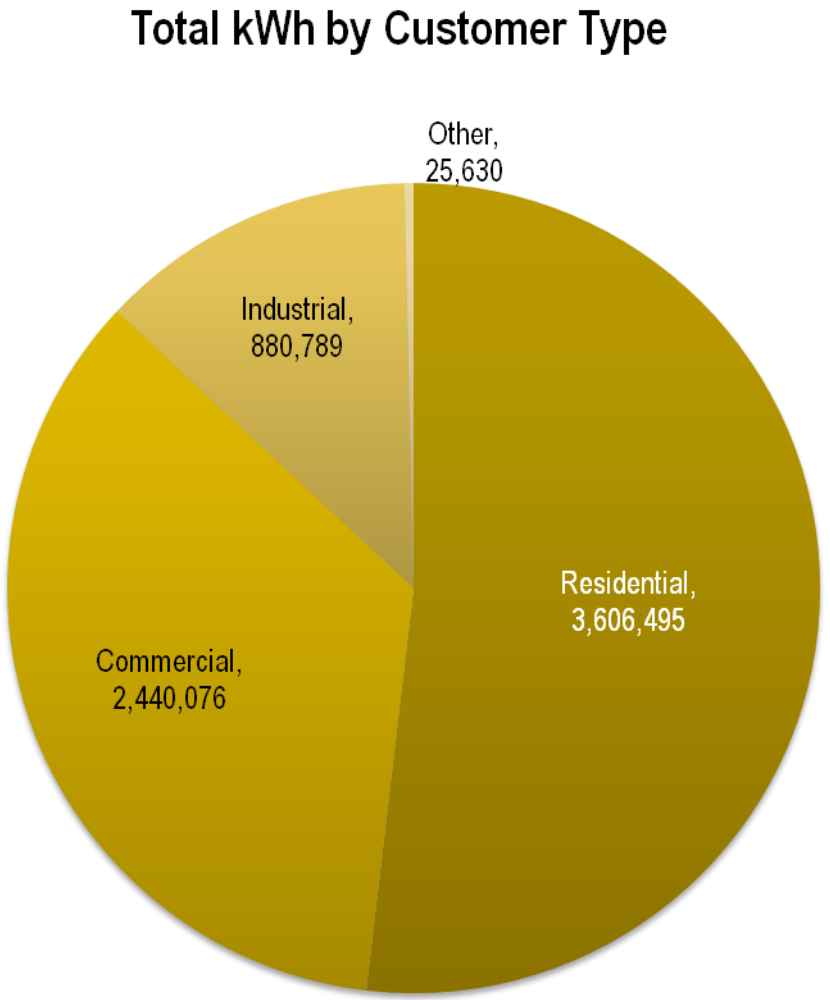
Snohomish County PUD



Customer information

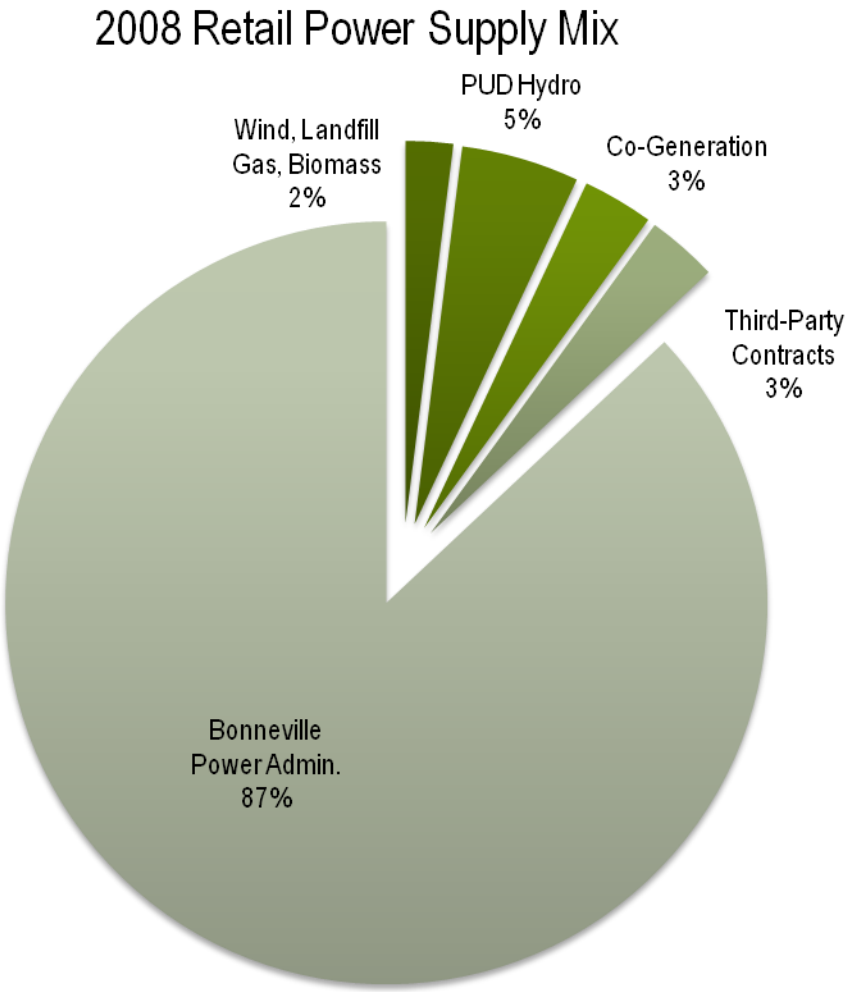




PUD Power Supply

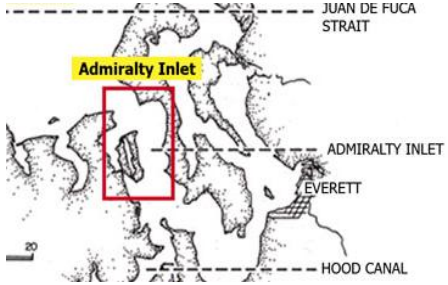
Break out of 2009 -2010 planned power mix

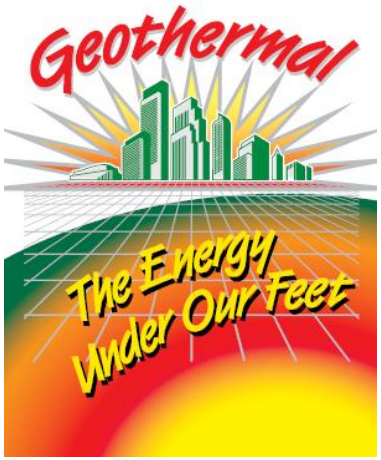
- 10% green energy
- 80% BPA
- 10% open energy market



Focus on Local Renewable Generation

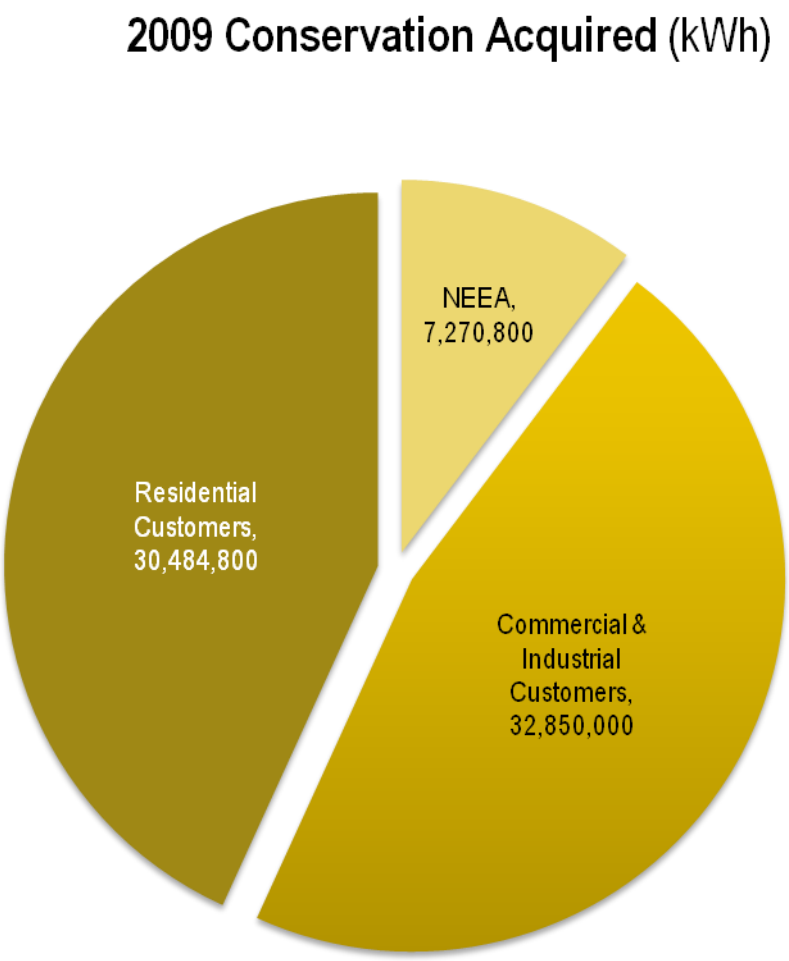
- **Tidal**
  Admiralty Inlet pilot - up to 3 turbines
- **Geothermal**
  detailed resource evaluation under way
- **Low Impact Hydro**
  three existing sites, evaluating others
- **Solar**
  10 kW project on PUD headquarters, offering customer incentives
- **Biomass/Dairy-Digester/ Landfill Gas**
  reliable “base-load” projects





Conservation as a resource

- Lowest cost, lowest risk resource for meeting future demand
- Reduces the need for new generating resources by 50% over the next 20 years
- Aligns with State Initiative 937 - Renewable Portfolio Standard



C&I Energy Efficiency at the PUD

- Customer education
- Technical and project management support
- Financial incentives

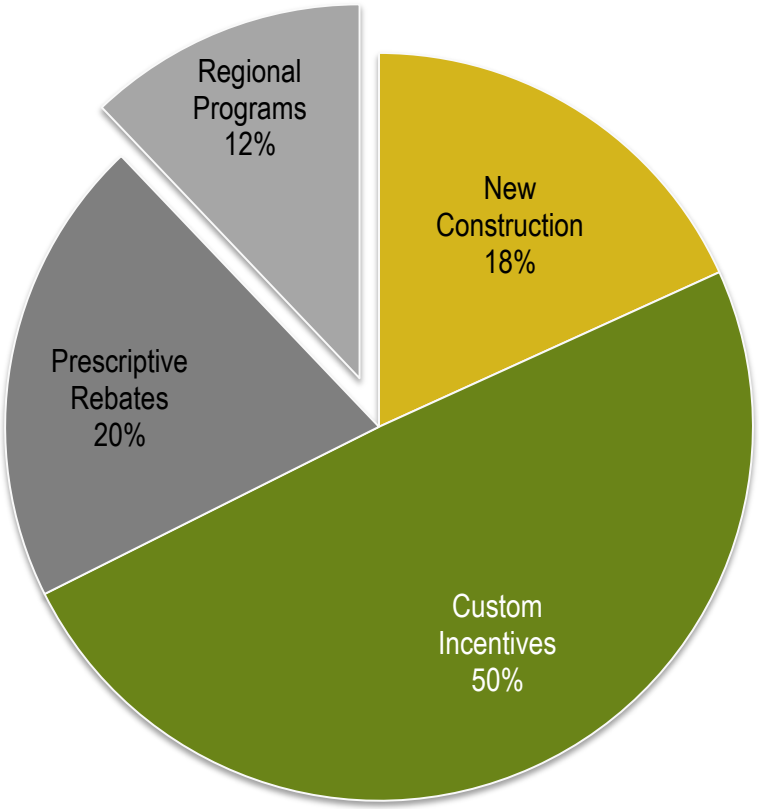
- Historically 70% of projects are lighting, accounting for half of total savings, others include industrial process, commercial HVAC measures
- Completed 245 projects in 2008 and 493 projects in 2009
- Anticipate 550 plus projects in 2010
- Ave project size decreased from 120,000 kWh in 2007 to 54,000 kWh in 2009

New in 2009

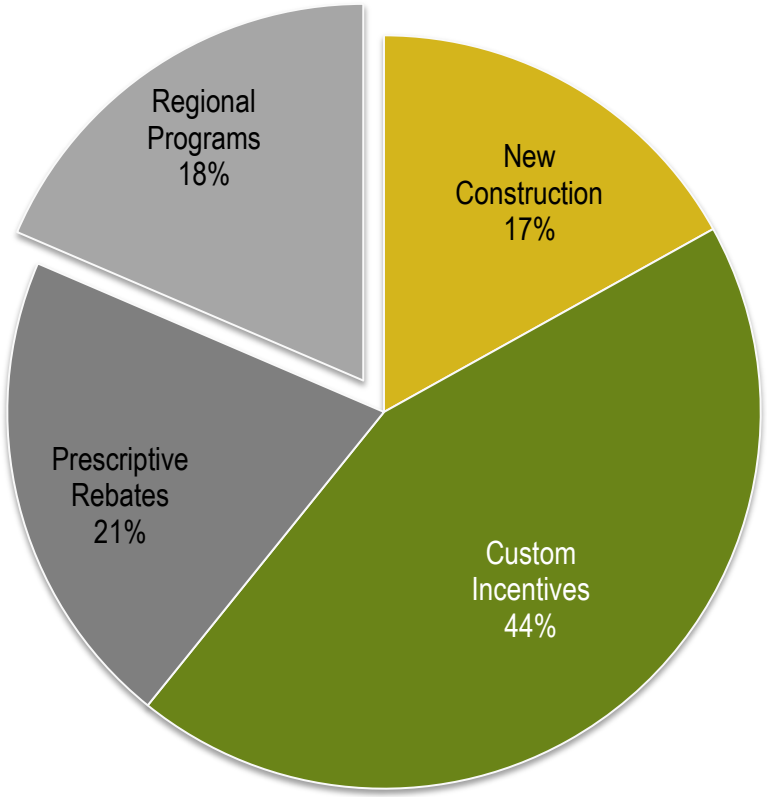
- Streamlined programs, Increased incentives
- Resource Conservation Manager program for schools

Commercial and Industrial Programs

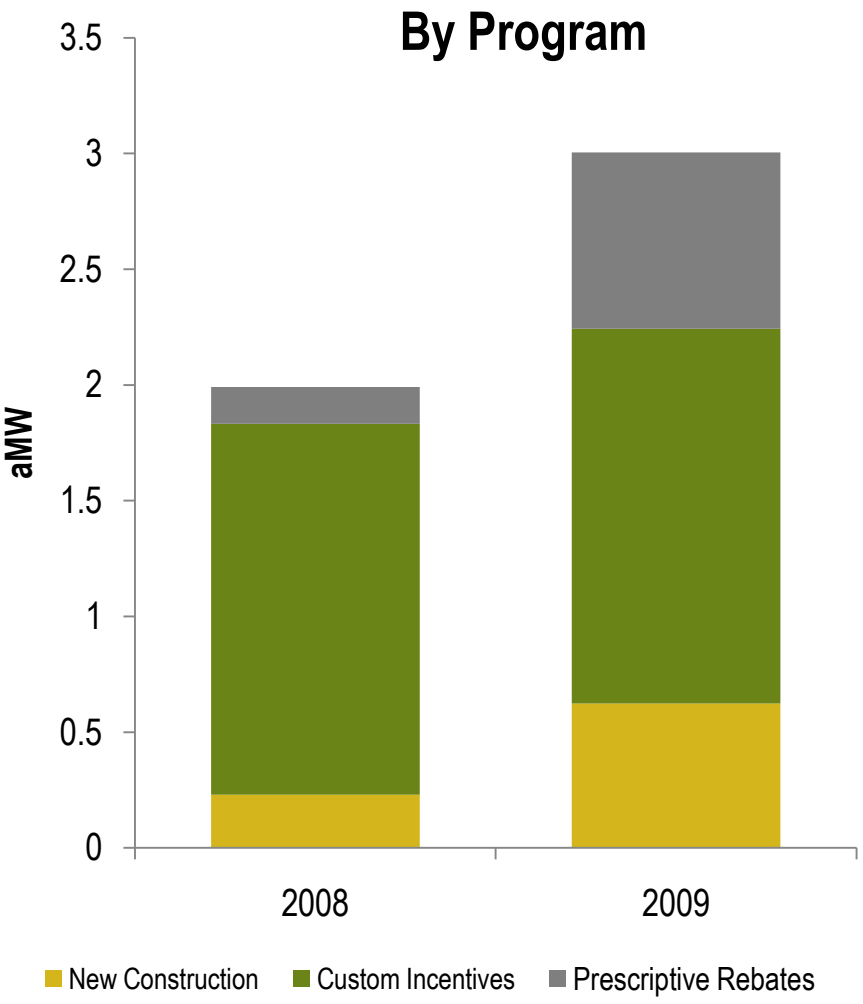
Incentives & Contractor Payments
$5.8 million

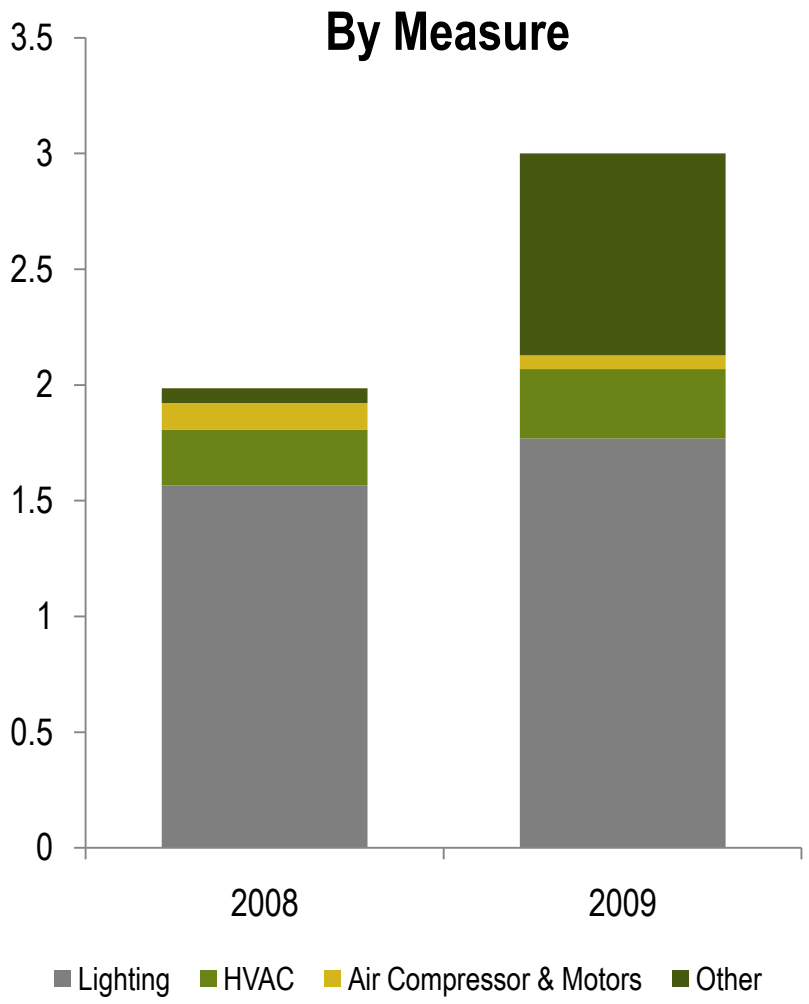


Impacts
3.75 aMW



2009 Commercial and Industrial Results



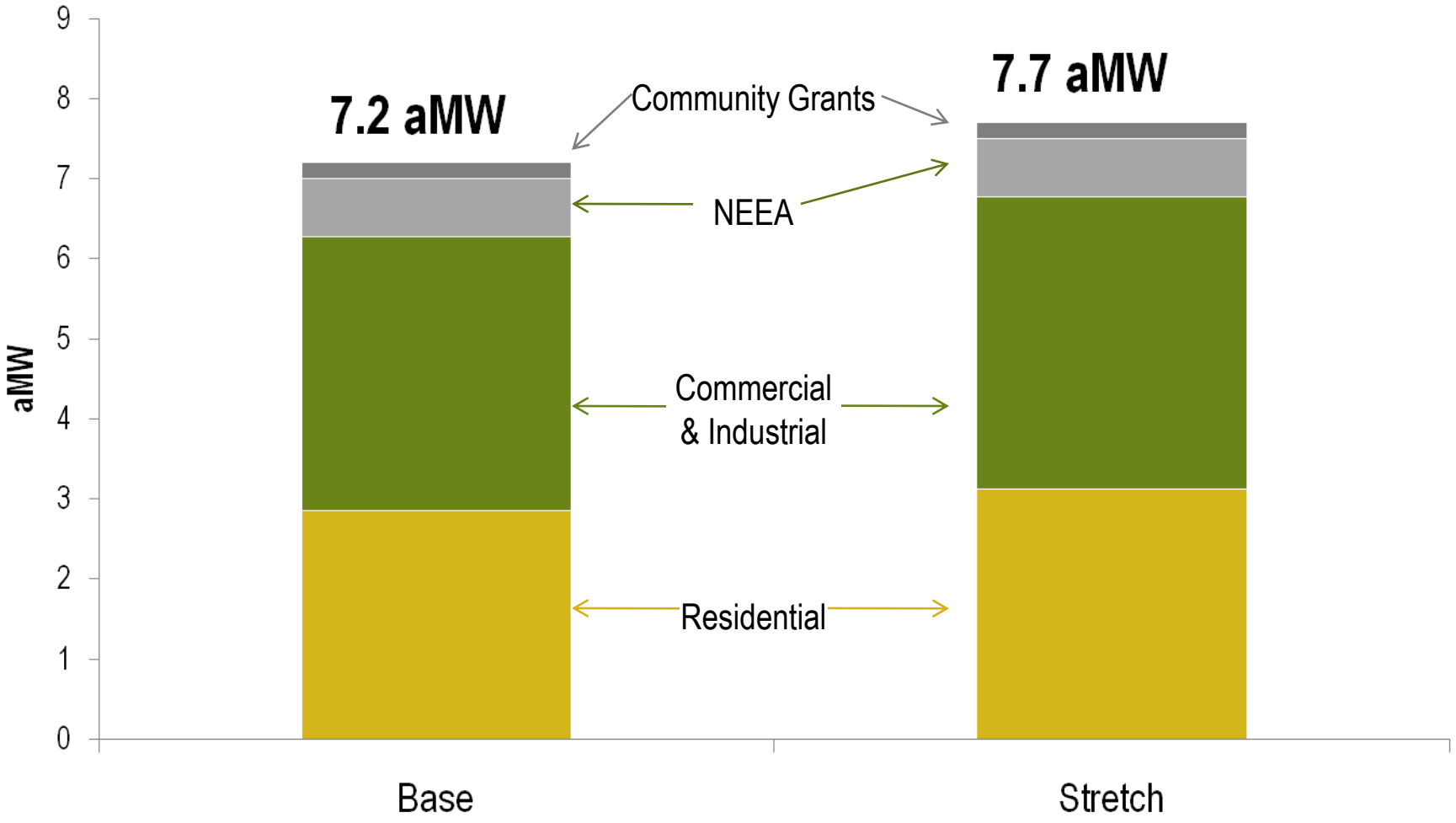


2009 Program Status – PUD Direct Hands On

- Savings Target : 26,280,000 kWh (3.00 aMW) with $5.8 Million Budget
- Number of projects completed: 493
- Achieved Savings: 26,770,000 kWh (102%)
- Commercial: 421 projects, 19.9M kWh; $3.8M incentives/rebates ($0.19/kWh)
- Industrial: 72 projects, 6.3M kWh; $1.3M incentives ($0.20/kWh)

- Additional 6.1M kWh from regional multi-utility programs, third party delivered

2010 Savings Goals



C/I Energy & Business Services

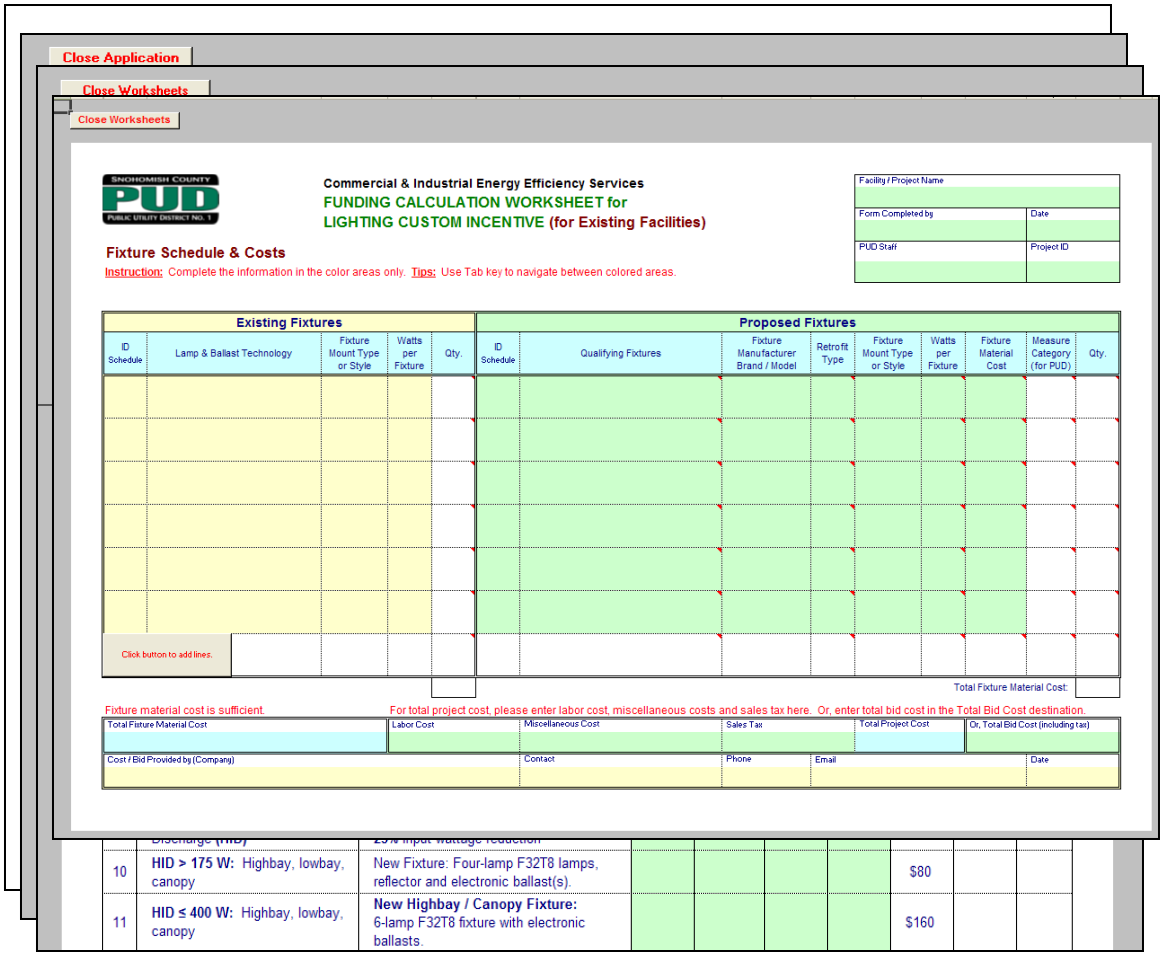
- **Coordination w/CI Energy Efficiency**
  - Develop leads, support CI projects
  - Account managers assigned to Top 700 C/I customers
  - Energy Challenge outreach to Top 700 customers

- **Community Outreach**
  - Business Services - geographic assignments to cities, schools, other community groups
  - Helped coordinate w/4 cities/tribes receiving ARRA direct allocations plus with other cities and county; 7 cities received competitive awards

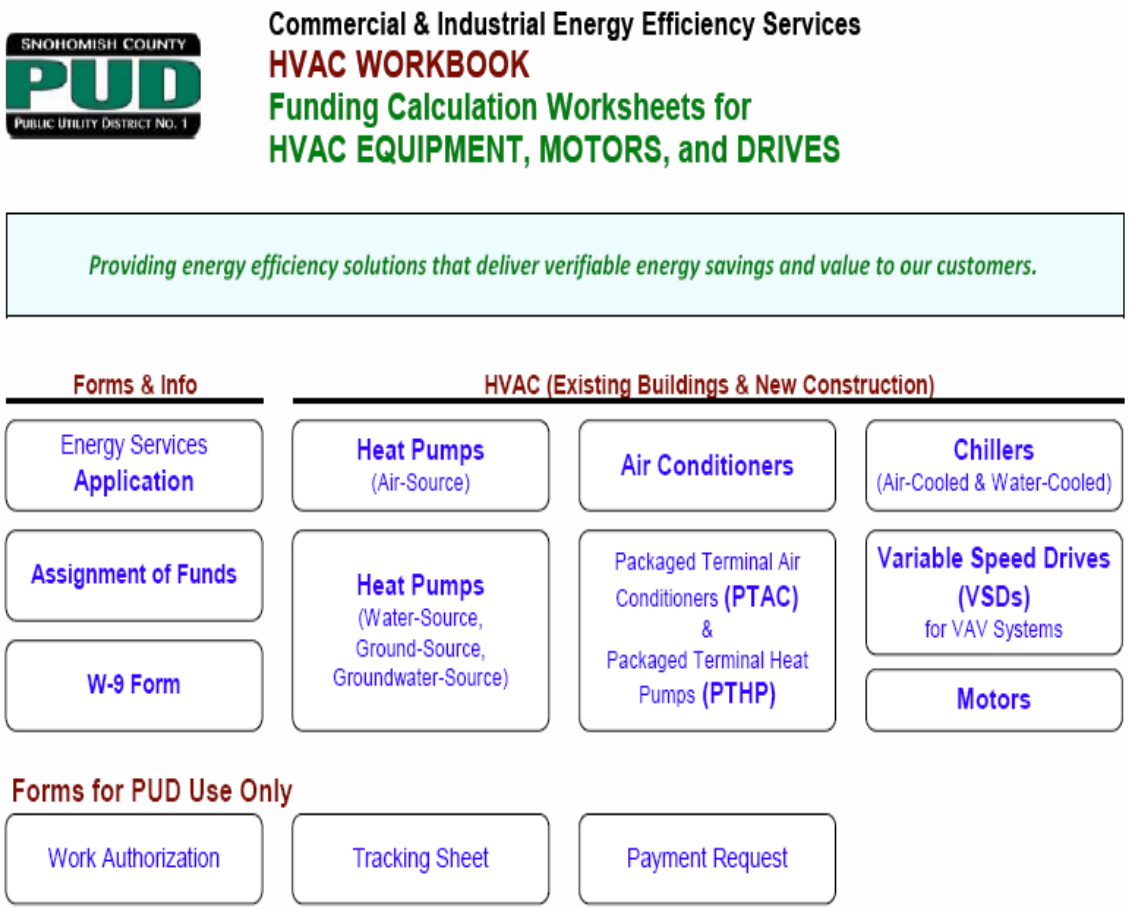
- **2010 … Continue Outreach**
  - Co-deliver Resource Conservation Manager Program launched in late 2009
  - Three participants; four more to join soon

New Funding Calculation Workbooks

- Single file with all forms included
- Simplified calculations
- Intuitive
- User friendly
- Online at www.snopud.com



New HVAC Workbook



C&I Incentives – Existing Buildings

- For lighting and lighting controls, incentive is 20¢ per kWh estimated annual savings.
- HVAC and other equipment which exceeds code requirements is eligible for incentives of 20¢ to 30¢ per kWh estimated annual savings; Baseline for retrofit is 85% of code value; Electric resistance baseline is allowable.
- Standardized calculations for common HVAC measures like heat pumps, PTAC, PTHP, air conditioners, chillers, ASDs etc.
- Maximum incentive = 70% of project cost.

C&I Incentives - New Construction

- For lighting, variable incentive from 15¢ per kWh to 25¢ per kWh estimated annual savings, 20¢ per kWh for controls.
- HVAC and other equipment , incentives of 20¢ to 30¢ per kWh estimated annual savings.
- Standard calculations for common measures like VFDs, HVAC equipment, etc.
- Custom incentives available for non-standard items.
- Project / equipment must exceed code requirements by at least 10% to qualify.
- Maximum incentive = 50% of material costs or full incremental cost.

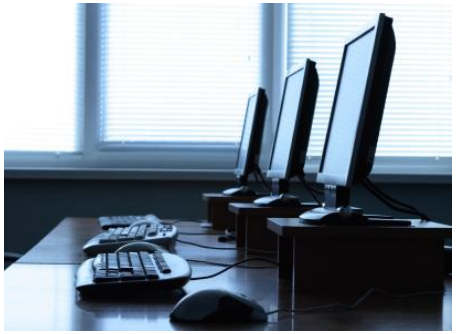
Other C&I Incentives

For both Existing Facilities and New Construction

- Process equipment and controls
- Compressed air systems
- Pumping systems
- Refrigeration equipment
- Data center measures
- Other technologies as appropriate

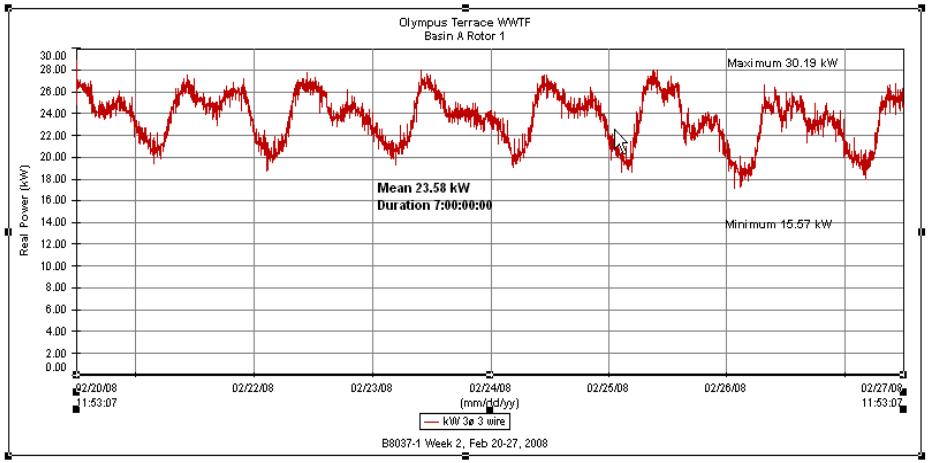
C&I "Rebates"

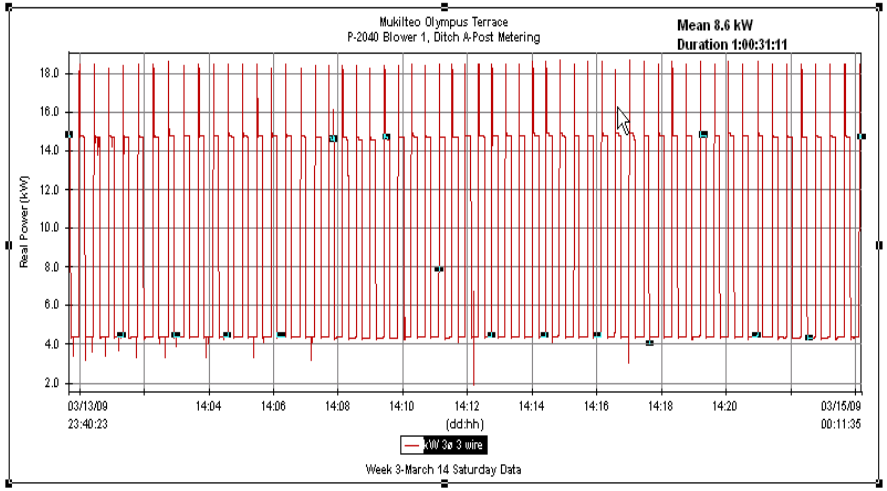
- Lighting rebates up to $15,000 / 70% of project cost
- PC power management, commercial kitchen equipment, green motor rewind,
- Increased rebate amounts in 2009 by 30 to 40% for most measures



Industrial Projects

- Focus on Process and System Improvements
- Metering to Inform (MTI) estimates and Metering to Verify (MIV) to document results





SNOHOMISH COUNTY PUD
PUBLIC UTILITY DISTRICT NO. 1

Be a Conservation Sensation

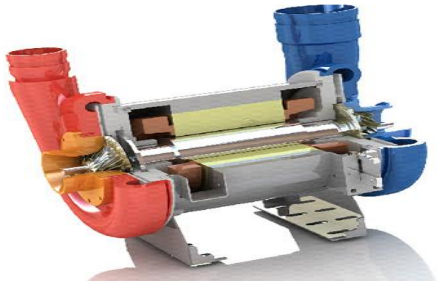
Industrial Projects – 2006 – 2009

- 152 projects
- 32 million kWh, 3.75 aMW
- Aerospace, Biotech, Food Processing, Timber, Pulp and Paper, Glass, Aggregates and Concrete, Manufacturing, Water/wastewater
- Measures included compressed air projects, insulation, lighting, ASDs, M/G set replacements;
- Other process improvements to reduce BHp or runtime

Increasing Focus on Industrial in 2010

Project Summary-Mukilteo WWTP - 2009

- Existing: (2) 40 HP Brush rotors (43.44 kW) 380,534 kWh/Yr
- Installed: (1) 50 HP K-Turbo / Sanitaire Diffusers (17.12kW) Anticipated use is <u>150,000 kWh/Yr</u>
- *Est. Min Savings Per Year/ 8760 Hrs Operation Projected 230,534 kWh/Yr or 61% of original load*
  - $.07 Avg rate per kWh for C&I customers schedule 20 medium load
  - $15,970.70 per year Savings
  - Snohomish PUD Incentive $39,171



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Compressed Air Projects –Industrial/Manufacturing – 2000 – 2009

- Expanded focus on compressed air efficiency in 2000; hired engineer w/efficiency expertise
- Completed 167 projects, ave size 192,000 kWh
- 32,020,000 kWh, 3.65 aMW, $2,241,398 in avoided utility expense by customers
- Aerospace, Biotech, Food Processing, Printing, Timber, Pulp and Paper, Glass, Aggregates and Concrete, Instrumentation, Manufacturing, Water/wastewater
- Systems approach including VFD's on compressors; cycling air dryers, adequate storage; recommend leak detection

Concrete and Aggregate Case Study – Smith Island Hot Mix and Recycle Plant

- 5/06 – Install pipe insulation on exposed piping carrying heated oil - 235,000 kWh/yr ($16,500) savings; Three month payback after incentive
- 12/06 – Installation complete on 60 HP VS compressor, 660 gallon storage receiver and 250 SCFM cycling air dryer. 43% reduction of CA power compared to prior system 19.5 kW average pre; 8.4 kW post install
- Installations pre/post metered for verification – combined estimated 396,000 kWh savings/year
- $31,000 Utility incentives; $28,000 annual savings/avoided cost to customer

Measures for Success -- Our Message to Customers

- Contact us early – bring us your ideas, we'll be glad to work with you; ongoing relationship is key
- Include us in project meetings
- Provide documents that describe your project including bids, submittals, drawings, etc.
- Keep in touch from project development through installation
- Note that Authorization is required prior to project installation

Thank You…….

C&I Contacts

- C&I Manager, Jim West

- Program Managers:
  - Rick Allen, Rebate Programs
    - 425-783-1772
  - Alan Budman, New Construction
    - 425-783-8282
  - Sinh Tran, Existing Buildings
    - 425-783-8248

  Business Services
  - Tom Hovde
    - 425-783-1703

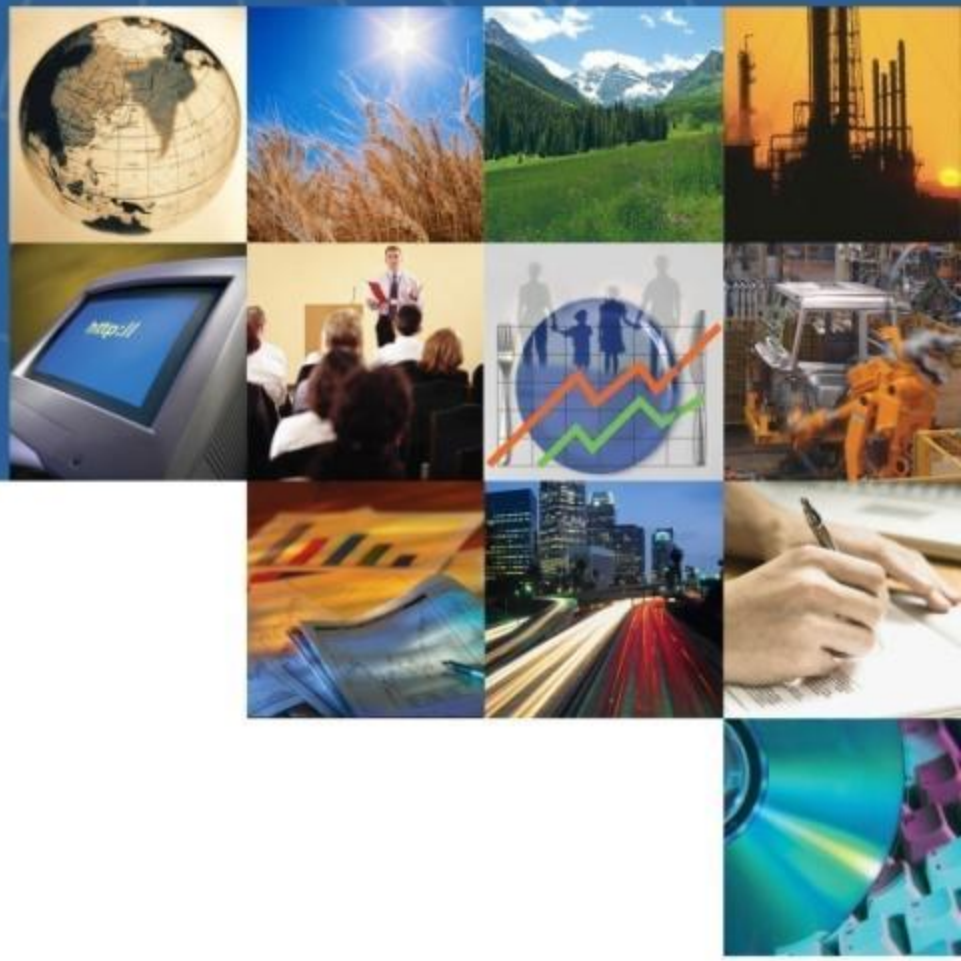
- Field Engineers
  - Jim Conlan
  - Steve Forck
  - Dave Hunt
  - Jewon Kim
  - Ronn Larpenteur
  - Patrice Lundquist
  - Jim McDougal
  - Ken Satre

www.snopud.com

Be a Conservation Sensation

www.bcs-hq.com

US Department of Energy Resources for Industrial Energy Efficiency



Lindsay Bixby

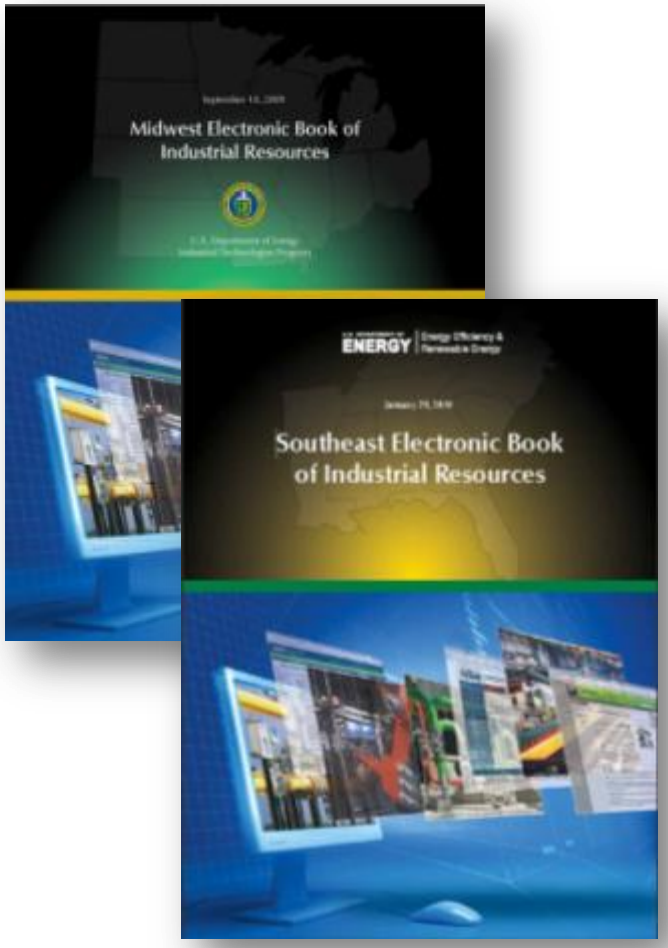
March 10, 2010

BCS

A woman-owned small business | www.bcs-hq.com

Regional Resource Handbooks

- These handbooks are easy-to-read collections of incentives and resources to help industry improve its energy efficiency.
- Information is available at the national, regional, and local levels.
- Collaborative data collection effort from DOE, resource providers, power administrations, and state energy offices among others.
- Southeast and Midwest are completed, West is in review, and Northeast is in progress.



Locating the Resources

Indexed by:

- Geography
  - Nation, region, state
- Type of Assistance
  - Analysis tools, energy audits, financial assistance, incentive program, rebate program, technical assistance, and training

Sorted by:

- Resource Provider
  - Government
  - Utility
  - Non-profit Organizations
    - Local/Regional Initiatives
    - Clean Energy Application Centers
    - Industrial Assessment Centers
  - Private Programs

Federal, National, and Regional Chapters

Federal and National Programs

A variety of federal and national organizations offer incentives and resources to help industrial manufacturers lower their energy intensity and consumption.

Government

Internal Revenue Service

Biodiesel Income Tax Credit
Federal Tax Credit
Companies that put biodiesel fuel into a vehicle or use biodiesel fuels in their business vehicles are eligible for a tax credit of $1.00 per gallon.
Learn More:
Excise Tax Branch
202-622-3130
http://www.afdc.energy.gov/afdc/progs/view_ind_fed.php/afdc/396/0

Corporate Tax Credit
Federal Tax Credit
In addition to receiving a tax credit for solar photovoltaic generation, a non-residential manager can receive a tax credit of 30 percent for geothermal energy, microturbines, and fuel cells.
Learn More:
800-829-4933
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=browse_usc&docid=Cite:+26USC48

Fuel Cells and Microturbines Tax Incentive
Federal Tax Credit
Tax credits of up to $3,000 per kWh are available for the purchase of fuel cells, while tax credits of up to $200 per kWh are available for microturbines.
Learn More:
800-829-4933
http://energytaxincentives.org/business/fuel_cells.php

U.S. Department of Agriculture

Biobased Products and Bioenergy Program
Federal Loan Program
Loans are available to help rural industry generate electricity from biobased sources.
Learn More:
http://www.rurdev.usda.gov/rbs/biomass/biomass.htm

Biorefinery Assistance Loan Guarantee
Federal Loan Program
Loans are available to help biorefineries conserve and use energy more effectively. Loan guarantees are available up to $250 million.
Learn More:
http://www.rurdev.usda.gov/rbs/busp/baplg9003.htm

Business and Industry Guaranteed Loans
Federal Loan Program
Loans of up to $10 million are available to rural industrial manufacturers to "improve the economic and environmental climate" in their communities.
Learn More:
http://www.rurdev.usda.gov/rbs/busp/b&i_gar.htm

Energy Efficiency Improvements Loan
Federal Tax Credit
Loans are available for the purchase of renewable energy generating systems by small rural businesses or agricultural producers.
Learn More:
http://www.rurdev.usda.gov/rbs/farmbill/index.html

Renewable Energy Systems and Energy Efficiency Improvements Program
Federal Grant and Loan Program
This program provides grants and loans to small businesses in rural communities that are interested in making their buildings more energy efficient.
Learn More:
http://www.rurdev.usda.gov/rbs/farmbill/index.html

U.S. Department of Energy

Loan Guarantee Program
Federal Loan Program
DOE offers loans to projects that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases." Loans are available for biomass, hydrogen, wind, solar, hydropower, advanced fossil energy coal, carbon, electricity delivery and reliability, alternative fuel vehicles, pollution control equipment, and industrial energy efficiency projects.
Learn More:
202-586-8336
http://lgprogram.energy.gov/index.html

Unsolicited EERE Proposals
Federal Grant Program
Unsolicited proposals may be selected if they are novel and do not reflect a current solicitation or existing work.
Learn More:
John N. Augustine
412-386-4524
John.Augustine@netl.doe.gov
http://www1.eere.energy.gov/financing/unsolicited_proposals.html

U.S. Department of the Treasury

American Reinvestment and Recovery Act Tax Credits and Grants
Federal Tax Credits and Grant Program
Tax credits and grants are available from select state energy offices to help promote renewable energy generation and/or energy efficiency.
Learn More:
http://thomas.loc.gov/home/h1/Recovery_Bill_Div_B.pdf

U.S. Environmental Protection Agency (EPA)

Clean Construction USA Loans
Federal Loan Program
EPA offers loans to companies to help finance projects that reduce diesel emissions from construction equipment and vehicles.
Learn More:
http://www.epa.gov/otaq/diesel/construction/

Combined Heat and Power (CHP) Partnerships
Federal Assistance Program
Combined Heat and Power (CHP) systems are an efficient, clean and reliable approach to generating power and thermal energy from a single fuel source. Incentives for CHP are available through the EPA.
Learn More:
703-373-8108
chp@epa.gov
http://www.epa.gov/chp/funding/index.html

Energy Star for Industry
Technical Assistance
The Energy Star program is a joint initiative of the U.S. Department of Energy and EPA which seeks to increase implementation of energy efficient equipment and techniques.
Learn More:
http://www.energystar.gov/index.cfm?c=industry.bus_industry

U.S. Small Business Administration (SBA)

Energy Loan Program
Federal Loan Program
SBA offers a loan program to small businesses that are affiliated with energy conservation. Loans are up to $2 million with a low interest rate.
Learn More:
http://www.sba.gov/services/financialassistance/sbaloantopics/SpecialPurposeLoans/index.html

National Resources

Non-profit Organizations

Pump Systems Matter

Pumping System Optimization and Energy-Efficiency Education & Training
Technical Assistance
Vendor neutral market awareness, education, training, products, services and tools that focus on energy savings opportunities with pumping systems.
Learn More:
Joananne Bachmann
973-267-9700
jbachmann@pumps.org
http://www.PumpSystemsMatter.org

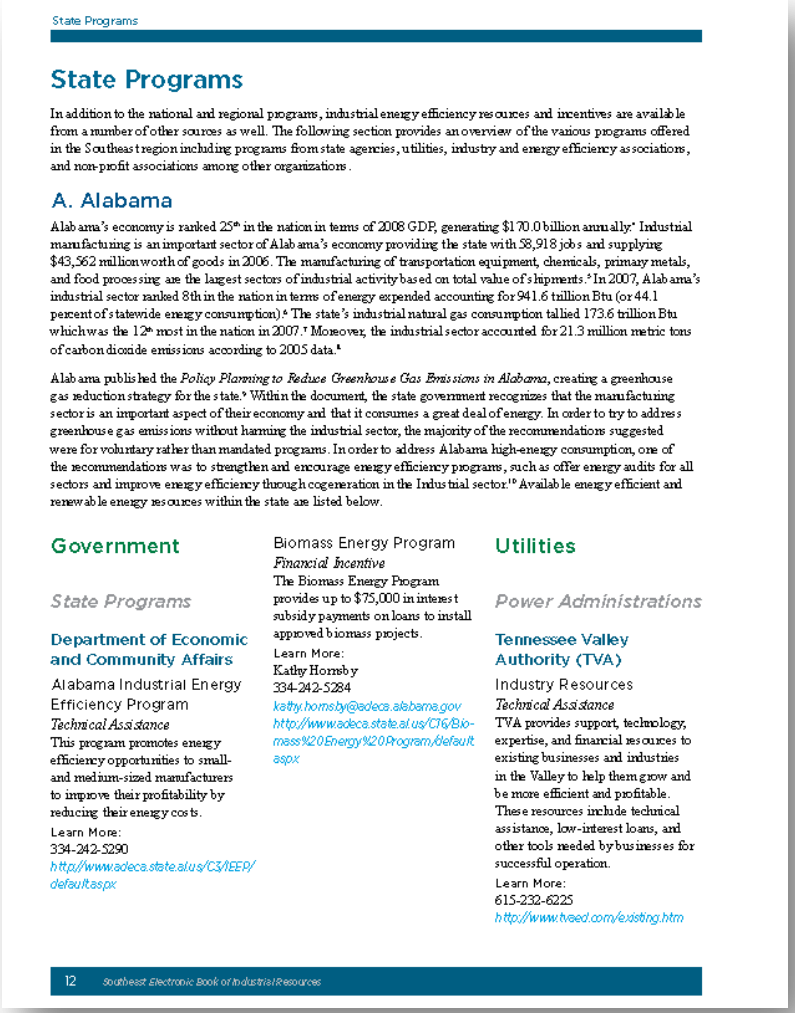
National Industry Associations

Aluminum Association

Energy Information
Technical Assistance
The organization provides fact sheets on energy and environmental responsibility to its members.
Learn More:
Charles Johnson
703- 358-2960
cjohnson@aluminum.org
http://www.aluminum.org/

State Chapters

- Each chapter provides an overview of industry including:
  - Percent of GDP
  - Total employment
  - Top industries by value of shipments
  - Energy consumption
- Chapters also provide an overview of state policies pertaining to energy efficiency or renewable energy generation.



State Programs

State Programs

In addition to the national and regional programs, industrial energy efficiency resources and incentives are available from a number of other sources as well. The following section provides an overview of the various programs offered in the Southeast region including programs from state agencies, utilities, industry and energy efficiency associations, and non-profit associations among other organizations.

A. Alabama

Alabama's economy is ranked 25th in the nation in terms of 2008 GDP, generating $170.0 billion annually.[2] Industrial manufacturing is an important sector of Alabama's economy providing the state with 58,918 jobs and supplying $43,562 million worth of goods in 2006. The manufacturing of transportation equipment, chemicals, primary metals, and food processing are the largest sectors of industrial activity based on total value of shipments.[5] In 2007, Alabama's industrial sector ranked 8th in the nation in terms of energy expended accounting for 941.6 trillion Btu (or 44.1 percent of statewide energy consumption).[6] The state's industrial natural gas consumption tallied 173.6 trillion Btu which was the 12th most in the nation in 2007.[7] Moreover, the industrial sector accounted for 21.3 million metric tons of carbon dioxide emissions according to 2005 data.[8]

Alabama published the *Policy Planning to Reduce Greenhouse Gas Emissions in Alabama*, creating a greenhouse gas reduction strategy for the state.[9] Within the document, the state government recognizes that the manufacturing sector is an important aspect of their economy and that it consumes a great deal of energy. In order to try to address greenhouse gas emissions without harming the industrial sector, the majority of the recommendations suggested were for voluntary rather than mandated programs. In order to address Alabama high-energy consumption, one of the recommendations was to strengthen and encourage energy efficiency programs, such as offer energy audits for all sectors and improve energy efficiency through cogeneration in the Industrial sector.[10] Available energy efficient and renewable energy resources within the state are listed below.

Government

State Programs

Department of Economic and Community Affairs

Alabama Industrial Energy Efficiency Program
Technical Assistance
This program promotes energy efficiency opportunities to small- and medium-sized manufacturers to improve their profitability by reducing their energy costs.
Learn More:
334-242-5290
http://www.adeca.state.al.us/C3/IEEP/default.aspx

Biomass Energy Program
Financial Incentive
The Biomass Energy Program provides up to $75,000 in interest subsidy payments on loans to install approved biomass projects.
Learn More:
Kathy Hornsby
334-242-5284
kathy.hornsby@adeca.alabama.gov
http://www.adeca.state.al.us/C16/Biomass%20Energy%20Program/default.aspx

Utilities

Power Administrations

Tennessee Valley Authority (TVA)

Industry Resources
Technical Assistance
TVA provides support, technology, expertise, and financial resources to existing businesses and industries in the Valley to help them grow and be more efficient and profitable. These resources include technical assistance, low-interest loans, and other tools needed by businesses for successful operation.
Learn More:
615-232-6225
http://www.tvaed.com/existing.htm

Sample Listing

Appendix

- Information on ESCOs
- Information by state on available small financial programs including load management, water heater, and heat pump rebates
- Set up in the same format as main entries.

Appendix A: Additional Resources

Central Electric Power Association

Water Heater Program
Financial Assistance
A customer is eligible to receive a $50 rebate if they purchase an energy-efficient electric water heater.
Learn More:
Foch Dickens
866-846-5671
http://www.centralepa.com/ms.htm

Coast Electric Power Association

Commercial Energy Audits
Analytical Assistance
Coast Electric Power Association provides an energy audit for commercial customers. A representative from the cooperative will walk through a customer's business and identify existing systems that could be made more energy efficient.
Learn More:
Janell Nolan
228-363-7259
http://www.coastepa.com/comaudit.aspx

Commercial Heat Pump Rebate Program
Financial Assistance
Coast Electric Power Association is offering rebates of $50/ton for the purchase of heat pumps. This rebate is applicable to both new constructions and retrofit projects.
Learn More:
Janell Nolan
228-363-7259
http://www.coastepa.com/comheat-pump.aspx

East Mississippi Electric Power Association

Energy Audit
Analytical Assistance
A representative from the cooperative will analyze a member's facility to determine how to make it more energy efficient.
Learn More:
http://www.emepa.com/energyAudit.aspx

North East Mississippi Power Association

Water Heater Rebate
Financial Assistance
Customers are eligible to receive a $50 rebate if they purchase an energy-efficient electric water heater.
Learn More:
662-234-6331 or 877-234-6331
http://www.northeastpower.org/special_offer.php

H. North Carolina Utilities

Public Power

City of Albemarle Electric Utility

Water Heater Rebate
Financial Assistance
The City of Albemarle will pay customers $150.00 if they purchase an energy-efficient electric hot water heater.
Learn More:
704-984-9615
http://www.cialbemarle.nc.us/pu_electric_usage.htm

City of Gastonia Electric Utility

Water Heater Rebate
Financial Assistance
The City will pay customers rebates of $150.00 for the purchase of an electric water heater that is larger than 30 gallons.
Learn More:
704-866-6823
http://www.cityofgastonia.com/city_serv/electric/rebate/rebate.cfm

City of Lexington Electric Utility/ ElectriCities

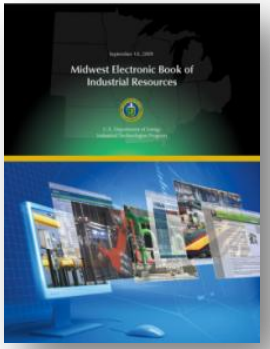
Electric Services Needs
Technical Assistance
This program assists businesses by providing energy efficiency studies, assessments, and peak load management recommendations.
Learn More:
336-243-2489
http://www.lexingtonnc.net/EconDev/econdev1.asp?id=utilities

City of Monroe

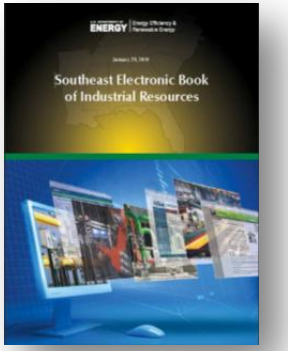
Load Management - Electric
Financial Assistance
Customers are eligible for a $150.00 rebate if they allow the utility to power down their electric water heater during peak use periods.
Learn More:
704-282-4543
http://www.monroenc.org/Energy%20Svcs/PDFs/Water%20Heater%20Rebate%20for%20EL.pdf

How to Obtain a Copy of the Handbook

- Individual resource guides with state-specific information are available
- Each state-specific Handbook will also contain national and regional information
- E-mail me if you would like a state-specific copy or if you would like an entry to be added or updated.



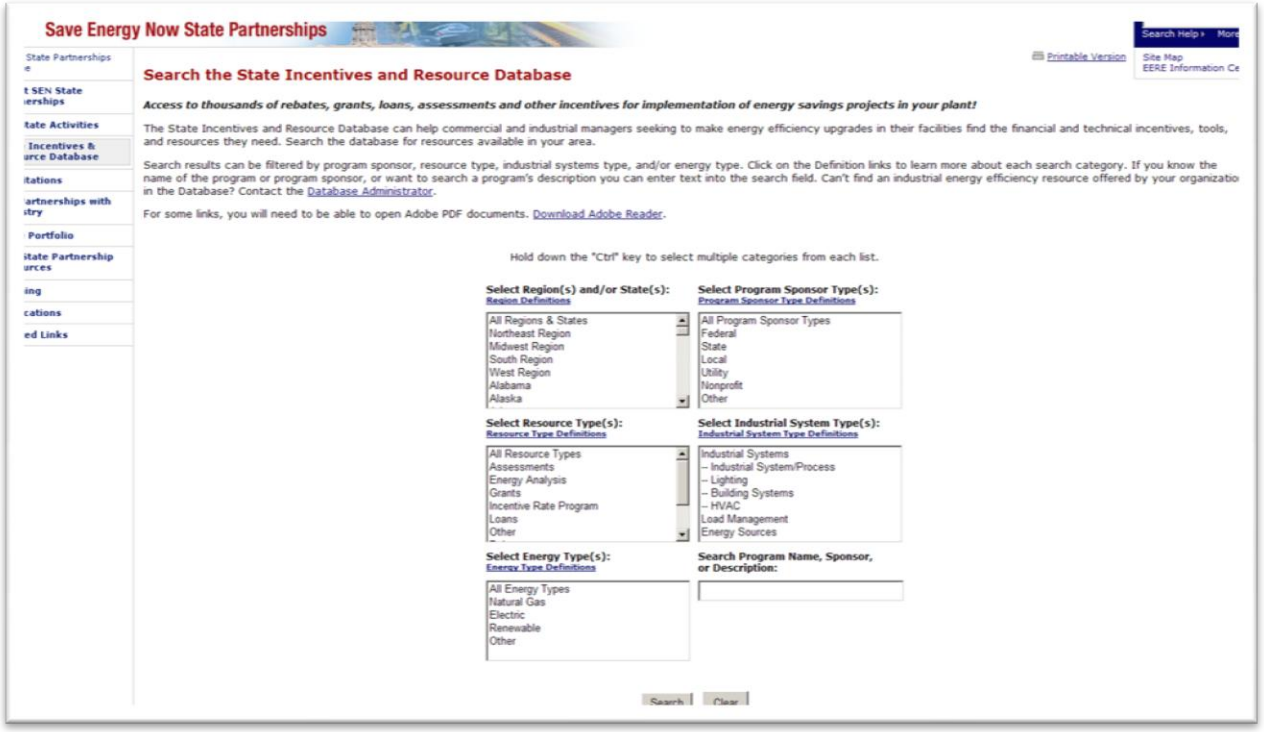
Midwest Handbook:
http://www.eere.energy.gov/industry/states/pdfs/midwest_handbook.pdf



Southeast Handbook:
http://www1.eere.energy.gov/industry/utilities/pdfs/southeast_resource_handbook.pdf

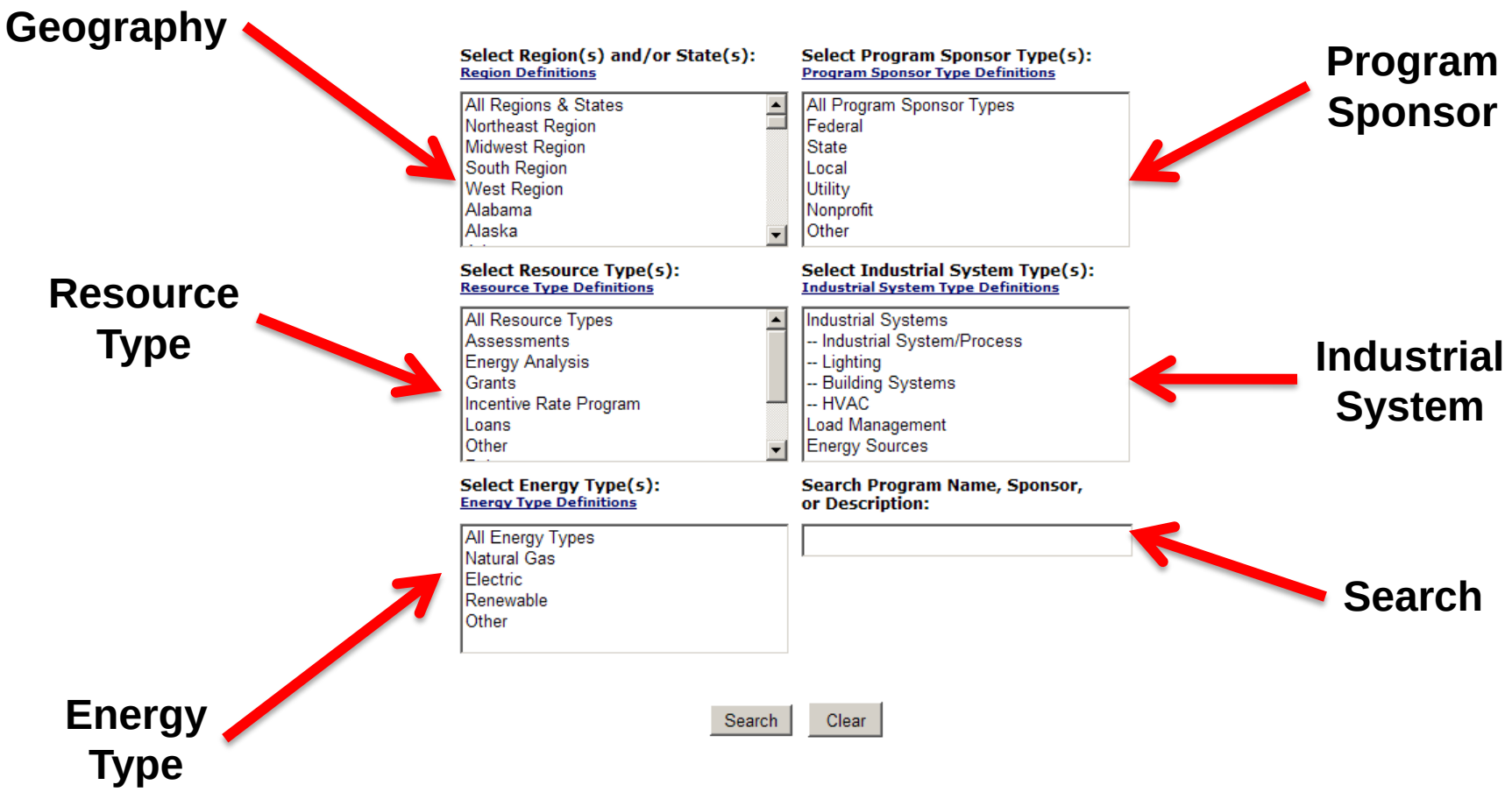
States Incentives and Resources Database

A repository of nearly 3,000 energy incentives, tools, and resources for industrial managers at the national, state, county, local, utility, and non-profit levels. This database is updated every six months, with the most recent update in March 2010.



http://www1.eere.energy.gov/industry/states/state_activities/incentive_search.aspx

Search Functions



Sample Results

Search Criteria:

You Searched:

Region and/or State: California

287 result(s) found

California

AMP Solar Rebate Program
Alameda Municipal Power (AMP) is offering $4.2 million in rebates over a 10 year period to customers that install solar photovoltaic (PV) systems. Rebates are available to all residential and commercial customers on a first-come, first-served basis. Participants will be required to undergo a free AMP energy efficiency audit, accept the terms and conditions in the AMP Interconnection and Purchase Agreement, and obtain necessary building permits from the City of Alameda.
Program Sponsor: Alameda Power and Telecom

Business Energy Audits
Alameda Power and Telecom offers free energy audits for business customers and shows ways to reduce electric use.
Program Sponsor: Alameda Power and Telecom

Commercial Air Conditioning Rebates
These air conditioning rebates help Alameda businesses to install high-efficiency, properly sized equipment.
Program Sponsor: Alameda Power and Telecom

Commercial Customer Loans
This collaborative program with a local bank offers business customers low-interest loans for approved electric technologies, including energy efficient lighting and charging equipment for electric vehicles.
Program Sponsor: Alameda Power and Telecom

Commercial Lighting Rebates
Lighting rebates are available for T8 fluorescent lamps and electronic ballasts; compact fluorescent, high-pressure sodium, and metal halide lamps; occupancy sensors; and more energy-saving products.
Program Sponsor: Alameda Power and Telecom

Economic Development Incentive
A discount will be applied to all charges under the standard general service rate schedule for which the customer qualifies, exclusive of state or local taxes, for the purpose of business attraction or facility expansion.
Program Sponsor: Alameda Power and Telecom

Key Account Program
Alameda Power and Telecom commercial customers are eligible for grants of up to $10,000 for energy efficient building design and equipment in new construction or other approved unique energy efficient projects.
Program Sponsor: Alameda Power and Telecom

Meter Lending Program
Commercial customers can borrow a meter reader to analyze how much energy is being consumed by certain pieces of equipment and appliances.
Program Sponsor: Alameda Power and Telecom

Commercial Permit Fee Waiver
Permit fees will be waived up to $5,000 for Anaheim businesses that upgrade buildings with energy efficient equipment.
Program Sponsor: Anaheim Public Utilities

Commercial Solar Energy Program
Anaheim Public Utilities offers businesses an incentive for the installation of commercial photovoltaic (PV) systems. By installing a PV system, businesses can offset utility consumption with emission-free renewable generation.
Program Sponsor: Anaheim Public Utilities

Thank You!

For more information:

Lindsay Bixby

BCS, Incorporated

303-425-6800, ext. 464

lbixby@bcs-hq.com





For More Information

DOE Industrial Technologies Program (ITP) Utility Partnerships
www.eere.energy.gov/industry/utilities

Sandy Glatt
ITP Project Manager, State and Utility Partnerships
sandy.glatt@go.doe.gov
303.275.4857

American Public Power Association (APPA)

Demonstration of Energy-Efficient Developments (DEED)
www.APPAnet.org/

Michele Suddleson
DEED Project Manager
msuddleson@APPAnet.org
202.467.2960

To receive a flyer describing the remaining webinars in this series or for answers to additional questions, please email Ryan Harry at rharry@bcs-hq.com.

Questions?