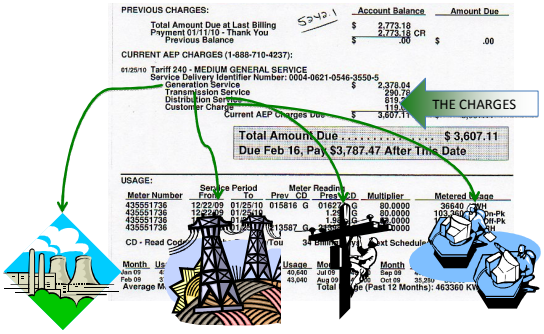
Utility Bills 101

Or

What does all that mean?

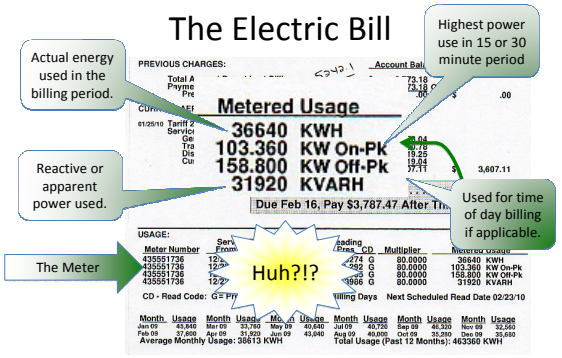
The Electric Bill



So what is the difference between KW (Demand) and KWH (Consumption)?????

- Electric demand or KW represents what needs to be available on a peak day (power plants, transmission systems, distribution systems).
- Electric Consumption or KWH reflects the actual energy consumed (coal, natural gas, fuel oil) and other operating costs.
- Demand costs are controlled by turning off lights in the day time, raising A.C. temperatures during the day, shutting off unneeded equipment, and more efficient equipment.
- Consumption costs are controlled by turning things off when not needed and more efficient equipment.

The Electric Bill



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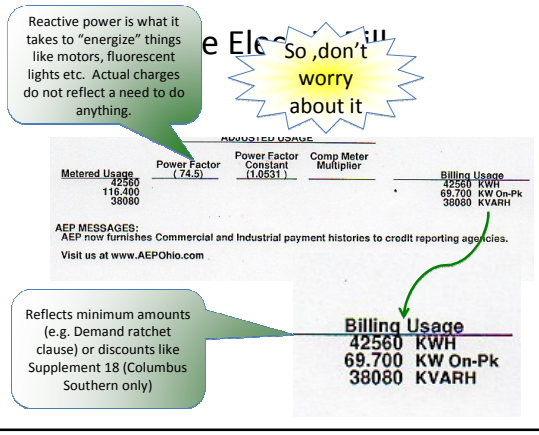
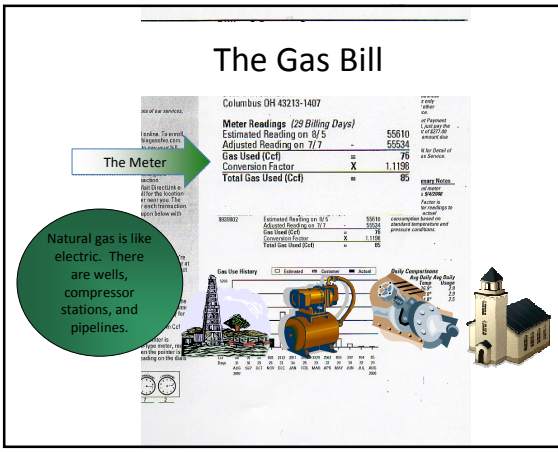
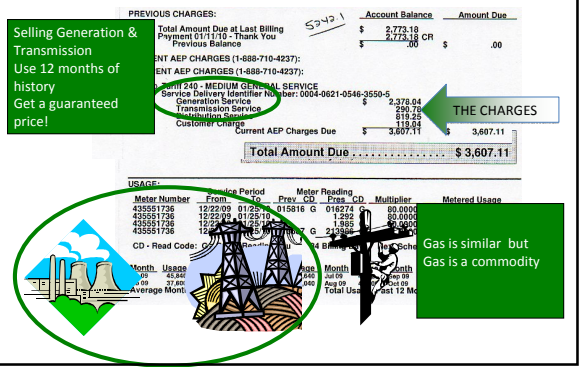


The Gas Bill



Electricity and Gas Marketers



O.K., so I can read my utility bill.

Now What??

Make a Long-term Commitment

- Assessment
  (utility bill review, benchmarking, audit)
- Develop a plan and set goals
- Take action
- Track savings
  (with Portfolio Manager)

Benchmarking

Why Benchmark?

- Know your starting point
- Set goals
- Track changes and recognize achievements
- Funding tool
- Auditing first step

Benchmarking tells organizations:

- How they use energy
- Where they use it
- What factors drive its use

Portfolio Manager

Why use EPA Portfolio Manager?

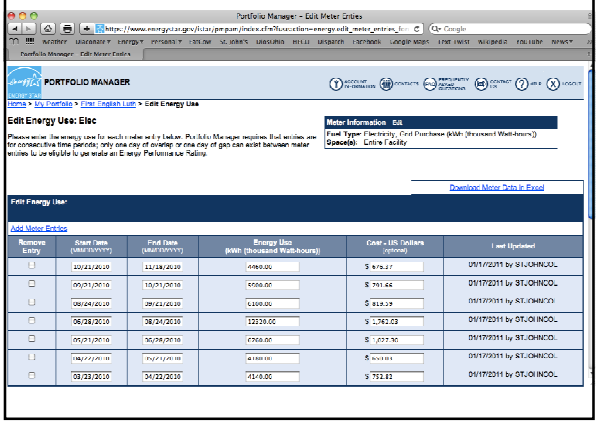
- Free simple analytical tool
- Industry Standard
- Comprehensive development process
- Symbol of energy performance
- Streamlines reporting and quantifies results

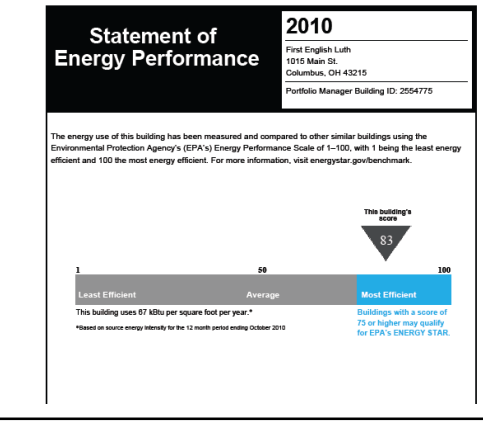
What does Portfolio Manager tell you?

- Efficiency improvements over a baseline
- GHG emissions
- Consumption rate and Energy intensity
- Water use
- Energy Star Rating

Step 2: Set up an Account

Go to: www.energystar.gov/benchmark





How do I get there?

Self Taught – Ohio Interfaith Power and Light "Cool Congregations"

http://www.ohipl.org/?q=AuditResources

Get Help – Energy Audits
(OhIPL can help with reduced cost audit and/or one year loans)

Types of Energy Audit

Preliminary Energy Use Analysis.

This is a review of historic utility use and cost and a ranking of the building using Btu/sq.ft./year.

Billing errors and unusual trends are identified as well as the potential to switch to advantageous rates.

Typically this audit will include a site visit and a discussion of potential Energy Conservation Measures (ECM's) based on knowledge and experience.

Usual cost - $250 to $500 Benefit – Benchmark and status

Types of Energy Audit

Level I - Walk-Through Analysis

This type of assessment includes a utility use analysis and a one to two day walk-through of the facility.

During the walk-through, building and process operating characteristics are identified, detailed observations are made, and potential ECM's are identified.

Cost and Benefit calculations are completed for no and low cost ECM's and longer term projects are identified with estimated paybacks.

Recommendations for operational changes are identified. All assumptions used during the analysis are identified.

Cost - $750 to $1500 Benefit 10% to 15% savings

Types of Energy Audit

Level II - Energy Survey and Analysis

Level II assessments include a field survey where equipment and systems loads are measured and quantified, energy use is broken down into categories (lighting, heating, air conditioning, main process loads, etc.), and operating/maintenance procedures are evaluated.

OhIPL offers hybrid Level I/ Level II audit for $350 to $700

All ECM's are prioritized based an the economics and other client requested parameters. Calculations are included in the final report for future reference.

Cost $1500 to $2500 Benefit 10% to 30% savings

Types of Energy Audit

Level III- Detailed Analysis of Capital Intensive Modifications

Using the results of the Level II analysis and the clients direction, specific projects are subjected to a more rigorous study.

This usually includes additional data collection to confirm energy savings potential and development of schematic designs.

Contractors of the owner's choosing are contacted to develop budgetary pricing and the report includes detailed calculations including the impact to non-energy operating and maintenance costs.

Cost - $0.25 to $0.50 per sq.ft. Benefits – Up to 50% savings. Systems Upgrades.

Incentives:

All investor owned electric utilities in Ohio are required to achieve energy efficiency levels and will pay you to help!

Municipal Utilities through AMP-Ohio offer electric savings programs.

Gas companies are coming around!

Acknowledgements:

ELCA Southern Ohio Synod

Sara Ward – Interim Director of OhIPL

Amy Kaspar – Architect and LEED AP

John Fetters - CEM