Committee on Energy and Environmental Protection

Frits E. Lawaetz Conference Room, St. Croix

Presentation

of

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Virgin Islands Public Services Commission

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Today's Discussion Topics

- Provide an analysis on the cost of oil in the world market versus the decrease that is being passed on to the consumers
- Provide detailed information to the public so that they may better understand how rates are regulated

Our objectives today are to:

- Answer your questions concerning these two topics, and
- Clarify any misunderstanding that may exist about these two matters.

Oil Prices vs Costs To Consumers

- Historically WAPA has relied on oil as its primary energy source, supplied locally by HOVENSA. Fuel to WAPA was priced at a substantial discount to market (25-30%), benefiting consumers.
- Subsequent to the HOVENSA cessation of operations oil is now provided by Vitol, who also will be WAPA's supplier of propane.
- WAPA added solar energy projects in 2013 and 2014, with two additional solar projects to be added next year.
  - Significant amounts of customer solar from roof-top panels is provided through net metering. This reduces the amount of energy that WAPA produces with petroleum and the total energy cost to the Virgin Islands.
- Propane is now WAPA's fuel of choice. Generators are being reengineered to burn either propane or oil as conditions warrants. Propane is 40% to 45% more economical than oil, but is subject to higher delivery costs. With propane, oil will still be required for start up.

Oil Prices vs Costs To Consumers

- Fuel and other energy charges are billed to customers through the "levelized energy adjustment charge" ("LEAC")
- The LEAC rate in effect from Oct-Dec 2014 was $0.3776/kWh. This declined to $0.2780/kWh for the current period, Jan – June 2015. WAPA's recent filing, now before the PSC, projects a further decline to $0.2512/kWh. The LEAC rate has responded and is projected to respond further to the declining market price of fuels.
- "Price" of fuel directly impacts the "costs" of fuel in the LEAC rate, but "price" is only one factor in the LEAC rate
- Other factors impacting the "cost" of fuel in the LEAC rate include:
  - ▶ Generating unit efficiency and availability
  - ▶ Fuel transportation & handling cost
  - ▶ Delivery system efficiency
  - ▶ Unaccounted for energy
  - ▶ All which determines the amount of fuel used

Oil Prices vs Costs To Consumers

- Other costs that are recovered through the LEAC rate, but that are not totally fuel-related are also included in the LEAC rate. These other cost in the current LEAC rate, account for about 25% of the overall LEAC rate and include:
  - ▶ Recovery of previous under-recovered fuel balances,
  - ▶ Amortized cost of LPG fuel infrastructure,
  - ▶ Operating cost of LPG facilities,
  - ▶ Rate financing mechanism for deferred maintenance and emergency generator,
  - ▶ Power purchased from Solar power production facilities, and
  - ▶ Other miscellaneous smaller items.
- All of these factors impact the cost passed onto consumers in the LEAC rate.

Oil Prices vs Costs To Consumers

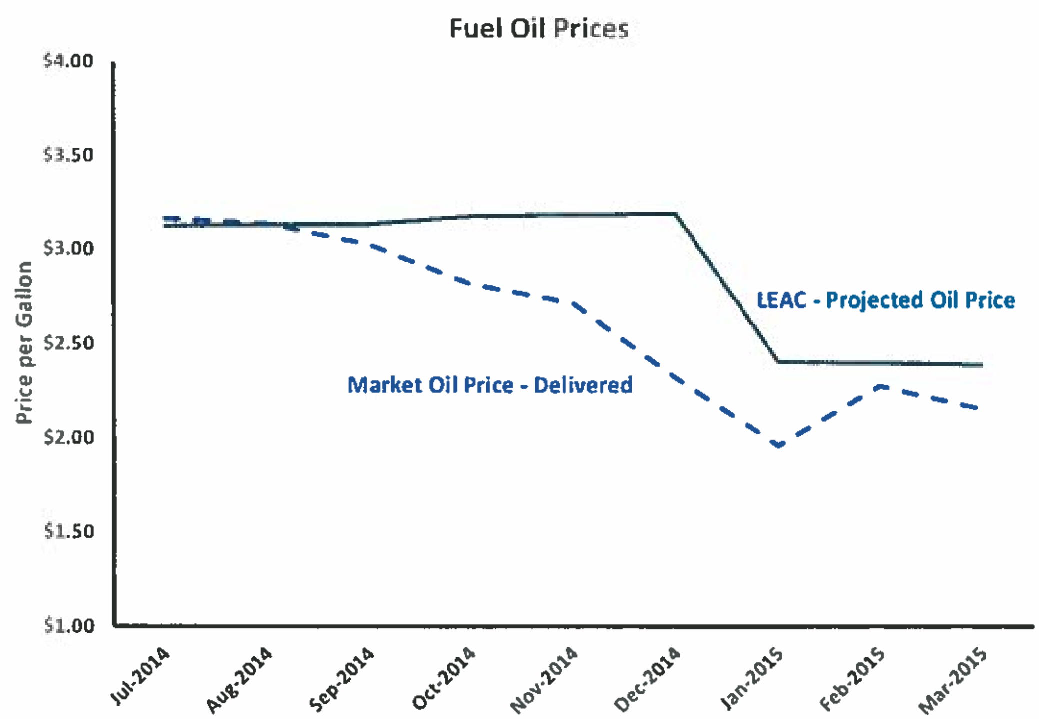
- Fuel prices in LEAC rates are based on world market prices for fuel adjusted for delivery to the Virgin Islands
- The current six-month LEAC rate, requires forward fuel prices be selected 3 to 9 months prior to the market setting the actual price.
- A long forward horizon disadvantages consumers since it does not allow for the robust capture of sharply decreasing fuel prices. Likewise, WAPA is disadvantaged in a sharply increasing market.
- All fuel costs are passed onto consumers on a dollar-for-dollar basis. In other words the cost of fuel in the LEAC follows directly the market price of fuel. An over/under reconciliation process ensures that debits/credits are passed through to consumers in the following 6-month LEAC rate period.
- The LEAC rate to consumers represent approximately 70% of a typical electric bill.

Oil Prices vs Costs To Consumers

- LEAC rate represents an estimate of the projected fuel and related energy costs for a future 6-month period. Fuel pricing estimates are based on well-established forward pricing indices.
- Several key factors impact the costs in an approved LEAC rate:
  - ▶ The forward price of fuel for the 6-month LEAC period. (In the current LEAC rate fuel oil is assumed to be at 100% through February. The current LEAC rate is based on the conversion to propane being completed in March for St. Croix and in April for St. Thomas. For LEAC purposes after April propane is the primary fuel; although, the actual conversion has not yet taken place).
  - ▶ Generators available for electricity production.
  - ▶ Efficiency of generators producing electricity.
  - ▶ Energy lost in the delivery from generators to consumers.
  - ▶ Unaccounted for energy (theft, metering accuracy, billing and other non-technical losses).

Oil Prices vs Costs To Consumers

The figure shows the relationship between the market price of oil and the price of oil used in the current and prior LEAC rate.



Oil Prices vs Costs To Consumers

- Analysis of market price of oil vs. price used in the LEAC rate show:
  - ▶ Prior to Sep. 2014 the market price of oil and the forward prices contained in the LEAC rate were essentially equal
  - ▶ The precipitous drop in world oil prices resulted in the forward prices developed in the May-June 2014 timeframe for use in the Jul-Dec 2014 LEAC rate to exceed the market price.
  - ▶ This situation was substantially corrected in the Nov-Dec timeframe with the use of forward prices for the January-June LEAC rate; however, world oil prices continued to fall in Jan. 2015 and fell below the forward prices for the Jan-Jun 2015 LEAC period.
  - ▶ The situation again somewhat corrected itself in February and March 2015 with market prices tracking upward and more closely matching the forward prices contained in the Jan-Jun 2015 LEAC rate.
- This situation is indicative of the volatile nature of oil markets. Hence the importance of a robust true-up mechanism that corrects every six-months for any over or under recovery of fuel pricing and total costs.

Oil Prices vs Costs To Consumers

- Other factors arguably play a significant role in the fuel costs passed to consumers. While little can be done by the Virgin Islands to influence world fuel markets and resultant prices, much can be done to control fuel costs.
- The availability and choice of power plant equipment has a substantial impact on consumer costs. Unavailability of equipment has had a greater impact on the LEAC rate than a $10 or $20/BBL reduction in fuel price.
  - ▶ On St. Thomas the unavailability of the heat recovery steam generator (HRSG) has impacted fuel cost by as much as $2 million/month.
  - ▶ Substantial deferred maintenance also has a monetary impact on monthly fuel costs. Deferred maintenance of equipment is a chronic problem transferring a significant cost to consumers as well as poor service. **This issue needs a resolution**.

Oil Prices vs Costs To Consumers

- Non payment of outstanding utility bills is the major underlying reason for deferred maintenance with government accounts representing a majority of the unpaid amounts. It is the systemic issue leading to deferring maintenance, poor service and inefficiencies.
- It is a false economic practice for delinquent government accounts to be tolerated since the ultimate cost to consumers in terms of poor service and inefficiencies is significantly greater than the value of outstanding unpaid government accounts.
- In some cases the government has issued bonds to pay their utility bills with taxpayers then paying the cost of these bonds.
- Another false economic practice since taxpayers and consumers are largely the same—this leads to a payments in excess of the original billing amount!

Oil Prices vs Costs To Consumers

- ► Likewise the efficiency of WAPA generators has a substantial impact on consumer costs. WAPA has never undertaken an integrated resource plan (IRP) to determine the optimal resource plan (i.e., supply and demand-side resources) for Virgin Islanders. This is an industry standard tool to determine fuel reduction strategies and is required by most utility commission.
  - ► Recent reports indicate that WAPA could reduce fuel costs through increased efficiencies by as much as 40% to 50% while providing for the capital for the replacements.
- Line losses were reduced from over 12% in 2004 to approximately 6% currently. Line losses were the focus of many PSC enquiries over the years. With VI legislation not permitting direct PSC actions to require WAPA to reduce line losses the solution was made at a very slow pace costing consumers tens of millions of dollars with no benefit.

Regulatory Powers—How are Rates Regulated?

- Virgin Islands statutes require that rates be "just and reasonable."
- Virgin Islands statutes provide that operations and planning decisions be the purview of WAPA management and its board, but that rates be independently set by the PSC.
- Virgin Island statutes, as limited by the VI Courts, do not provide the PSC with powers normally common to mainland regulatory commissions, such as:
  - Requiring long-term Integrated Resource Planning (IRP)
    - Resource acquisition
    - Portfolio standards
    - Energy efficiency
  - Construction authorization
  - Management audit and prudence investigation
  - Debt issuance
  - Service standards and quality

Regulatory Powers—How are Rates Regulated?

- The failure of VI statutes to provide the PSC with these and similar powers common to regulatory commissions severely limits the PSC's role and diminishes its ability to protect the public interest as well as the interest of consumers who mistakenly assume the PSC has these powers..
- After hearings providing for input from WAPA, PSC staff and the public, the PSC adopted in the most recent rate proceeding the recommendation of the Hearing Examiner that WAPA be only allowed to recover "prudent costs" incurred to provide service.
- When the level of prudent costs differ from the level of costs actually incurred the PSC must receive evidence whether the difference in cost can in any way be justified to be passed on to consumers. It must also consider the impacts to both the utility and its customers of any action which denies expenses incurred – despite question regarding the prudence or reasonableness of those expenses.

Regulatory Powers—How are Rates Regulated?

- The PSC uses several processes to discharge its rate-setting responsibilities. The process used is driven by the nature of the request. Processes include:
  - ▶ Base rate proceedings
  - ▶ LEAC rate proceedings for electric and water
  - ▶ Emergency rate proceedings implemented by surcharge or other method
  - ▶ Surveillance reviews

- The PSC attempts to use industry and regulatory best practices in the setting of rates:
  - ▶ Obtains expert testimony from all parties
  - ▶ Obtains reports and recommendations from independent hearing examiners
  - ▶ Seeks input from the public
  - ▶ Reviews recommendations from management auditor relating to best practices, cost and reliability issues

Regulatory Powers—How are Rates Regulated?

- Base rates adjustments in the Virgin Islands follow statutes and established PSC protocols. For a major base rate proceeding the PSC routinely appoints a hearing examiner to oversee the process. The process then proceeds generally as follows:
  - Utility files an detailed application identifying the increase amount, proposed rates, justification with supporting materials and data in accordance with minimum filing requirements (MFR's).
  - Interested parties may file intervention pleadings and participate directly.
  - The filing, associated information and MFR's are reviewed by PSC staff and additional information sought through discovery.
  - Evidentiary hearings are held before the independent hearing examiner
  - Testimony (written and oral) is taken from WAPA, PSC staff, Intervenors, and the public.
  - Hearing examiner considers evidence and reports recommendations to PSC.
  - PSC holds a public hearing for consideration, decision-making and final order.

Regulatory Powers—How are Rates Regulated?

- Many WAPA actions impact rates that are supported by "after the fact" PSC petitions. These petitions simply ask and, due to financial considerations, all but require the PSC to "rubber stamp" decisions previously made by WAPA. This is in lieu of normal regulatory oversight. Examples include:
  - ▶ Resource acquisition / construction authorization
    - Purchase of unit 22
    - Purchase of unit 23
    - Purchase of additional HRSG on STT
  - ▶ Prudence investigation
    - Prolonged delay of HRSG implementation on STX
    - Delay in implementation of reverse osmosis technology for water production
    - Delay in implementing line loss mitigation measures
  - ▶ Integrated resource planning
    - Delays in implementing high efficiency generating units
  - ▶ Many others

Regulatory Powers—How are Rates Regulated?

- These decisions have each cost consumers tens of millions of dollars and cumulatively hundreds of millions. Many have been criticized by subsequent management and boards – but meanwhile consumers solely bear the consequences and excess cost of these decisions.
- In many instances, the size of the decision already made and implemented by WAPA make it impossible for the PSC to disallow the cost, no matter how irresponsible or imprudent, because disallowance of the cost likely would lead to WAPA bankruptcy. For instance, in the current LEAC rate proceeding, despite having a contract that estimated the cost of implementing LPG infrastructure at $87 million, WAPA now seeks $150 million for such implementation – apparently $150 million that it has now agreed to with the contractor. The PSC may find the incremental $63 million to be imprudent, but will be hard-pressed to disallow all, or any, of it and has the difficult task of reviewing the decision after the fact.

Regulatory Powers—How are Rates Regulated?

- In Oct. 2014, WAPA anticipated requesting funding from the PSC for an 18-month lease extension. In Nov. it entered into a 24-month extension. It finally submitted a request for the funding for the extension to the PSC in Dec. All the PSC can do is either approve or reject, but a rejection will not now change WAPA's costs.
- The inability of the PSC to evaluate decisions for "best practices" and "prudent costs" results in consumers paying excessive costs. This issue has been briefed to the Legislature by the PSC on numerous occasions. Once the decisions have been made and the dollars committed the options for the PSC in protecting the public interest and the interest of consumers are stark: either provide rates (unnecessarily) for the dollars committed by the Authority's management and the board or provide lower rates based on the legal standard of prudent cost that will be inadequate to maintain system reliability, power quality and integrity.

Regulatory Powers—How are Rates Regulated?

- Under the current regulatory framework consumers believe the PSC has the responsibility protecting the public interest in these matters impacting costs and ultimately rates; however, in reality the PSC simply doesn't have the authority. Meanwhile, WAPA has the authority and at times has made decisions imprudently costing consumers millions of dollars. But, in these circumstances it is consumers that bear the responsibility and consequences for their actions, and not WAPA. This is a broken regulatory framework in need of a solution.
- Government actions in not paying its utility bills timely also leads to a significant increase in costs all consumers must pay by creating a cash shortage. This shortage leads to deferred maintenance; that leads to significant unit and customer outages; that leads to significant unit and system inefficiencies; that lead to much greater fuel costs and unreliable and poor service to all consumers.

Regulatory Powers—How are Rates Regulated?

- Government receivables have increased substantially since 2013 and represent over $30 million in cash that is unavailable to WAPA for maintenance and other critical needs.

WAPA - Electric
Accounts Receivables Balances
June 13 to August 14
($000s)

	Jun 13	Jun 14	Aug 14	$ incr.	% incr.
Central government	$ 13,648	$ 16,426	$ 17,497	$ 3,850	28%
Independent agencies	10,237	19,316	17,120	6,883	67%
All other A/R	24,797	24,531	25,302	505	2%
Total electric system receivables	$ 48,682	$ 60,273	$ 59,920	$ 11,238	23%

Regulatory Powers—How are Rates Regulated?

- The management audit (final process of completion) has made several significant recommendations that, if implemented, could significantly reduce the electric and water bills of consumers:
  - Retire the existing fleet of generators and replace with modern, high efficiency generators in the 8 - 12 mw range. The auditor indicates this recommendation will reduce consumer bills an additional $50 million per year above the savings projected from propane. The projected savings include paying off the capital costs for the new generators in 3 years.
  - Reduce personnel levels through attrition and retirement to reflect industry practices in required staffing levels. If implemented this will produce significant consumer savings as well.
- Under existing VI statutes the PSC cannot “order” WAPA to implement the recommendations of the audit. The PSC could indicate that after all the evidence is heard and evaluated that it would set rates on the “prudent” costs and actions as reflected in the record.

Regulatory Powers—How are Rates Regulated?

In conclusion:

- The PSC powers are limited to general rate-setting based on the established "just and reasonable" regulatory principle.
- Rate setting process is initiated upon the receipt of an application from a utility detailing the nature of the increase, justification, and supporting materials. This information is then reviewed by PSC staff. Other than the LEAC, hearings are then held before an independent hearing examiner appointed to consider input from the utility, PSC staff and the public. After consideration the hearing examiner makes a report on recommendations to the PSC. The PSC makes a final decision and issues an order putting the rate change into effect.

Regulatory Powers—How are Rates Regulated?

- The current regulatory framework is broke, and while consumers believe the PSC has comprehensive regulatory powers, the PSC has no authority for:
  - ▶ Establishing service, reliability and power quality standards.
  - ▶ Ensuring facilities are properly maintained and in proper working condition.
  - ▶ Integrated resource planning (IRP) and facility certification
    - Resource acquisition, Renewal portfolio standards, and Energy efficiency
  - ▶ Construction authorization
  - ▶ Prudence and management audit reviews
  - ▶ Debt issuance
  - ▶ Service standards and quality
  - ▶ Power plant performance reports
  - ▶ Smart grid technology deployment
- These are normal PSC powers, and comparable powers exist over other regulated entities. These authorities could protect the public interest and save consumers hundreds of millions of dollars.

Committee on Energy and Environmental Protection

Questions and Answers