

Regulatory Treatment of Technical and Non-technical Losses

Mission Statement

The WUTC protects consumers by ensuring that utility and transportation services are fairly priced, available, reliable, and safe.

WUTC – Kyrgyz Republic Partnership

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July, 2006

Definitions

Losses

- Electricity that enters the utility system for which the utility is not compensated.

Technical Losses

- System inefficiencies (“friction”) that consumes electricity

Non-Technical Losses

- Electricity that customers consume but do not pay for

Technical Losses

Estimate magnitude of system losses during the transmission and delivery of power to customers

- Determined through a Loss Study
 - Top Down (must know/estimate losses due to thievery)
 - MWh generation and purchases compared to MWh consumed and sold
 - Peak generation and purchases compared to Peak consumption and sales
 - Bottom Up
 - Cumulative estimates of losses on transmission lines, distribution lines, transformers, meters, etc.

Technical Losses

One Utility's Technical Losses (2001)

| <u>Service</u> | <u>MW</u> | <u>MWh</u> |
|------------------|-------------|-------------|
| Transmission | 5.39% | 4.35% |
| Primary | 2.38 | 1.54 |
| <u>Secondary</u> | <u>2.18</u> | <u>2.25</u> |
| Total | 10.40% | 8.13% |

Technical Losses

Regulatory Treatment

- Who pays? The utility or customers?
- Fundamental Question
 - Cost of Upgrades $>$ Value of Lost Electricity
 - $=$
 - $<$
- Customers pay ($>$)
 - Technical losses are reasonable – adjust customer rates to reflect technical losses
- The utility pays ($<$)
 - Disallow that portion of power costs that would have been “saved” had the utility upgraded its system

Non-Technical Losses

Not a significant problem in Washington

- approximately 0.5% of customers don't pay their bills
 - Half due to financial hardship
 - Half due to misbehavior

Aid for Those with Financial Hardship

Energy company programs

- The Budget Payment Plan
 - Averages annual energy costs into 12 equal monthly payments.
- Ratepayer-funded energy bill assistance
- Community-funded energy bill assistance
- Customer energy efficiency programs
 - Weatherization, heating system improvements, water heaters, light bulbs, low-flow shower heads, high-efficiency appliances, and rebates towards efficient furnaces.
- Customer conservation education
- Special payment arrangements made directly with the company

Aid for Those with Financial Hardship

Community organization programs

- The Salvation Army – a non-for-profit charity
 - assistance centers throughout the state
 - screen applicants to determine eligibility and ensure that the support reaches those most in need
 - assistance is typically available from January through June, or until the funds are gone
 - the fund is supported by private donations

Aid for Those with Financial Hardship

Federal government aid – LIHEAP

- LIHEAP Programs
 - conduct outreach activities
 - assists low income households in meeting their wintertime home energy costs
 - provides low-cost weatherization and other cost-effective energy-related home repair
- Monthly household income cannot exceed 125% of the federal poverty guidelines
- The benefit ranges from \$25 to \$750. The average statewide benefit in 2002 was \$376.
- local community-based nonprofit organizations and local governments provide these energy and weatherization services

Aid for Those with Financial Hardship

State Program

- **Winter Moratorium** – emergency measure to prevent energy companies from disconnecting low-income individuals during the winter (November 15 through March 15)
- To qualify for the Moratorium a customer must
 - Provide the utility company with a statement proving that the household's monthly average income is within eligibility limits (125% of the federal poverty guidelines).
 - Make and keep payment arrangements.

Approaches to Deal with Misbehavior

Misbehavior includes:

- 1) those regarding electrical service as a public good, and
- 2) thievery

Public Good Response – Education

- Regulatory Compact
 - utility obligation to serve
- And***
 - customer obligation to pay for that service
- Paying provides funds for maintenance and system improvements that will increase service quality and reliability – start virtuous cycle

Approaches to Dealing with Misbehavior

Thievery response - *Disconnect*

- A utility may immediately disconnect service if:
 - The customer has stolen the utility's property
 - Does not include failure to pay bills
 - Does include illegal connections
 - The customer has fraudulently used service
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- The customer has vacated the premises
 - The customer's wiring or equipment is unsafe
 - The customer fails to keep an agreed-upon payment arrangement

Disconnections for Non-Payment

Before disconnecting service, the utility must:

- Provide the customer a first disconnection notice
 - Disconnection date - at least 8 business days after delivery of the disconnection notice
 - Cause for disconnection
 - Delinquent balance
 - Charges for disconnection or reconnection
 - Utility contact information
- Provide the customer an additional disconnection notice
 - By mail, in person, or by telephone contact

Thank You.

I am available for any questions.