

**YAP STATE  
PUBLIC SERVICES CORPORATION**

**Performance Audit Report on  
the 2006 Variable Fuel Charge –  
Is it justifiable and reasonable?**



**Office of the Public Auditor  
State of Yap  
Federated States of Micronesia**



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**EXECUTIVE SUMMARY**

The Office of the Yap State Public Auditor has issued its report on the special audit conducted on the variable fuel surcharge adopted by the Yap State Public Services Corporation on March 9, 2006 which objective was to determine whether the variable fuel charge was justifiable and reasonable. The audit was requested by the Governor of the State of Yap in May 2006.

The report concluded that while the March 9, 2006 rate increase was justifiable in the sense that the Corporation needed to increase revenue to remain self-sufficient, the timing of the increase and the justifications for it provided by the Corporation did not allow for adequate study before implementation of the new rate; consequently, the amount of the rate increase was unnecessarily high. Our analysis of the Corporation's financial information for the first twelve months under the variable fuel charge (April 2006 to March 2007) as compared to data from FY2005 and FY2004 found that the increase in revenue in the twelve months following implementation of the new rate surpassed the Corporation's increase in fuel expense by \$773,337 and \$987,121, respectively. This is despite the fact that the actual revenue generated by the rate was only 69% of its full potential – the new rate had increased the cost of electricity to customers 104% across the board, but YSPSC was not seeing a 104% increase in revenue due to decreased consumer demand for electricity and erosion of the electric customer base brought on by the higher electricity rates.

The report raises the issues below and urges management to study the questions further in order to determine the best course of action to take:


*(1) Will the variable fuel charge contribute to higher fuel prices for the Corporation?* Analysis of the increases in fuel prices billed by Mobil to YSPSC and the gas stations in Yap showed that during the first twelve months of the variable fuel charge, the price of fuel to YSPSC increased at a lower rate than the gas stations. But after March 2007, on the first anniversary of the variable fuel charge, the cost of fuel to YSPSC increased more rapidly than prices at the pump. In fact, in the summer of 2007, gas station prices were at the same level as the summer of 2006, but YSPSC's prices had seen an increase of more than 70 cents. The Corporation insisted that the higher prices were a result of market conditions, but we are skeptical because of a lack of a similar increase at the pumps.

*(2) Will the continued increase in the variable fuel charge brought on by higher fuel prices continue to erode the Corporation's customer base?* As can be expected, the higher cost of electricity has not only caused demand for electricity to fall, but has resulted in the loss of a number of electric customers. Moreover, the number of monthly delinquent accounts has started to rise. Unless, management take action to reduce cost elsewhere to alleviate the burden of rising fuel prices on customers, the continued erosion of the Corporation's customer base will ultimately lead again to operating deficits.

Based on the unaudited results of the first twelve months following implementation of the variable fuel charge, it appears that YSPSC could survive a reduction in the 2006 electric rate. However, to prevent the recurrence of deficits, the Corporation must adopt and implement a long-term ongoing cost reduction/containment program in addition to any rate revision that the Corporation may entertain in the future.

We met and discussed the content of this report with the management and officials of the Yap State Public Services Corporation and their comments are presented on page 43 of this report.

We thank the Board of Directors, the general manager and staff of the Corporation for their assistance and cooperation extended to us during the course of our audit.

  
Gertrude Gootinan  
Public Auditor

November 6, 2007

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### A. BACKGROUND INFORMATION

#### Legal Mandate

The Yap State Public Service Corporation (YSPSC) is a public corporation created on March 9, 1995 by Yap State Law No. 4-4 to provide electricity, water and sewer services, and refuse collection and disposal to the residents of Yap State. The Corporation is governed by a seven-member Board of Directors, appointed by the Governor with the advice and consent of the State Legislature.

The primary objective for the establishment of YSPSC was to create a self-sustaining public corporation to take over services formerly provided by the Department of Public Utilities and Contracts.

- ◆ *Section 9 of YSPSC's enabling law states, "The manager and board shall manage the Corporation in a business-like manner so as to provide the most efficient delivery of its services at the **most reasonable cost** to consumers."*
- ◆ *Section 4(b) further states, "The Corporation shall within one year of confirmation of all board members implement a plan by which it or its designee will establish rates, metering, billing, and collecting fees in a fair and rational manner from all consumers of utility services so that the Corporation will be financially independent of all appropriations by the Yap State Legislature as soon as possible."*

The law went insofar as to establish timelines for the achievement of financial independence as follows:

- *Section 11(a) required that within three months after the confirmation of the Board members the Corporation should adopt a rate structure to charge customers an amount at least equal to the marginal costs of providing the utility services.*
- *Section 4(b) required the utility rate structure to be such that the Corporation could be financially independent of the State within one year from the date of the confirmation of board members.*
- *Section 9(c) requires the Board to adjust the rates so that within three complete fiscal years, collections from a particular utility service were sufficient to recover the costs associated with the operations and delivery of that particular utility service.*

#### History of Amendments to the Electric Utility Rate

Had the Corporation followed the timeline for amendments to its utility rate structures called for by its enabling legislation, by the early 2000s, each customer class within each utility service division should have been contributing its fair share to YSPSC, allowing the Corporation to operate at break-even. For reasons unknown, the Corporation was not able to meet the timeline, at least for the electric utility rate structure. Instead, before the 2005 and 2006 rate amendments, there had been only one other amendment to the electric tariff:

**1997 Rate Structure:** The first basic rate structure developed by YSPSC and adopted in June 1997 specified a different rate schedule for residential customers while the government and

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commercial customers shared another rate schedule. This rate structure remained unchanged for eight years, despite yearly operating losses and repeat warnings from its comptrollers that YSPSC was facing cash flow problems. Finally, in 2004 in response to its dwindling cash position, the loss of two major customers, the impact of Typhoon Sudal, and the rising cost of fuel, YSPSC revisited its electric rate schedules.

**2005 Rate and Fuel Surcharge:** On January 31, 2005, YSPSC implemented a new base rate schedule plus a fuel surcharge. The 1997 schedule was revised to increase the groups of customers under the rate schedules for residential and commercial classes and to adopt a separate rate for the government. A fuel surcharge of three and a half cents (\$.035) per kilowatt hour consumed was also added on top of the revised base rate. By the time the new rate went into effect, the cost of fuel worldwide was escalating rapidly. Management feared that the 3.5 cents per kilowatt would not be sufficient to fund its fuel purchases, therefore, the Corporation placed customers on notice about a new electric rate that it planned to implement in 2006.

**March 2006 Variable Fuel Charge:** The variable fuel charge implemented by YSPSC to address the rising cost of fuel went into effect on March 9, 2006. To justify the fuel charge, YSPSC revised the base rate again “to remove the fuel component hidden in the base rate” and billed it separately as a variable fuel charge tied to the price per gallon of fuel and the amount of kilowatt consumed. A different fuel charge was assessed to the outer islands’ customers and the Yap Proper customers.

**Terminology:** For ease of our discussion, we will refer to the first rate schedule implemented by YPSC as the “1997 rate”, the 2005 rate revision as the “*fuel surcharge*” or “2005 rate” and the 2006 rate revision and fuel surcharge as the “*variable fuel charge*” or “*the 2006 rate*”. In other discussions, we will be differentiating between the basic rate structure and the fuel adjustment add-on by referring to them as the “*base rate*” and the “*fuel surcharge*” or “*variable fuel charge*”, as may be applicable.

#### **Why we performed this audit:**

**Public Outcry** - To suddenly face two dramatic rate increases in as many years was a jolt to the largest group of YSPSC’s customers – the residential customers. While the 2005 fuel surcharge was a like sudden wave in the normally placid sea to the majority of customers who had not seen a rate increase in eight years, customers complained but soon came to accept it. In contrast, the 2006 fuel charge was felt like a tidal wave. The variable fuel charge billed to customers in March 2006 nearly doubled the electric bills of the residential customers across the board. Needless to say, customers were not happy.

**Government’s Response:** To respond to the increase in electric rates, a group of residents organized themselves as the “Voice of the People” and sought respite from the YSPSC fuel charge by petitioning the Office of the Governor and the State Legislature for assistance. To respond to the petition, the Governor organized a taskforce to review the demands of the people and to make recommendations on the proper response the Government should take relating to YSPSC’s fuel charge.

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In a letter dated May 15, 2006, the Governor asked the Office of the Public Auditor to audit YSPSC for the specific purpose of answering the following questions:

1. Since January 1, 2005, are the increases in electricity (utility rates) justified and proportional to the increases in fuel prices over this time?
2. Are administrative costs as a percent of the total operating expense excessive relative to other utilities of similar size and setting?

In July 2006, the State Legislature appropriated \$300,000 to assist residential and commercial customers partially pay for the fuel charge portion of their utility bills. The subsidy was applied to electric bills beginning in August to November 2006. By December 2006, the subsidy was gone, but by then diesel fuel price had peaked and was on the decline, even though the price remained above the level of fuel prices before March 2006 when the variable fuel charge went into effect.

#### **B. AUDIT OBJECTIVES:**

We understood from the questions the Governor raised that he was interested in understanding the following:

- ◆ Was a rate increase the only means available to YSPSC to address the rising costs of fuel?
- ◆ If the rate increase was justified, was the 100% increase in residential customers' electricity bill reasonable?
- ◆ Were the Corporation's indirect costs such as general and administrative expenses reasonable when compared to other utility companies of similar size and setting?

#### **C. SCOPE AND METHODOLOGY**

We conducted our audit in accordance with standards for performance audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain relevant, competent and sufficient evidence to support our findings and conclusions. An audit includes examining, on a test basis, evidence supporting management's assertions relating to the areas under audit in order to achieve the audit objectives. Therefore, our audit involved judgments about the types of documents to be reviewed, the types of analysis to be performed and the areas to be tested.

**Understanding Past History:** The period of review as requested by the Governor covered January 2005 to the present. However, before we could form conclusions about what was happening at YSPSC, we had to understand a bit of their financial history. To do that, we obtained and reviewed YSPSC's audit reports for the fiscal years 2000 to 2004. Those first five years represents the period during which YSPSC was operating under the 1997 electric rate schedule and fuel prices were more constant.

**Comparing the Past to the Present:** We also used the 2005 audit report, financial and accounting details available from YSPSC to understand fiscal year 2005 operations when the fuel surcharge was in effect. This, we compared to the audited results of fiscal year 2006 of which six months was under the 2006 variable fuel charge. We also extended our review to encompass unaudited financial information from October 2006 to March 2007 in order to have available a

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full-twelve months under the variable fuel charge for comparison with the previous fiscal years information.

We compared the activities of the different fiscal periods to data gathered relating to the prior five years and analyzed the changes in YSPSC's revenues and expenses over the years. Our conclusions were based on the comparisons of the financial results of the first twelve months under the variable fuel charge (April 2006 to March 2007) which we call the Variable Fuel Charge Year (VFC Year), FY2006, FY2005 and FY2000 to 2004.

**Comparing YSPSC to Other Utility Companies:** To understand how YSPSC's financial performance compared with other utility companies in Micronesia, we obtained audit reports for the period of fiscal years 2000 to 2005 from various utility corporations within the FSM, Guam, Saipan and Palau: Pohnpei Utilities Corporation, Kosrae Utilities Authority, Chuuk Public Utilities Corporation, Commonwealth Utilities Corporation, Saipan, Guam Power Authority, Palau Public Utilities Corporations and Yap State Public Utilities Corporation. Unfortunately, not all audit reports for the above period were available as shown below.

	Name of Utility Corporations	Audit Reports Available (FY)
1	Yap State Public Service Corporations (YSPSC)	FY 2000 - 2005
2	Pohnpei Utilities Corporation (PUC)	FY 2001 - 2005
3	Chuuk Public Utilities Corporation (CPUC)	FY 2000 - 2004
4	Kosrae Utilities Authority (KUA)	FY 2000 - 2005
5	Palau Public Utilities Corporation (PPUC)	FY 2003 - 2004
6	Commonwealth Utilities Corporation (CUC)	FY 2000 - 2003
7	Guam Power Authority (GPA)	FY 2004 - 2005

**Informal Interviews:** We met with YSPSC General Manager, Assistant General Manager, and Chief Engineer and tried to understand relevant aspects of YSPSC's operation. We interviewed the YSPSC Chairman of the Board, power plant division manager, billing section staff, and accounting staff and obtained detailed financial information on YSPSC operations.

### D. SUMMARY OF CONCLUSIONS

#### The First Question:

The Governor's letter of May 15, 2006 asked, "Since January 1, 2005, are the increases in electricity (rates) justified and proportional to the increases in fuel prices over this time"?

**Complexity of the Question:** To attempt an answer, we focused on the two words in the question indicating aspects of performance: "justified" and "proportional". With the words in mind, we attempted to analyze YSPSC's financial results and the changes in fuel prices during fiscal years 2005 and 2006 to determine whether a simple analysis could sufficiently address the question. Unfortunately, the more we learned about YSPSC's operation, the more we began to realize that the question was not as straightforward as it first appeared.



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We found the question to be as complex as YSPSC's operation is complex. To understand whether the rate increase was justified, we had to consider the important factors contributing to the need for YSPSC to increase its revenue. We understood that the primary justification offered by the YSPSC management for the rate increase was the rising cost of fueling the generators. Had this been a new objective for YSPSC, it would have been easier to merely review the impact of the new rate in isolation of the other aspects of YSPSC's operation. However, this was not the case. The ability to purchase fuel to ensure the delivery of electric service to customers is a basic responsibility of YSPSC.

**Our response:** Therefore, in order for us to determine whether the rate increase was justifiable, we had to review YSPSC's financial operation as a whole; and not just for the periods of the rate increases but for past periods too. However, due to time constraints and our own limitations, we wanted to focus our review on providing as much of the answers that we believed the Governor was seeking in light of the events that prompted his request for our audit in the simplest manner possible. Therefore, after considerable deliberations, we decided to pursue answering the first question by breaking it further into two basic questions:

- ◆ Was a rate increase justifiable?
- ◆ If the rate increase was justifiable, was the amount of the increase reasonable?

Because of the complexities of the issue, providing a definitive answer to the Governor's question became less our focus. Instead, we tried to understand and explain the factors impacting YSPSC's response to the fuel crisis. Because we do not profess to be more knowledgeable about YSPSC's operation than its management, instead of offering recommendations, we have only identified specific issues relating to the 2006 rate increase that we feel warrant further analysis by the Corporation and the State leadership in the hope that a compromise can be reached by the Corporation and its customers.

#### **The Second Question:**

“Are administrative costs as a percentage of the total operating expenses excessive relative to other utilities of similar size and setting?”

Compared to the first question, we found the Governor's second question to be a bit easier to address. Our ability to answer it effectively was hindered by time constraints and the incomparability of financial information from the utility corporations within Micronesia with YSPSC. However, as we did with the first question, we did not limit our scope to merely answering the Governor's question with a “yes/no” response. Instead, we focused our review on identifying areas of YSPSC's operation where cost reductions might be possible.

#### **Discussion of Findings:**

##### **Why a rate increase was justifiable**

We believe that the Yap State Public Service Corporation was justified in raising rates in fiscal year 2005 and especially in March 2006. Our review of the Corporation's financial history and results for fiscal year 2004 and 2005 found that YSPSC had not achieved the financial security mandated by its enabling legislation. Since it was established in 1997, the Corporation incurred

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consecutive operating losses up to and including fiscal year 2005. In fact, 2004 was the worst year with the Corporation incurring an operating deficit in excess of \$1 million.

The reason for the recurring deficits was that none of the Corporation's subdivisions was generating enough revenue to cover expenses of each respective utility service. Even though the Power Generation and Distribution utility was the most economically viable, it was also the most capital intensive. It's Yap Proper operation was also subsidizing the outer islands operations. Among the electric utility customers under the 1997 rate, the government was subsidizing the commercial and residential classes who were not billed enough to pay for the costs of the electricity these classes consumed. The recurring operating deficits was an indication that the electric base rate established in 1997 was insufficient to cover the basic costs of power generation and distribution. Moreover, the lack of an effective cost containment policy throughout the years only widened the gap between the yearly revenue brought in by the base rate and the annual direct and indirect costs of the electric utility.

By fiscal year 2004, the Corporation was in a financial crisis – its electric revenue was diminishing whereas its cash requirements were increasing. Within the same period, the Corporation lost several commercial customers, who according to management, had accounted for approximately 17% of annual electric revenue. In addition, Typhoon Sudal devastated the island in April 2004 with the effect of further eroding the electric customer base by its destruction of homes and small businesses. Meanwhile fuel prices were rising rapidly. In addition, debt service payments on loans the Corporations had obtained from the State and the Asian Development Bank were scheduled to increase in fiscal years 2007 and beyond.

#### **Why the 2006 Rate Increase was Unreasonable**

Even though the Corporation had valid reasons to raise rates at the end of fiscal year 2005, the eight years without an adequate base rate had undermined its financial position to a level where the Corporation could not survive the events of 2004 and 2005 unless it took action and *fast*. The 2006 rate amendment was a quick-fix solution, and like all such solutions, time has revealed its deficiencies which are discussed below:

- (1) The Corporation did not consider mitigating the impact of a rate increase on customers through implementation of long-term cost reduction programs in addition to an increase in rates.
- (2) Instead, the Corporation used the increase in fuel prices as the primary justification for the rate increase thereby missing the opportunity to restructure the base rate to ensure that it sufficiently covered the marginal costs of the electric utility service before adding the fuel surcharge. Instead, the base rate was dismantled to supposedly remove the fuel component. In reality, part of the fuel component is still contained in the base rate because the 2006 variable fuel charge by itself has been insufficient to fund fuel purchases. By claiming to have removed all components related to fuel from the base rate, the Corporation was able to justify assessing a fuel surcharge in the 2006 rate structure that is five times more than the authorized legal limit of three and a half cents.
- (3) The Corporation directly tied the variable fuel charge to the per gallon price of diesel fuel but financial results after implementation of the 2006 rate showed that the average increase in the cost of fuel to YSPSC from 2001 to 2004 is much lower than the average percentage increase

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in fuel prices in 2005 and 2006 due to such variables as electricity demand, efficiency of the generators, volume of fuel purchased, etc.

- (4) Due to the haste to increase revenue, the Corporation did not adequately study the impacts of the return of customers lost as a result of Typhoon Sudal on revenue in FY06 and beyond and the potential negative impact of an electric rate that is too high on the electric customer base and the local economy.
- (5) As a result of the foregoing, in addition to the delay in raising the base rate for eight years, the burden of an increase in the base rate, plus the additional revenue required to compensate for the erosion in the customer base, the higher fuel prices and debt service payments – an average increase of 104% - was served to customers in two installments over a fourteen-month period.

#### **Immediate Impact of 2006 Electric Rate**

The financial results of the first twelve months with the 2006 variable fuel charge support our conclusions that the 104% increase in costs per kilowatt hour charged to customers through implementation of the 2006 electric rate is higher than necessary for YSPSC's current requirements:

- (1) Despite the 104% increase in average cost per kilowatt hour to customers, YSPSC electric revenue only rose 69% under the first twelve months of the Variable Fuel Charge (April 2006 to March 2007) when compared to revenue collected in fiscal year 2004 under the 1997 rate. Therefore, customers are shouldering a heavier burden that is not generating a corresponding increase in revenue for the Corporation.
- (2) The cause for the 2006 rate not generating its revenue potential is that the rate is eroding the electric customer base, especially the commercial class. Commercial electric consumption fell by 463,588 kilowatt hour from December 2004 to June 2006 through conservation and the loss of 57 customer accounts. The number of accounts has risen again, but we expect that it will fall when fuel surcharge increases as a result of the newest quotes from Mobil to YSPSC for April through June 2007.
- (3) Moreover, numbers indicate that it might have been possible to raise more revenue at lesser cost per kilowatt hour to customers. *We found that for the commercial class, the actual gain in 2006 revenue was lower than what could have been earned potentially had rates remain at the 2005 or 1997 level.*
- (4) Even though the 2006 electric rate and variable fuel charge only generated a 69% increase in revenue as compared to fiscal year 2004, the revenue generated exceeded the increase in the Corporation's fuel expense during the same period by \$987,121. The excess of revenue over fuel expense has helped the Corporation eliminate its operating deficit. However, the large amount of revenue brought in by the 2006 rate over what is required for fuel purchases points to a possibility that the Corporation could have met its financial objectives by raising rates across the board by 70% instead of the current 104%.

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#### **Potential Long-Term Impact of 2006 Electric Rate**

After the first anniversary of the 2006 Electric Rate and Variable Fuel Charge, certain events and conditions give cause for concern that the 2006 Electric Rate may have long-term negative consequences for the Corporation. We urge the Corporation's management to carefully study the issues below:

- (1) Is the Variable Fuel Charge which is tied directly to Mobil fuel prices contributing to the higher fuel prices charged by Mobil to the Corporation? Our comparison of fuel prices at the gas stations and as billed by Mobil to the Corporation indicates that the increase in the latest quotes to the Corporation may be unreasonably high.
- (2) The number of monthly delinquent accounts, especially for the residential class, has risen since the government subsidy ran out in October. Will the 2006 rate continue to bring in the amount of cash required by the Corporation, or would it continue to erode the electric customer base?

#### **Points for Management's Consideration**

- (1) Based on the results of the first twelve months under the 2006 electric rate, we believe that the Corporation can survive a reduction in the current rate. However, management must carefully study its current financial requirements, before revising the rate again, to ensure that adequate reprieve is given to customers without sacrificing the Corporation's financial stability.
- (2) Any such rate amendments to be considered MUST include a corresponding cost management plan. This is very important because expenditure trends during the first twelve months under the 2006 electric rate closely resembles the historical trend of expenditures for the Corporation from 2000 to 2004 when *indirect costs rose higher* than direct costs. It would be very difficult for the Corporation to maintain costs at reasonable levels to customers if it does not limit its costs per kilowatt hour to levels that customers can reasonably afford.
- (3) Based on our understanding of its operations and the results of our comparisons with expenses of the other utility corporations within Micronesia, we believe that YSPSC should examine the following areas of its operations for potential cost reductions:
  - General and administrative expenses – currently being allocated to the subdivisions based on revenue levels. We believe that a more realistic allocation should be based on expenditure levels instead.
  - Salaries and wages – our comparison with other utility corporations found that YSPSC pays more in salaries as a percentage of cash receipts than any other utility company in Micronesia. Our review of the Corporation's salaries and wages showed that individual salaries and wages were not excessive, but perhaps the number of personnel could be reduced. Because salaries and wages is second only to fuel as the largest expense of the Corporation, it should be reviewed for savings in any cost containment efforts undertaken by the Corporation.

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- Outer islands operations – Operating power plants in the outer islands is in direct conflict with the Corporation's mandate to ensure that its various utility services are self-sustaining. Despite recommendations made by the Corporation's past comptrollers that the Outer Islands operations be discontinued because of its drain on the Corporation's resources, nothing has been done to address those concerns. Consequently, the Yap electric customers are essentially financing the electric bills for customers of the three outer islands power plants – Mogmog and Falalop, Ulithi, and Falalop, Woleai. Even with the significant increase in electric rates for the outer islands, the three power plants are still operating at deficits. Management should discuss the operation with the State leadership and perhaps obtain an ongoing subsidy for this operation, although such a subsidy would run around \$200,000 annually and might not be affordable to the State.
  - Better fuel prices - The State should investigate ways to reduce the cost of fuel to the residents of the State. In Micronesia, Yap has some of the highest, if not *the* highest, prices for diesel and gasoline.
- (4) The Corporation should continue to strive to achieve the financial goals established by its enabling legislation that requires the customers of each utility service to pay for the costs of the respective utility service. To prevent per unit costs from rising beyond the reach of customers, YSPSC must prepare balanced budgets for each utility operation. When certain costs outside the control of the Corporation rise resulting in a projected shortfall, the shortfall should be eliminated by first reducing nonessential costs, and then when absolutely necessary, by raising utility rates.

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#### ***PART 1: Why a rate increase was necessary***

##### **A. The Corporation needed to attain financial independence as required by its enabling legislation.**

YSL 4-4 dated March 9, 1995, authorized the Corporation to raise rates in order:

- To become “*financially independent of all appropriations by the Yap State Legislature as soon as possible.*”
- That “*collections from a particular utility service are sufficient to recover the costs associated with the operation and delivery of that particular utility service...including “adequate financial reserves for debt service, if any, and the replacement costs of obsolete or damaged equipment.”*”

YSPSC is comprised of three subdivisions and administration: (1) Power generation and distribution, (2) Water and Sewer, and (3) Outer Islands Operations. As mandated by law, each subdivision should be self-supporting – able to generate enough revenue to cover its direct costs plus a percentage of the administration costs.

The Corporation’s attempt to gain financial independence from the State Government would first begin by ensuring that each class of customers within each utility service divisions was billed its fair share of the costs of the services it received. While it would not be realistic to expect each class of customers to foot its exact share of the cost of services (i.e., because of economies of scale, larger customers’ overall costs would generally tend to be smaller than for smaller customer classes), as of fiscal year 2005, there was still great disparities between the contributions of the customers within each subdivisions towards the cost of operations. Moreover, in the Power Generation and Distribution subdivision, we found that at the end of fiscal year 2005, the government class was essentially supporting the residential and commercial classes. The inadequate contributions from customers from within each subdivision of the YSPSC resulted in a history of operating losses for the Corporation.

##### **B. Despite its mandate to ensure that collections were adequate to support costs of operations, none of the Corporation’s subdivisions were self-supporting.**

A review of the financial information for the three subdivisions for FY05 found that while none of the divisions was fully breaking even, two were worse off than the other. The figures below were obtained from YSPSC’s comptroller. The FY05 figures agree in total to the audited financial statements, except that expenses are lower than the FY05 audited financial statements by \$6,106. The audited statement of revenues and expenses for FY05 were not departmentalized, therefore, we had to use YSPSC’s FY05 trial balance for this analysis.

Currently, YSPSC allocates administration costs between the three subdivisions proportionate to each division’s sales. We believe that it would be more accurate to allocate G&A based on expense levels, instead of revenue, because expense is a more accurate representation of the time that management spends on certain activities. If G&A were allocated proportionate to divisional expenses, the net losses for Water and Sewer Division and Outer Islands Operations would be higher than what is presented below:

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*Table 1.1 – FY05 Operating Revenue and Expenses by Division*

<u>Year ended 9/30/05</u>	<u>Power Gen. &amp; Distribution</u>	<u>Water &amp; Sewer</u>	<u>OI Operations</u>
Operating revenues	\$3,062,025	\$366,118	\$121,494
Operating expenses	<u>3,447,025</u>	<u>425,011</u>	<u>398,397</u>
Operating loss	<u>\$(385,000)</u>	<u>\$ (58,893)</u>	<u>\$ (276,903)</u>
Loss as a % of revenue	(13%)	(16%)	(228%)

Even though the Power Generation and Distribution above showed net losses, this division is capable of breaking even; its loss is only 13% of total revenue in FY05. It is also possible that if G&A were allocated proportional to expenses, it would show that the Power Division Yap Proper is actually breaking even. In fact, this division is subsidizing the water and outer islands operations.

- C. In the Power Generation and Distribution Division, the government was subsidizing the residential and commercial class under the 1997 rate structure and even the 2005 rate structure.

Inherent in its mandate to adjust rates so that each utility service generates enough revenue to cover the marginal costs of providing the service, is the responsibility of YSPSC to ensure that each class of customers is bearing its fair share of the cost of the utility services the customers are receiving.

**Electric Customer Base**

The Corporation’s electric customer base consists of three major classes – residential, commercial, and government customers. Each class of customer has its own electric rate structure that is further differentiated within each class based on the amount of kilowatt hours consumption. The Corporation services electric customers, not only on Yap Proper, but also in Ulithi and Woleai atolls. We therefore determined the sufficiency of the base rate by assessing whether or not each customer class was paying to YSPSC the equivalent of what it costs the Corporation to generate the kilowatt hours consumed by the customers.

**Kilowatt hour usage by customer class:** In order to bill its customers based on kilowatts hours, YSPSC keeps records of the total kilowatt produced and billed each period. From these records, we accumulated the total kilowatt produced and billed in fiscal year 2005 by customer class. The residential customer class contributed the least in revenue, consumed the second least amount of kilowatt hours but incurred the highest cost. Therefore, the residential customers were being subsidized by the commercial and government customers. The billable kilowatts produced in FY2005 and the third quarter in FY06 were billed as follows:

	<u>FY05</u>	<u>FY06</u>
Residential customers	23.53%	25.63%
Commercial customers	51.52%	45.13%

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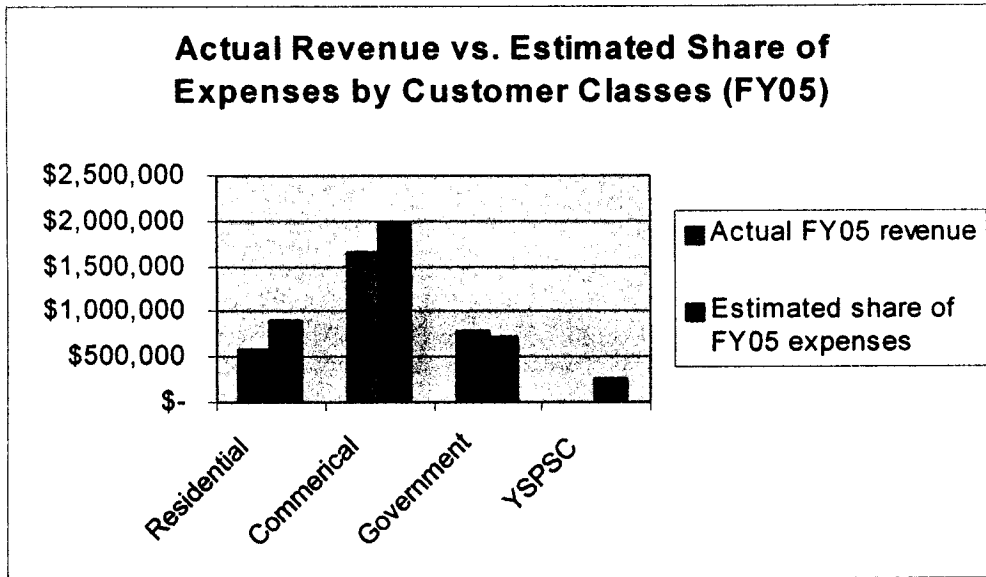
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Government	18.44%	23.86%
YSPSC	<u>6.51%</u>	<u>5.39%</u>
Total	<u>100.00%</u>	<u>100.00%</u>

**The analysis** - Based on the kilowatt consumption, we segregated the direct and indirect expenses related to the production and distribution of electricity from total operating expenses. We prorated the total electric expense among the different classes of customers using the above percentages to obtain their estimated share of expenses. We then compared the estimated expense by class to actual revenue billed to determine which class was able to pay for its share of electricity.

**FY05 Results** - We found that during fiscal year 2005, the only class that was paying for its consumption was the government. Residential and commercial customers (and of course YSPSC who did not bill itself its share of kilowatt hours used) were not billed enough to cover their estimated costs of electricity. The graph below illustrates:

*Graph 1.1: Electric revenue vs. estimated expenses per customer class FY05:*



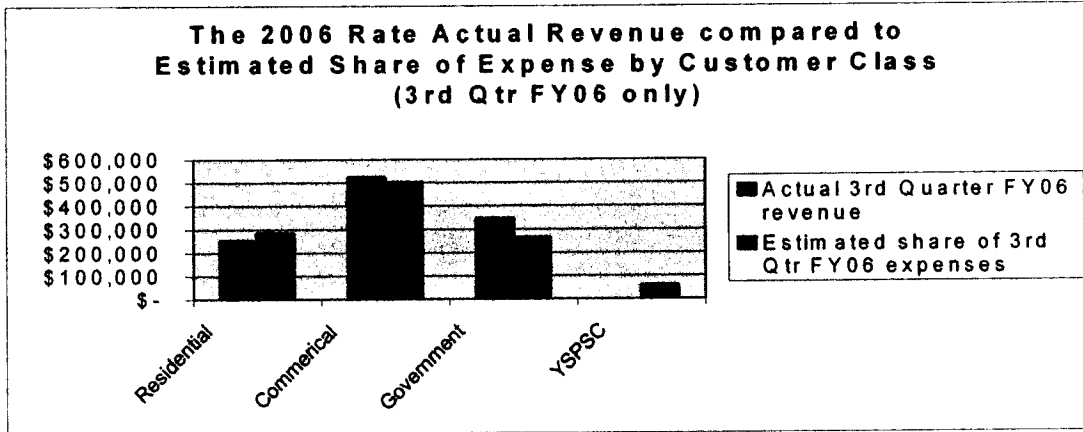
**FY06 Third Quarter Results** – We did the same analysis again to determine the impact of the 2006 electric rate amendment and fuel charge on the graph above. Because the 2006 rate revision went into effect in March, we limited our review to the activities of April, May and June 2006. As presented in the graph below the 92% increase in residential customers’ electric bill under the 2006 rate over what they were paying under the 1997 rate was still not sufficient to cover the estimated costs of the kilowatt hours consumed by this class. In contrast, the commercial customers whose bill increased 93% under the 2006 rate amendment as compared to the 1997 rate was now paying enough money to YSPSC to cover their share of electricity expenses.



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*Graph 1.2: Electric revenue vs. estimated expenses – 3<sup>rd</sup> Qtr FY06:*



The results of our comparisons above between the estimated costs of production of the kilowatt hours used compared to revenue generated by classes suggested that the March 9, 2006 rate increase is justified in that it increased the residential classes' contribution towards the cost of production of the electricity this class consumes. Still, even with the rate increase, the residential class which registered the complaint against the rate increase still is not paying for its share of the electricity it consumes, although its contribution has increased significantly as compared to the 1997 and 2005 rate increases.

**D. The history of operating losses indicates that the base rates within each utility subdivision were inadequate to cover the marginal costs of the utility services.**

Every company that manufactures goods or provides services to its customers has to devise a billing rate that takes into consideration its direct and overhead costs in order to bill its customers the estimated unit cost of providing the good or service. Accordingly, YSL 4-4 authorized YSPSC to adopt a schedule of user fees that accurately reflected the marginal costs of providing electrical services to the people of the State. This would be what we would refer to as the base rate.

YSPSC's 1997 electric rate structure consisted of only a base rate – there was no surcharge added to the base rate. That base rate was intended to cover the basic costs of providing electric services to customers. Such basic costs include direct costs such as fuel and lubricants for the generators, spare parts, salaries of power generation and distribution staff, annual amortization of the utility plant, fixed asset, etc. In addition, a portion of the overhead costs such as the time of the general manager, clerks and accounting staff should also be estimated and figured in as part of the utility rate structure. The fact that YSPSC incurred operating losses from FY00 to FY04 showed that the basic rate structure from 1997 was not sufficient to cover the costs of normal operations. A history of YSPSC's financial results for the past six years is presented below:

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**Table 1.2: YSPSC's financial information (FY00-FY06): Source: YSPSC audit reports**

	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006
Electric Sales	2,593,736	2,862,098	2,861,328	2,909,060	2,546,288	3,183,519	4,186,531
Other Sales	187,400	429,772	444,821	395,770	398,942	366,118	306,338
Operating Revenues	\$2,781,136	\$3,291,870	\$3,306,149	\$3,304,830	\$2,945,230	\$3,549,637	\$4,492,869
Operating Expenses	3,592,518	4,019,179	3,908,811	4,013,309	3,959,790	4,273,002	4,693,241
Operating Loss	(811,382)	(727,309)	(602,662)	(708,479)	(1,014,560)	(723,365)	(200,372)
Add back: Depreciation	701,057	701,023	667,613	719,616	737,627	740,209	763,582
Operating Gain (Loss) before Dep.	(110,325)	(26,286)	64,951	11,137	(276,933)	16,844	563,210

As a result of an inadequate base rate, the Corporation ended each of the past seven years with operating deficits – the lowest being (\$200,372) in fiscal year 2006 and the highest of \$1,014,560 in fiscal year 2004. Prior to the 2005 and 2006 electric rate amendments, the Corporation collected the highest revenue from its electric customers in fiscal year 2003. Despite the high sales, the Corporation still incurred an operating deficit of \$708,479 that year. Keeping all variables constant, had the Corporation attempted to eliminate the deficit in 2003, it would have had to increase the base rates across the board by approximately 24%. That would translate to an increase of \$4.80 for a customer whose average monthly utility bill is \$20.

**E. Lack of an effective cost containment policy in the past years increased the insufficiency of the electric base rate.**

In order for the Corporation to keep user fees “reasonable”, expenditures must be limited to levels that could be supported by the customers. This is normally done through cost containment policies and procedures, evidence of which would be found in the form of written policies communicating such to relevant staff members. Once formulated and adopted, the policies are implemented through operating budgets which limits expenditures to levels of projected revenue. To enforce the budgets, accounting ledgers would be tailored to accumulate the necessary financial information to allow management to evaluate financial results for deviation or achievement of cost-savings policies.

We found no written cost containment policies at the Corporation prior to fiscal year 2004. Moreover, inconsistent use of accounting and budgeting information indicate that cost-saving measures were not a priority of management. Specifically:

- **General and administrative costs** were classified differently on internal budgets, general ledger, and external financial reports indicating that such costs were not periodically monitored. Our review of general and administrative costs found that YSPSC had three different figures for the same expense in fiscal year 2005, owing to different classifications used in the general ledger, external financial statements and cash flow budgets. We found that the budget for 2005 allocated \$567,138 to G&A. The trial balance for fiscal year 2005 had \$269,172 for G&A and the audit report \$270,604. Had amortization of debt service and capital assets been included in G&A budget for FY05,

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budgeted G&A would have risen to \$802,364. But on the general ledger and audited financial statements, these items were reported separately. The lack of standardized classification of expenses under G&A made monitoring of such expenses difficult for management.

- **Accounting system was not designed to provide timely information** on expenses of the different components of operating expenses – vehicle fuel was mixed with production fuel, spare parts expense were not recorded until the end of the year when physical inventory was taken; fuel costs for the Outer Islands power plants were not immediately segregated from Yap Proper production fuel costs. Grant and capital project expenditures were not segregated from expenditures funded by operating revenues. Without timely and relevant financial information, management could not successfully monitor levels of expenses and make decisions about cost reductions.
- **Lack of balanced budgets.** In the August 17, 2006 board meeting minutes, the management reported to the board that the FY2006 operating loss of over \$500,000 was actually smaller than the budgeted loss of \$1 million. We found it surprising that YSPSC was not required to prepare a balanced budget. We reviewed copies of the operating budgets for FY03 to FY06 and found that YSPSC did not prepare balanced budgets for two of the four years. The FY03 and FY04 budgets were balanced – anticipated shortfall in operating revenues over expenses were allocated to grants for an overall balanced budget. In contrast, the FY05 and FY06 budgets showed projected deficits of (\$780,000) and (\$1,142,000), respectively. We do not know whether the deficits in the 2005 and 2006 budgets were deliberate in order to justify the planned increases in electric tariffs for 2005 and 2006.

**Successful cost containment measures require planning and periodic monitoring.** Cost reduction strategies are necessary because not all types of costs could be subjected to the same cuts. Direct costs are less likely to be reduced without affecting the level of services provided by the organization, whereas indirect costs or overhead can generally be trimmed without too much impact on services.

- Therefore, first in the planning is the identification of direct and indirect costs.
- Next, each type of costs should be monitored for a period of time to determine the minimum expenditure level required to maintain the desired level of services.
- Concurrent with these initial efforts should be administrative policies and procedures to identify and minimize or eliminate nonessential costs.
- After a period of monitoring, the organization should be able to adjust expenses to rise and fall with the level of revenue, thereby minimizing the impact of unanticipated events on operations.

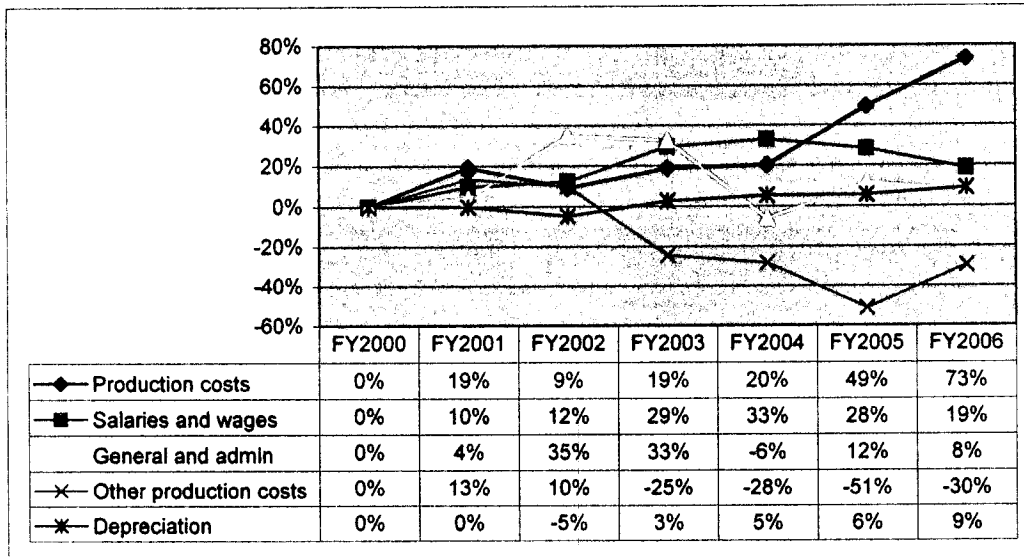
**Instead, financial results showed a steady rise in YSPSC's operating expenses since 2000.** A review of audited financial statements of the Corporation showed no evidence of costs containment by the Corporation, except for the temporary measures taken in FY04 when rising fuel costs was imminent. *In fact, analysis of the financial data for the five years from FY2001 to 2005 as compared to FY2000 found consistently that yearly percentage increases in revenue were matched by similar percentage increases in expenses, except for FY04 in which revenue decreased 2% under FY00 levels while expenses remained at 10% above FY00 levels.*

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While increases in direct expenses in concert to increases in revenues should be expected, the graph below showed that direct costs were not the only costs rising:

*Graph 1.3 – Historical Trend of Operating Expenses – FY00 to 06*



The trend analysis of YSPSC expenditure levels supported our opinion that YSPSC had not undertaken meaningful action to reduce costs since 2000, except for the July 2004 management directives. It also showed that other production costs consisting primarily of spare parts and inventory for the power and water was the expense which suffered the biggest cuts in FY2002, declining even more after the 2004 cost containment measures. These costs are essential to YSPSC's operations and may not be curtailed indefinitely. In fact, after implementation of the new tariffs in 2005 and 2006, other production costs began to rise.

In FY02 and FY03, administrative and general costs rose higher than any other types of expense. The expense dipped in 2004, but has risen again beginning in FY2005. The cost containment procedures were in place for most of this time. The measures were lifted after implementation of the 2006 utility rate increase and therefore, YSPSC's total operating expenses resulted in a 31% increase over FY2000 operating expenses. Furthermore, our review of YSPSC's budget for FY2007 found that YSPSC projected an additional 14% to its operating expenses over FY2006 actual expenses.

Salaries and wages rose higher than any types of expense, except for G&A in 2002 and 2003. It was slightly lower in 2005 mainly due to staff turnover. Vacancies in accounting section and power plant that were not filled until 3<sup>rd</sup> quarter 2006 account for the decrease in salaries in FY2006. A look at FY07 budgeted salaries showed that it is 10% more than 2006 salaries. It appears that YSPSC has no intent of reducing salaries even though it is the second largest expense of the Corporation.

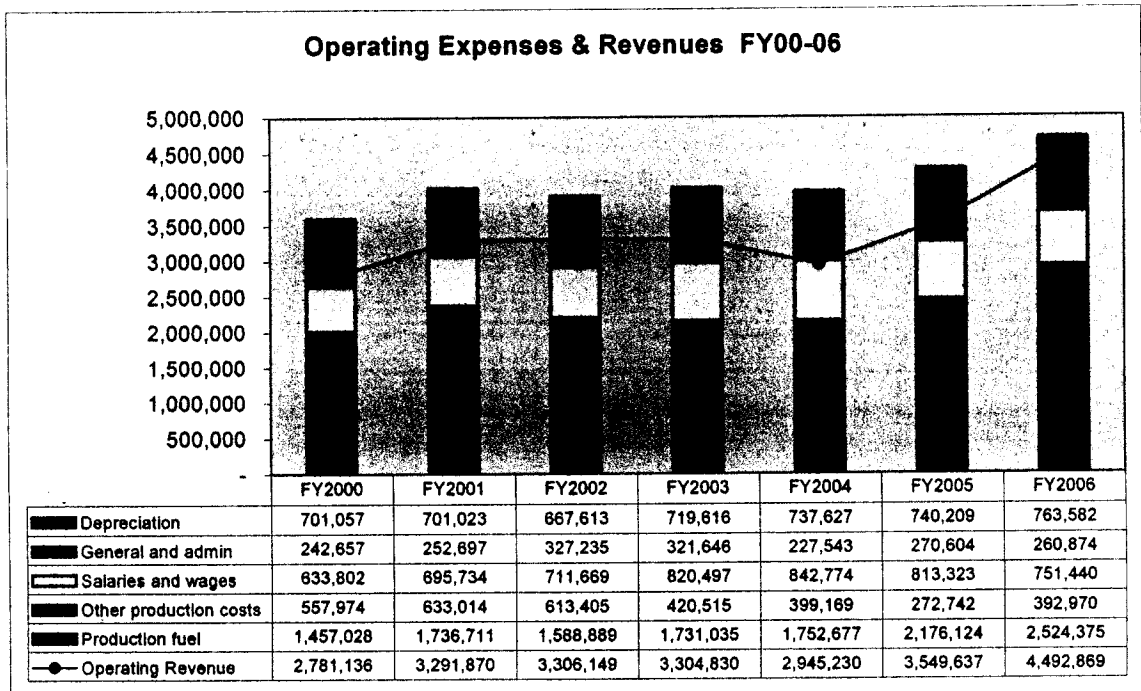
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**F. Action had to be taken because cash balances had deteriorated to the lowest level in YSPSC's history by the end of fiscal year 2004 whereas cash requirements were rising.**

Because timely action was not taken by the Corporation to reverse its financial situation, by the end of 2004, the amount of cash being generated by utility sales was insufficient to even fund regular operations. The following graph illustrates:

*Graph 1.4: Components of Operating Expenses with Intersecting Revenue Line*



**Monthly Cash Requirement was Increasing**

An entity's cash position is a good indicator of its financial health. The availability of cash to allow an entity to settle its obligations such as payroll and payments to suppliers and vendors is critical. A cash reserve is also necessary to serve as a buffer for emergencies – such as the rising costs of fuel or expenses related to recoveries after natural or other emergencies and to fund capital projects. But as indicated by its financial results since 2000, YSPSC barely generated enough revenue to fund its recurring expenses, let alone capital expenditures. Therefore, to replace obsolete and damaged equipment and to fund other maintenance programs, the Corporation had to borrow funds.

These borrowed funds accounted for the major part of the cash that the Corporation had at the end of fiscal year 2000. However, as the funds were expended for their intended purposes, the cash balance began to dwindle. Consequently, the year-end balance of cash in YSPSC's bank accounts decreased over the course of the six years from a high of \$1.9 million in 2000 to a low of \$497,723 at the end of fiscal year 2005.

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Discussions with YSPSC management indicated that approximately three months worth of cash was necessary to be maintained by the Corporation to ensure uninterrupted services to the public. During fiscal year 2005, YSPSC averaged approximately \$300,000 in monthly expenses, therefore, the cash that YSPSC had at the end of fiscal year 2005 of \$519,010 represented less than two-months worth of cash requirements that was carried forward into fiscal year 2006. The ideal cash reserve for YSPSC is approximately \$900,000, according to management. Unfortunately, we noted that in the first nine months of FY2006, monthly expenses had risen to over \$400,000, thereby increasing the cash reserve requirements to \$1,200,000.

**Debt Service Payments:** In addition to the almost unattainable \$1,200,000 in needed cash reserves, YSPSC had obtained loans from three different sources that it had been servicing since fiscal year 2002 with an unpaid principal of \$2,993,067 at September 30, 2006. The principal and interest payments on these loans for the past three years have been approximately \$80,000 annually. In fiscal year 2007, the loan principal and interest payments are set to increase to \$103,000, with subsequent increases to over \$120,000 in fiscal years 2008 and beyond. Therefore, YSPSC needed to begin accumulating cash as soon as possible in order to meet its debt service payments in the near future as well as to serve as a safety net for emergencies.

**Increase in Fuel Prices:** The extent of the increase in fuel prices during fiscal year 2005 and fiscal year 2006 represented an “emergency” for YSPSC because at no time in its history had prices exceeded the two dollar mark. To understand the impact of the 2005 and 2006 fuel prices on YSPSC, we reviewed a history of the per gallon prices charged by Mobil to YSPSC from FY2001 to 2004 to obtain a per gallon average for the first four years for comparison with the prices in 2005 and 2006. We found from YSPSC that Mobil’s quoted per gallon prices were received by the Corporation on the 7<sup>th</sup> of every month. Because it was too tedious to account for the monthly price changes, we obtained the year-end per gallon prices in effect for the first four years and compared it to prices in effect as of September 30, 2005 and 2006 to estimate the percentage increase in prices in FY05 and FY06. Our findings are presented below:

**Table 1.3: Comparison of Per Gallon Price of Fuel – 2001 to 2006**

<b>Year</b>	<b>Per Gallon Price (\$)</b>	<b>Percentage Increase</b>
2001	1.2654	
2002	1.1987	
2003	1.3578	
2004	1.5242	<b>Average: \$1.3365</b>
2005	2.2532	69.27%
2006	2.6253	97.23%

The 69% and 97% increase in fuel prices as of September 30, 2005 and 2006 respectively, resulted in an increase in YSPSC’s production fuel expense of 32% and 53% as of the end of fiscal year 2005 and 2006, respectively. As a component of total operating expenses, production fuel increased from an average of 42% for the five years 2000 to 2004 to 51% and 54% in fiscal years 2005 and 2006, respectively. Therefore, in order to ensure enough cash to pay for higher cost of diesel fuel to power the generators, YSPSC had to increase its monthly utility sales.

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#### **But Unexpected Events had Contributed to a Decline in Electric Sales**

**Loss of Customers:** The first event that precipitated the Corporation to finally take action was related to the departures of a few of the Corporation's major commercial customers such as Kingtex and MKI in FY04 and FY05 and Penta Ocean soon thereafter, and the demise of the Yap Fresh Tuna cold storage operations and the Ocean View Hotel also around the same time. According to management, these customers had contributed at least 17% of total electric revenue to YSPSC, therefore, their losses were significant to YSPSC's operations, especially that the Corporation was already operating at a loss. Had the base rate been adequate at that time, the Corporation could have more easily adjusted to the 17% loss in revenue by increasing the base rate a little, while at the same time reducing expenses in order to absorb the 17%. Instead, nothing was done. In fact, operating expenses, especially salaries and general and administrative expenses rose the highest during the same period.

**Typhoon Sudal:** The second event which contributed to a loss of revenue to YSPSC was Typhoon Sudal which devastated Yap in April of 2004. The loss of revenue caused by the loss of electricity island-wide for two or three days after the storm, plus the two to three weeks downtime while power crews tried to get each of the major distribution grid back on line, significantly decreased the Corporation's FY04 electric revenue to \$2.5m from the \$2.9 earned in fiscal year 2003. However, the impact of the loss of billable electric meters as a result of Typhoon Sudal was not limited to fiscal year 2004. Many residential homes were not rebuilt until fiscal year 2005 and 2006.

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### ***PART 2: Why the 2006 Electric Rate was Unreasonable***

#### **A. The Corporation did not mitigate the impact of a rate increase on customers by considering long-term reduction in expenses before planning an increase in rates.**

We expected a more structured cost reduction plan by the Corporation than the temporary cost containment directives management issued in July 2004 prior to finalizing the 2005 rate increase. Such a plan should have targeted elimination of the Corporation's operating deficit by reducing a percentage of expenses in conjunction with a restructuring of the base rate structure and assessment of a fuel surcharge. Instead, the cost containment measures implemented by the Corporation through memo directives issued in July 2004 in anticipation of higher fuel prices consisted mostly of standard internal control policies and procedures. Some of the restrictions imposed were as follows:

- ◆ GM's approval of all purchases over \$100 for essential items only
- ◆ Limit the number of employees that can make purchases under \$100
- ◆ Employees will be required to pay for invoices not approved by general manager
- ◆ Suspension of corporation financed parties
- ◆ Limit internet usage and long-distance calls
- ◆ No filling of vacant positions
- ◆ Overtime will be approved for emergencies only
- ◆ YSPSC's vehicle has to be parked at employees' houses unless called for during emergency.

Because management has a standing responsibility to ensure that expenses are reasonable and allowable and that they are contained within the entity's budgetary limits, the restrictions imposed in 2004 were just those, "cost-containment", not "cost-reduction" measures. The measures above should have already been in place since inception of the corporation given that YSPSC had been incurring losses since 1998. Therefore, instead of indicating that YSPSC was reacting responsively to the fuel emergency, the measures above only amplified the missed opportunities to streamline operations in the past.

Had management adopted short-term and long-term programs to reduce costs, the projected deficit in the base rate would have been reduced, thereby reducing the amount of revenue to be raised by the new rates. Unfortunately, the restrictions adopted in July 2004 were set to lapse once the new tariffs came into effect in 2005 and 2006. That decision to have only temporary cost saving measures in place was puzzling. In the September 25, 2005 letter transmitting the 2006 budget to management, the former comptroller voiced his concerns about "YSPSC's ability to continue business at the current level while sustaining large ongoing losses". He warned that the losses were placing YSPSC "in a very precarious situation and potentially out of business".

#### **B. The Corporation did not meet its mandated timeline for ensuring an adequate electric base rate.**

The law which created YSPSC dated March 9, 1995 established specific timelines and goals for the Board of Directors.



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- Section 11(a) required that within three months after the confirmation of the Board members that the Corporation should adopt a rate structure to charge customers an amount at least equal to the marginal costs of providing the utility services.
- Section 4(b) required the utility rate structure to be such that the Corporation could be financially independent of the State within one year from the date of the confirmation of board members.
- Section 9(c) requires the Board to adjust the rates so that within three complete fiscal years, collections from a particular utility service were sufficient to recover the costs associated with the operations and delivery of that particular utility service.

#### **No electric rate amendment for eight years.**

The rate structure adopted in June 1997 was in response to the above legislative requirements. But for eight years after that the Corporation did not raise rates any further despite consecutive yearly operating losses. Our review of internal budgets and audit reports found that the Corporation's own controllers warned the Corporation repeatedly that the Corporation could not afford to continue to operate with deficits. The financial statement auditors even advised YSPSC in the fiscal year 2002 audit to make use of the fuel surcharge authorized by its enabling legislation because conditions on the world stage at that time favored increased fuel prices.

Why then did YSPSC bear eight years of operating losses before finally raising rates in 2005? Increases in utility rates are unpopular with the general public. Without the rising cost of fuel, the only way the Corporation could have revised rates was to amend the base rate. Therefore, in order to obtain the public's approval, YSPSC would have had to show that its operations had been streamlined with the elimination of unnecessary costs and reductions in all other costs before it could propose a base rate amendment. That would have required a great deal more effort and may account for the Corporation's reluctance to amend the 1997 rate structure until it became absolutely necessary in 2005. *Moreover, because no effective cost containment policy had been in place, the cost per kilowatt hour to customers had increased beyond levels than could be paid only through user fees.*

#### **Rising fuel prices presented the opportunity to amend the rate structure**

Because the Corporation had delayed revising the base rate for too long, YSPSC was in poor financial condition by fiscal years 2005 and 2006 when fuel prices began to rise. Therefore, there was no time for in-depth analysis of the financial situation to know how to best respond to escalating fuel prices. In January 2005, the Corporation implemented a new rate structure which fully utilized the \$0.035 fuel surcharge authorized by law.

Unfortunately, fuel prices continued to escalate with the effect that the increase in revenue generated by the 2005 amendment was perceived by the Corporation to be insufficient to absorb the expected rise in production fuel expense.

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**C. As a result of delaying the required increase to the base rate, costs to customers were increased an average of 104% over a fourteen-month period.**

The Corporation did not raise rates until January 2005 when it finally began assessing the fuel surcharge and again on March 9, 2006 with the implementation of the variable fuel charge. Combining the effect of the 2005 and 2006 rate increases, delaying the desperately needed rate revisions resulted in sharp increases in the electric bill of the three major electric customer classes.

The price per kilowatt hour charged to customers increased 104% on average across all classes of customers from December 2004 to June 2006. For the different customer classes, the increases were as follows:

- **92% for residences** (\$0.1564 to \$0.3007)
- **93% for businesses and** (\$0.1862 to \$0.3587)
- **147% for the government** (\$0.1790 to \$0.4459)

During our discussions with YSPSC at a meeting where we discussed the contents of our first version of this draft report, management offered that it was for concern towards its customers that the Corporation delayed raising rates until the last possible moment. We can empathize with this viewpoint, but as we will discuss in the next section, the Corporation may have done a disservice to the public by delaying needed rate revisions to the last minute because by doing so, the Corporation did not avail itself of the time necessary to carefully study the planned rate increase to arrive at a rate structure that would solve its financial crisis without placing undue burden on customers.

**D. The Corporation missed the opportunity to restructure the base rate to ensure that it sufficiently covered the marginal costs of the electric utility service before adding the fuel surcharge.**

To its credit, when the Corporation implemented the 2005 fuel surcharge, it also revised the 1997 base rate structure. But the 2005 rate was not in effect long enough for the Corporation to determine whether the base rate was adequate. The 2005 rate was implemented in January 2005, but in its September 28, 2005 meeting, the Board of Directors discussed revising again the rate structure to address increasing fuel prices. Several options were discussed, but in the end the Board settled on a rate structure which removed the fuel component from the base rate and billed it separately as a variable fuel charge – Option #2 as presented by the Corporation's management.

We believe several factors affected the decision to adopt Option #2.

- ◆ Foremost is the fact that YSPSC had maximized its legal threshold for fuel surcharge of 3.5 cents per kilowatt hour in the 2005 rate amendment. By removing what YSPSC called “the fuel component” from the base rate, Corporation may have hoped that the new rate structure would not appear inconsistent with the law which limited fuel surcharges to three and a half cents per kilowatt hour. The Corporation explained to us that the 2006 variable fuel charge was not a surcharge (an add-on) but a “fuel charge”, but to us, this was just semantics.

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- ◆ The second possible reason the particular structure was chosen was because the board members could not differentiate between the merits and drawbacks of the various tariff options. Due to the urgency to raise rates, no accounting analysis and revenue projections were prepared and presented along with the options to explain to the Board of Directors how much revenue each proposed rate structure was expected to generate from each class and strata of customers. Neither did management propose strategies to identify and reduce any potentially negative impact of the new rates on each of the different customer classes.

In fact, had the Corporation expended the effort to justify the rates to the State leadership and the general public this audit would not have been necessary because all the accounting information and analysis to justify the new rates would have been available to convince the public that the rate was indeed justified. We found the contrary to be the case. Most of the accounting analysis and information that we required to form our own conclusions on the necessity and reasonableness of the new rates had to be gathered and compiled for us because such data had not been prepared.

- ◆ The third possible reason for choosing this particular option was because it allowed the Corporation to explain the rate increase to customers using the higher fuel prices as justification. A note in its public notice letter informing them of the proposed March 9, 2006 rates stated: *"The adoption of the new rate was a very difficult decision for the Board to make, but the decision had to be made in view of the unprecedented increase in fuel price to ensure that the services provided by YSPSC to the people of Yap remain uninterrupted."* The public hearing notice stated... *"the (2005) increase was insufficient to cover the (overall) cost (of operation) as fuel costs escalated beyond the reasonable projections"*.

**E. The variable fuel charge IS a surcharge and it is more than five times the fuel surcharge authorized by law.**

The law authorized the Corporation to impose a fuel surcharge not to exceed 3.5 cents per kilowatt hour for all consumers of electricity. The surcharge was allowed to be adjusted annually to reflect the cost of production fuel, except that the fuel surcharge for customers whose consumption is less than 2001 kilowatt hours should not exceed \$0.02 per kwh per calendar year.

The variable fuel charge implemented by the Corporation beginning March 9, 2006 was calculated by using the price per gallon of diesel fuel charged by Mobil to the Corporation, divided by 14 kilowatt hours for Yap Proper customers and 9 kilowatt hours for the Outer Islands electric customers. (We understand from YSPSC that the factor of 14 was the amount of kilowatt produced by the generators for each gallon of fuel consumed at peak generator efficiency). In March 2006 when the variable fuel charge was adopted, the fuel charge assessed on the Yap Proper electric customers was \$0.157 per kilowatt hour. As the per gallon price of diesel fuel charged by Mobil to the Corporation increased, the fuel surcharge increased correspondingly. Prices peaked in late summer of 2006 and began to decline around October 2006, but the fuel charge has remained above the fifteen cents mark since March 2006. That makes the fuel charge five times more than what the law authorized the Corporation to assess for fuel surcharges.

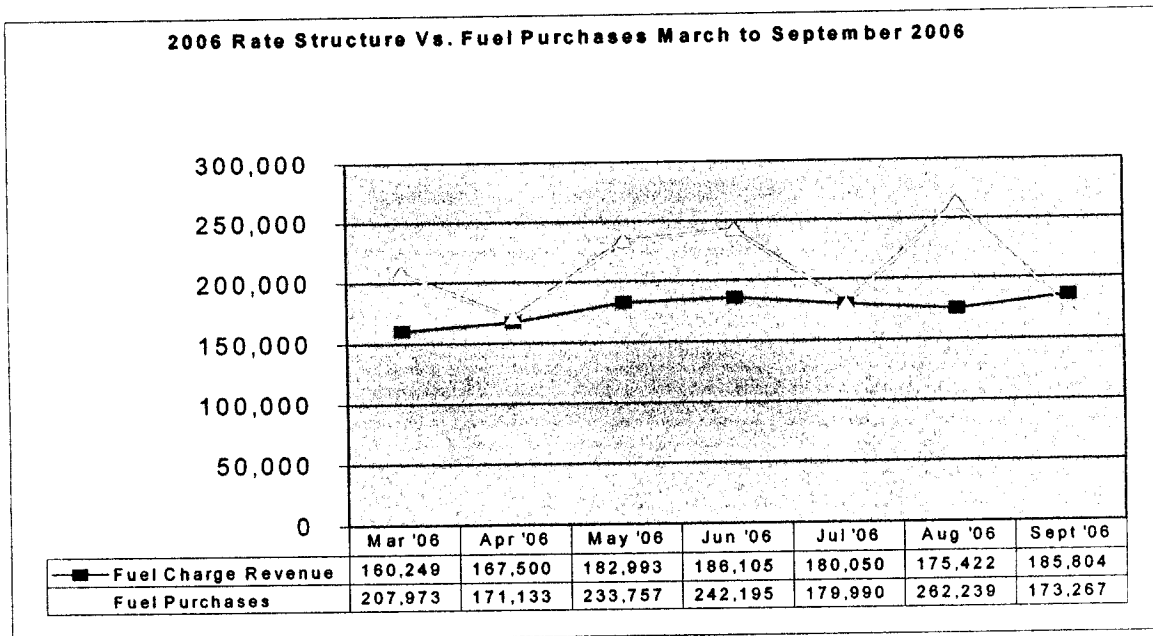
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**A portion of the base rate is still being utilized for fuel purchases.** To determine whether the fuel charge was by itself generating enough revenue to pay for production fuel, we segregated the monthly fuel charge from the base rate revenue and compared it to production fuel expense for the months of March to September 2006. Our review found that customer billings for the fuel charge for the six month period aggregated \$1.2 million, whereas fuel purchases for the same period totaled \$1.47 million, for a shortfall of \$232,431.

The graph which follows summarizes by month the fuel charge revenue and fuel purchases from March 2006 to September 2006.

**Table 2.1 – 2006 Fuel Charge Revenue vs. Fuel Purchases – March to September 2006**



**The variable fuel charge is a surcharge in excess of the authorized legal limit.** The insufficiency of the fuel charge revenue to cover current fuel purchases reveals that not 100% of the “fuel component” was removed from the base rate as suggested by YSPSC. This was somewhat expected because we found that the Corporation had not performed in-depth analysis to determine how much of the 2005 base rate was attributable to fuel costs, before supposedly dismantling that base rate to remove those costs to bill it separately as a variable fuel charge beginning in March 2006. Because revenue from the fuel charge alone is insufficient to pay for fuel, and fuel is a critical cost of providing electrical services to customers, it is logical to assume that there is still a portion of fuel costs being charged to customers in the base rate. If there is already a portion of fuel costs in the base rate, then the fuel charge is an “add on” component of the utility rate structure— a surcharge which would make the March 9, 2006 variable fuel charge clearly inconsistent with the letter of the law which authorizes a fuel surcharge of only three and a half cents.

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**F. Linking the variable fuel charge to Mobil fuel prices unnecessarily increased the cost of electricity to customers, because the Corporation's fuel expense has not risen at the same percentage rate as the per gallon prices of fuel.**

We think it is unreasonable to directly link the variable fuel charge to the per gallon price of fuel. We obtained records of the year-end per gallon price of fuel for the years 2001 through 2004, calculated an average and used the average to compare to the year-end prices in FY05 and FY06. We did the same for YSPSC's production fuel expense and electric revenue. Our findings are presented below:

*Table 2.1 – Percentage Increases in Diesel Price vs. YSPSC's Annual Fuel Expense*

Percentage Increases over Averages from FY2001-2004	Diesel Price/ Gal	Annual Production Fuel Expense
FY2001-2004 Average	\$1.3365	\$1,653,268
At/For the year ended September 30, 2005	\$2.2532	\$2,176,124
<i>Percentage change from 2001-2004 average</i>	<i>68.59%</i>	<i>31.63%</i>
At/For the year ended September 30, 2006	\$2.6253	\$2,524,375
<i>Percentage change from 2001-2004 average</i>	<i>96.43%</i>	<i>52.69%</i>

Because YSPSC management had tied the 2006 fuel charge to the price per gallon of fuel, we expected to see an increase in their costs similar to rate of the increase in fuel prices. However, because the cost of fuel to YSPSC depends not only on per gallon prices but also on the volume of fuel purchased, it was misleading to directly link the increases in customer's monthly billing to the increases in Mobil fuel prices.

The monthly volume of fuel consumption does not remain constant but depends on other variables such as the amount of fuel on reserve, the consumer demands for electricity, the efficiency of the generators, etc. Therefore, the actual cost of fuel to YSPSC would not necessarily rise at the same rate as the price per gallon of fuel. As shown in the table above, the increase in production fuel expense was only half of the percentage increase in the price per gallon of diesel fuel. Accordingly, it is more reasonable to tie the variable fuel charge to the increase in production fuel expense rather than price per gallon of fuel. *The decision to directly tie the rate increase on price per gallon of fuel may have far-reaching consequences that we will attempt to explain in the following sections.*

**G. The haste to take action resulted in adoption of a rate that may be too high**

Let's consider the period during which the Corporation began considering revisions to the electric utility rate. It was after the end of fiscal year 2004 when the Corporation had recorded the worst financial year in its history – an operating loss in excess of \$1 million. Moreover, all indications pointed to a worsening financial picture – a significant number of its customers had been lost as a result of the storm, fuel prices were climbing, and debt service payments had to be met. These considerations led to a rate increase that may have been intended to eliminate the \$1 million deficit, plus build up cash reserves to pay for the increase in fuel prices and also allow for the upcoming debt service payments.

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We found no revenue projections of the 2006 rate structure that would have helped us understand the Corporation's rationale for the amount of the rate increase. All we had to go by was a statement made by the general manager to us in one of our discussions that the rate amendment was projected to generate approximately \$500,000 a month or \$6 million in annual electric sales! Compared to the highest electric sales of \$2,909,060 in fiscal year 2003, *that was a planned increase of more than one hundred percent!* That actual average increase was 104%, as we discussed earlier.

Despite such a large rate increase planned by the Corporation, the engineer was assigned to take the lead to explain the proposed rate options to the Board of Directors even though the Corporation's comptroller was at the same meeting. Consequently, no meaningful accounting analysis was generated that could have explained to the Board the financial consequences of the proposed rate on the customers and on YSPSC itself. As a result, our review of the board minutes and other paperwork relating to the proposed rate increase found no consideration of the following key points:

*(1) Customers lost as a result of the storm would eventually come back online, therefore, revenue projections under the proposed rate should have given allowance for the return of those customers and not raise rates too high on the existing customers.*

*(2) Elimination of deficits is better managed when cash-inflows (revenue) is increased at the same time that cash outflows (expenses) is decreased. Attempts to eliminate deficits, especially one as large as \$1m by raising revenue only, often results in the erosion of the very customer base on which the entity depends for its survival.*

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***PART 3: The Impact of the 2006 Rate Increase***

We obtained unaudited financial information for YSPSC for the first twelve months of the variable fuel charge (from April 2006 to March 2007) to which we will refer as the “variable fuel charge year” (VFC Year), and compared it to audited financial statements for FY05 and FY04 to determine whether the financial results accumulated within the twelve months of the variable fuel charge supports management’s justifications for the 2006 rates when compared with information from the previous two fiscal years preceding the new rate.

The financial information follows:

**Table 3.1 – Financial Information for First Full Year of the Variable Fuel Charge (unaudited) compared to Audited Financial Information for FY2005 and FY2004**

	VFC Full Year April 2006 to March 2007	Audited FY2005	Audited FY2004	\$ Change Over FY2005	% Change Over FY2005	\$ Change Over FY2004	% Change Over FY2004
<b>Operating Revenues</b>							
Electric sales	\$4,299,949	\$3,183,519	\$2,546,288	\$1,116,430	35%	1,753,661	69%
Water and other sales	162,208	366,118	298,346	96,690	26%	63,866	16%
		<b>3,549,637</b>	<b>2,844,634</b>	<b>1,213,120</b>	<b>34%</b>	<b>1,817,527</b>	<b>62%</b>
<b>Operating expenses</b>							
Production fuel	2,115,172	2,176,124	2,242,117	343,093	16%	766,540	44%
Salaries & wages	765,118	813,323	821,918	(58,208)	(7%)	(87,659)	(10%)
Other production costs	272,634	272,742	272,543	112	0%	(45,311)	20%
General and admin	272,008	270,604	280,162	41,400	15%	(87,165)	(22%)
Depreciation	778,178	740,209	765,677	31,948	4%	34,530	5%
		<b>4,273,002</b>	<b>4,360,774</b>	<b>358,345</b>	<b>8%</b>	<b>671,557</b>	<b>17%</b>
<b>Operating Income/(Loss)</b>	<b>131,410</b>	<b>(723,365)</b>	<b>(1,014,560)</b>	<b>854,775</b>	<b>(118%)</b>	<b>1,145,970</b>	<b>(113%)</b>

**Positive results of the Variable Fuel Charge.** Much of the financial results of the variable fuel charge are positive. For the first time in its history, the Corporation generated an income, even after depreciation. This would certainly help the Corporation build up the much needed cash reserve and put it in a better position to meet its debt service requirements. In fact, as of March 2007, the Corporation had reserved a small amount of cash in a time-certificate of deposit, the beginnings of the establishment of a cash reserve for emergencies.

However, other concerns relating to the unreasonableness of the 2006 variable fuel charge appear to be confirmed by the results of the first twelve months of the new rate as compared to the financial results of the two fiscal years preceding it.

**A. Despite the 104% increase in average cost per kilowatt hour to customers, YSPSC electric revenue only rose 69% under the VFC Year when compared to revenue collected in fiscal year 2004 under the 1997 rate.**

But even the 69% is generous, considering that electric revenue in 2004 was actually much lower due to the negative impact of Typhoon Sudal on the customer base. When compared with 2003 electric revenue of \$2,909,060, the electric revenue collected within the VFC Year is only 48%

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more. In comparison with fiscal year 2005, the 2006 rate increased revenue by 35% or \$1,116,450. In contrast, the difference between the cost per kilowatt hours to customers under the 2006 rate as compared to the 2005 rate was 51% for residences, 31% for commercial, and 16% for Government or 31% on average for all customers.

**Why the 2006 rate increase did not generate its revenue potential**

The results of the VFC Year compared to fiscal year 2005 with the fuel surcharge and 2004 and 2003 under the 1997 rate are surprising when one considers the increase in the costs per kilowatt hours to customers under the 2006 rate as compared to the 1997 rate:

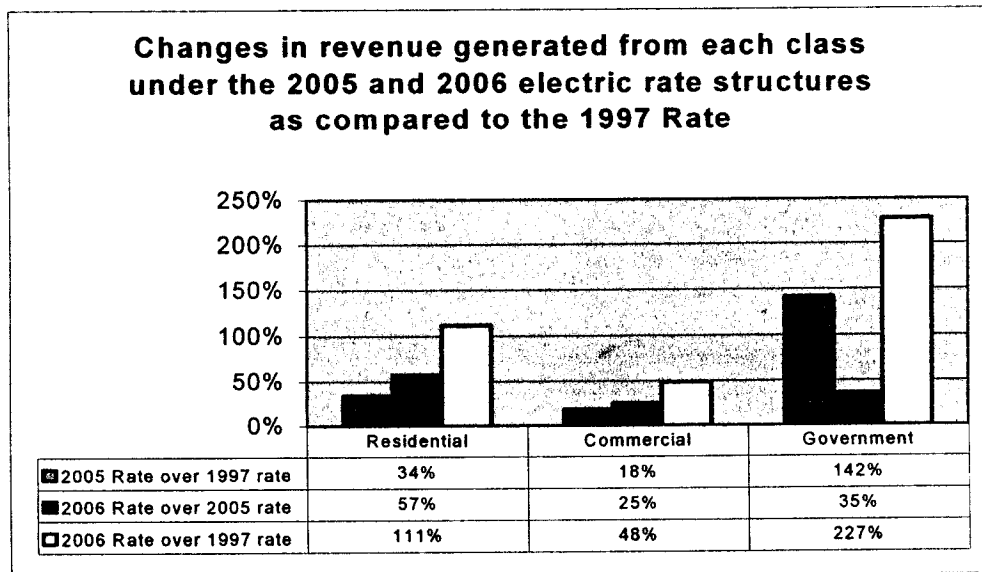
- **92% for residences** (\$0.1564 to \$0.3007)
- **93% for businesses and** (\$0.1862 to \$0.3587)
- **147% for the government** (\$0.1790 to \$0.4459)

To understand why the increase in overall revenue did not mirror the increase in costs per kilowatt hours to customers, we focused our analysis on certain quarters in which one of the three electric rates was in effect:

- 1997 rate      October to December 2004 – the last quarter this rate was effective
- 2005 rate      October to December 2005 – the last quarter under this rate
- 2006 rate      April to June 2006 – the first quarter this rate was in effect.

The actual revenue generated from sales to each of the three customer classes as shown in the graph below found that none of the percentage increases in revenue resembled the average increase in costs per kilowatt hours under the different rates:

**Graph 3.1 – Percentage Increase in Actual Revenue by Class from 2005 and 2006 electric rates Compared to the 1997 Rate Structure**





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The first question that arose was why the residential and government consumption increased when rates were increased. The expectation was that when rates increase, demand for electricity should decrease, as it did for the commercial class, therefore, consumption should decrease for all classes, at the least.

**Understanding the changes in consumption by the different electric customer classes**

To understand what had happened to consumption for the different classes under the 2006 rate as compared to the 2005 and 1997 rate, we obtained the number of customer accounts by class and kilowatt hours consumed for the same quarters above and compared them as follows:

*Table 3.2- Changes in number of accounts and kilowatt hour consumption by class for specific quarters.*

PERIOD	Residences		Commercial		Government	
	# of Accts	KWH	# of Accts	KWH	# of Accts	KWH
QE 12/31/04 under the 1997 rate	1,292	770,069	369	1,896,752	95	586,032
Increase/(decrease)	98	40,634	14	(370,977)	32	78,139
QE 12/31/05 under the 2005 rate	1,390	814,703	383	1,525,775	127	664,171
Increase/(decrease)	98	44,634	14	(370,977)	32	78,139
QE 6/30/06 under the 2006 rate	1,444	814,994	360	1,433,164	146	757,696
Total Increase/(decrease)	152	44,925	(11)	(463,588)	51	171,664
Cost per kilowatt hour		\$0.3007		\$0.3587		\$0.4459
Addition (loss) of revenue under 2006 rate		\$13,508		(\$166,289)		\$76,545

**B. The 2006 rate increase may be eroding the electric customer base, especially for the commercial class.**

(1) **Residential class** – The months between December 2004 and December 2005 saw an addition of 98 new accounts. We believe these were residences that were damaged by Typhoon Sudal that came back online. As expected from the increase in the number of accounts, consumption increased by 40,634 kilowatt hours. However, from December 2005 to June 2006, despite the addition of 54 new accounts, consumption increased only by 4,291 kilowatt hours. We can, therefore, see that the 2005 electric rate did not create a marked reduction in demand from customers. However, the 2006 rate caused residential customers' demand for electricity to fall, although the decrease was masked by new customers coming back on line.

(2) **Commercial class** – Despite the January 2005 rate increase, 14 more accounts existed at December 2005 compared to December 2004 when the 1997 rate was in effect. Yet, even with the additional customers, consumption fell by 370,977 (20%) kilowatt hours. When the 2006 rate was implemented, 23 commercial meters were lost, resulting in a loss of 92,791 (6%) in kilowatt hour consumption.

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(3) **Government** – The government saw an increase in 51 new accounts under the 2006 rate, as opposed to the last quarter under the 1997 rate. These are probably attributable to buildings damaged by Typhoon Sudal that have since been repaired. There is no obvious change in demand for the government in response to the 2006 rate as opposed to the 1997 rate.

**For basic commodities, a significant decrease in demand may indicate that prices have been raised beyond either the reasonable expectation of customers or beyond affordable levels.**

Based on this premise, YSPSC’s electric rates may have reached unreasonable levels as we can see in the significant drop in electric consumption for the commercial class. The decreases in demand from residential customers may also be significant, but the additional customers that were added in FY05 and FY06 (possibly due to the rebuilding of homes damaged by Typhoon Sudal) evened out the effects of any decreases in demand due to the sharp increases in electric rates.

Of the three classes, the commercial class appears to be the most sensitive to price increases possibly due to its objective to make money and the fact that owners can shut down the business when profitability is at stake. As one can expect, the government’s demand did not respond much to the increase in rates even though the biggest portion of the rate increase was assessed on the government. This may be because the government does not have as much flexibility to limit its use of electricity and also because the government is better able to bear the burden of the higher rates. The residential customers do not enjoy the large financial resources of the government, nor do they have the option to shut down available to commercial businesses. Consequently, this class has little room to maneuver when prices for necessary services are raised too high.

**C. Moreover, numbers indicate that it might have been possible to raise more revenue at lesser cost per kilowatt hour to customers.**

When prices are raised too high in an attempt to raise revenue, the corresponding decrease in demand for the commodity sometimes would cause actual revenue to fall below revenue projected from the price increase. Therefore, whenever circumstances require the raising of prices for a good or service, careful study must be conducted to ensure that the increase in prices would not result in a marked decrease in demand. To illustrate the potential impact on revenue of the 463,588 total kilowatt hour reduction in the consumption of the commercial class, we estimated the revenue that could have been earned had consumption not decreased and compared it against the actual gain in revenue as a result of the 2005 and 2006 rate increases.

*Table 3.3 – Dollar value of the decrease in the commercial class consumption under the 2006 rate*

<b>Tariff rate</b>	<b>Price per kwh</b>	<b>Potential revenue on 463,588 kwh</b>	<b>Actual revenue for quarter</b>	<b>Revenue gained as a result of rate increase</b>
QE 12/04 @ 1997 Rate	\$0.1862	\$86,120	\$353,224	–
QE 12/05 @ 2005 Rate	\$0.2741	\$127,069	\$418,202	64,978
QE 6/06 @ 2006 Rate	\$0.3587	\$166,289	\$522,177	103,975

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*In reference to Table 3.3, we found that for the actual increase in 2005 revenue of \$64,978 for the commercial class was lower than what could have been earned (\$86,320) on the 463,588 kwh lost had rates remained at the 1997 rate. Moreover, the additional revenue gained under the 2006 rate of \$103,975 is only \$17,655 more than the lost consumption could have generated under the 1997 rate. Comparing actual revenue billed for the quarter December 2005 under the 2005 rate with the actual revenue billed under the 2006 variable fuel charge, we found an increase of \$103,975. Supposing that that the commercial class consumption had remained at the December 2004 level, the 463,588 in kilowatt hour lost from the commercial class under the 2006 variable fuel charge would have generated \$127,069. We acknowledge that this is a simplistic analysis, but we are trying to make the point that due to the impact of price on demand, raising rates too high often results in lesser revenue than when rates are raised only slightly. Unfortunately, the negative economic impact of the 2006 rates might not be reversed simply by lowering commercial electric rates.*

**D. The increase in revenue generated by the 2006 rate is almost a million dollars more than what the Corporation needed to pay for fuel, indicating that the 2006 rate is too high.**

Even though the 2006 electric rate and variable fuel charge only generated a 69% increase in revenue as compared to FY04, the additional revenue generated exceeded the increase in the Corporation's fuel expense by \$987,121 for the same year. When compared to fiscal year 2004, the VFC year generated \$1,753,661 more in electric revenue. In contrast, the increase in production fuel expense in the VFC year compared to fiscal year 2004 was only \$766,540. Therefore, the difference of \$987,121 represents additional electric revenue that the Corporation is using for non-fuel expenses. The positive side of the 2006 rate is that excess revenue has helped the Corporation eliminate its operating deficit. However, the large amount of revenue brought in by the 2006 rate over what is required for fuel purchases indicate that the Corporation could have met its financial objectives by raising rates across the board by a percentage lower than the current 104%.

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#### ***PART 4: Potential Long-Term Impact of the 2006 Electric Rate***

After all the points that we have made previously about why we believe the 2006 Variable Fuel Charge to be unreasonable, we can only speculate at this point about the rate's long-term impact on YSPSC and its customers. But our cursory review of three key areas produced results that were troubling and may warrant a more careful and in-depth study to be commissioned by the State leadership in order to ultimately determine the success or failure of the Variable Fuel Charge.

##### **I. Will the Variable Fuel Charge contribute to higher fuel prices for YSPSC?**

YSPSC is the single largest consumer for diesel fuel in Yap. Previously when the billing rates to its customers were fixed, the fuel supplier had little incentive to increase its profit margin since YSPSC would have no financial means to pay for the additional costs. But what if the fuel supplier takes advantage of the variable fuel charge to increase its profit margin? To determine if we had cause to fear such a risk, we obtained the monthly per gallon diesel prices charged by Mobil to YSPSC for the months of October 2006 to March 2007 and compared it to the prices paid by the Kosrae Utilities Authority and Pohnpei Utilities Corporation to their fuel suppliers and diesel prices charged by Mobil to two gas stations in Yap who are non-Mobil distributors. (Mobil authorized dealers obtain a special discount for fuel purchased from Mobil for sale to the general public. These dealers did not respond to our request for information.)

The objective of the review was to determine whether the monthly increases in YSPSC's fuel cost was consistent with the other utility corporations and the local gas stations. We reasoned that if the monthly increases in prices charged by Mobil to YSPSC are consistent with the other companies, then YSPSC's fuel price increases are market place events and nothing more.

Our findings are presented below:

- **YSPSC** had the lowest per gallon price for all six months. From October 2006 to February 2007, YSPSC's fuel price decreased by 23 cents, but rebounded by 11 cents from February to March 2007. Even with the most recent increase of eleven cents, YSPSC still had the lowest fuel price for all three utility companies compared as of March 2007.
- **Pohnpei Utilities Corporation (PUC)** – fuel prices steadily increased each month to a total of 56 cents increase between October 2006 and March 2007. 23 cents of the increase occurred between October 2006 and December 2006. From January to March 2007, PUC's fuel price rose by only five cents.
- **Kosrae Utilities Corporation (KUA)** – perhaps by virtue of its fuel supplier being State-owned, showed a steady decline of 34 cents in fuel prices for the same period. Between October and November 2006, there was a drop of 4 cents. Then the price held steady until February when it declined by 20 cents, then another 10 cents decrease took place between February and March 2007.
- **Nondealership Gas Stations** – per gallon diesel prices for these gas stations unlike YSPSC did not decline anytime during this period. There was an increase of 17 cents in November,

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but then the price held steady until February when it increased by three cents. There was no increase for March 2007. As of this writing in the middle of April 2007, the price for gasoline at the pump has increased by fifteen cents.

**Conclusions:** Of the above companies, KUA is not an ideal comparison because its fuel supplier is a related party. Therefore, it seems that PUC and the gas stations should show the most similar trend in fuel price increases with YSPSC if the increases are based on the worldwide market conditions. However, as we can see from the above, during the period when YSPSC's prices were coming down, the fuel prices for the gas stations and PUC were increasing. But then in March 2007, on the one-year anniversary of the variable fuel charge, YSPSC's fuel prices increased twice as much as the increase for the local gas stations and PUC. In April 2007, the increase in YSPSC's fuel cost of 40 cents is more than twice the increase in prices at the gas stations of fifteen cents. Compare this to last summer when prices at the pump reached \$4.50 cents, Mobil only charged YSPSC \$2.69 cents for a gallon of diesel fuel. We can see now that the prices Mobil is charging YSPSC are no longer consistent with fuel prices on the local market.

**New Three-Month Fuel Supply Agreement**

The FSM has in place a fuel supply agreement with Mobil that will terminate in June 2007. Operating under this umbrella agreement, YSPSC entered into a five year fuel supply agreement with Mobil that ran from 1998 to 2003. That agreement had a clause that allowed for yearly extensions which YSPSC utilized from 2003 to March 2007. The agreement also allowed YSPSC a credit line of \$200,000.

The last fuel supply agreement between YSPSC and Mobil was terminated in March 2007. Without a new agreement, YSPSC would be subjected to the same nondealership price of \$3.61 currently being charged to the two gas stations who responded to our request for information. (Under the old agreements, YSPSC's per gallon prices were consistent with the special discounted price given to the Mobil authorized dealers.) A per gallon price of \$3.61 means a \$1.36 increase in fuel costs to YSPSC in April as compared to March 2007. YSPSC had no choice but to enter into a three-month fuel supply agreement with Mobil which called for monthly increases in fuel prices and termination of the \$200,000 line of credit, meaning that YSPSC would have to front cash for all its fuel purchases.

The monthly increases in fuel price under the new fuel supply agreement are as follows:

April 2007	\$2.6519	40 cents increase
May 2007	\$2.9519	30 cents increase
June 2007	\$3.3786	43 cents increase

The fuel supply agreement is for only three months, since the FSM agreement with Mobil is slated to expire in June 2007 and YSPSC is operating under that agreement. Perhaps the marked increases in fuel prices are due to some extent to its short duration. Perhaps, more favorable terms could possibly have been negotiated under a longer-term agreement. *But still the question remains: Would Mobil have been inclined to increase YSPSC's fuel prices so drastically under this new agreement if YSPSC could not readily finance the increase?*

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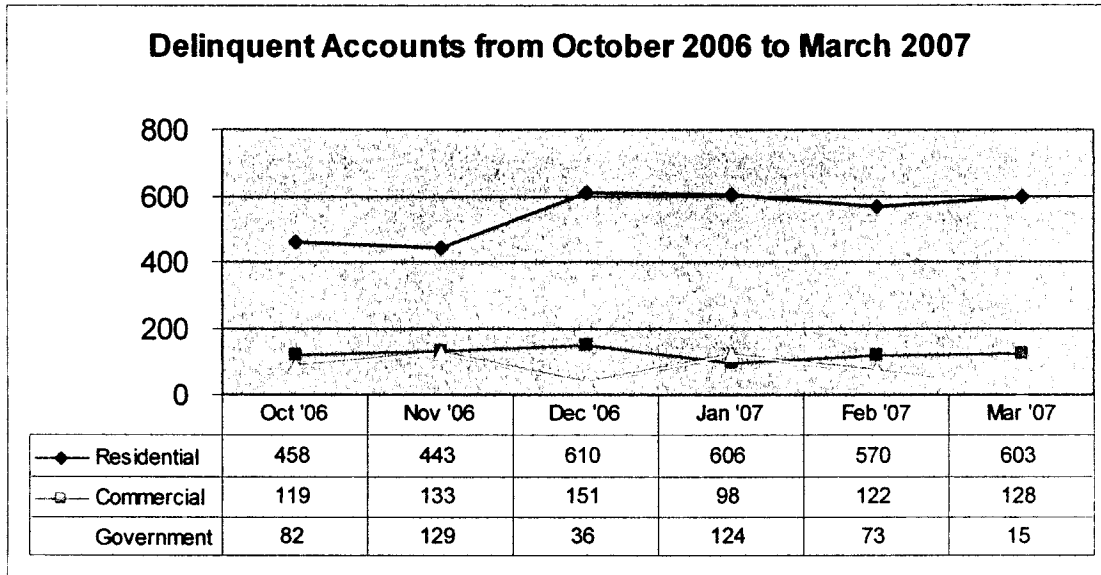
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**II. Will the ever-increasing variable fuel charge continue to bring in cash for YSPSC's operation?**

The variable fuel charge was built on the premise that a flexible rate was necessary to ensure cash was available to pay for fuel as fuel prices fluctuate. But the cash would be available only IF customers pay their utility bills. If electric bills for customers rise beyond what they could afford to pay each month, the number of delinquent accounts would rise, and YSPSC would be left with the same amount of cash as the previous months when the variable fuel charge was lower.

Our review of the number of delinquent accounts by class from October 2006 to March 2007 found the number of delinquent accounts rising for the commercial and residential classes. The increase was most significant in December 2006 when the State subsidy was depleted. For both classes, delinquent accounts decreased in January 2007 indicating that accounts were paid at the threat of disconnection, but increased in February and March 2007 to higher levels than in October 2006. The graph below illustrates:

*Graph 4.1 – Number of Monthly Delinquent Accounts – October 2006 to March 2007*



The number of delinquent government accounts is actually decreasing, possibly due to more timely payments by Finance. This is in line with our expectation since as we discussed in Part 3, the government class is not much affected by the variable fuel charge due to its larger resources.

**Potential Continued Erosion of YSPSC's electric customer base**

The number of delinquent accounts for the residential customers as of March 2007 of 603 accounts represents 40% of total residential customers. This is an eight percent increase in the number of accounts delinquent for the month of October 2006 of 32%. One can only expect the number of

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delinquent accounts to rise when the variable fuel charge increases. According to YSPSC, most if not all customers eventually do come when threatened with disconnection to pay their bills to avoid the reconnection fee of \$150. However, would commercial and residential customers be able to continue to afford to pay their bill when the new fuel prices go into effect under the new fuel supply agreement with Mobil? If customers experience difficulty settling their utility bills, they would conserve their usage of electricity even further, and when no reprieve is imminent, may be eventually forced to close their accounts with YSPSC.

The commercial class contributes the most revenue to YSPSC, but it is the most adversely responsive to increases in the electric rates. Our review of the number of electric customer accounts at YSPSC as of March 2006 compared to March 2007 shows the residential and government customers continuing to increase, but the commercial customers declined from March to May 2006, then increased slowly beginning in July 2006. The total number of commercial customer accounts of 374 as of March 2007 is still lower than the 382 accounts that existed when the variable fuel surcharge went into effect in March 2006. One can only expect that the number of customers would decrease again with the increases in fuel price under the new fuel supply agreement. If the price of fuel continues to escalate, it would force small businesses to close operation, eventually resulting in less revenue for YSPSC than what is required to pay for diesel fuel.

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#### ***PART 5: Points for Management's Consideration***

##### **A. Based on the unaudited results of the first twelve months under the Variable Fuel Charge, it appears that YSPSC can survive a reduction in the 2006 electric rate.**

We believe that the results of our comparison of the financial information for the twelve months under the variable fuel charge and fiscal year 2005 and 2004, presented as Table 3.1 on page 27, deserve further analysis by management as the points below indicate that it may be possible to reduce the 2006 electric rate and variable fuel charge without too much of a negative impact on YSPSC's operations.

(1) **The cost to YSPSC of fueling its generators is not rising as high as the per gallon fuel prices on which the variable fuel charge is based.** Despite the approximately 97% increase in fuel prices between 2005 and 2006 (see Table 1.3 on page 18), the *increase* in the Corporation's production fuel expense of \$343,093 for the period April 2006 to March 31, 2007 when compared to fiscal year 2005 is *only 16%*. Because YSPSC used fuel prices as the critical component of its push to adopt the 2006 electric rate and variable fuel charge, we feel that the rate should be reduced somehow to reflect more accurately the actual impact of fuel prices on the Corporation's operations.

(2) **The 2006 rate generated significantly less than its revenue potential.** The 2006 electric rate and variable fuel charge increased the average cost per kilowatt hour to customers from approximately 17 cents under the 1997 rate in effect as of December 2004 to 36 cents. That's an increase of 104%. Since customers are paying on average 104% more than what they paid under the 1997 rate, without considering the effects of price on demand for electricity, one would expect YSPSC's revenue to more than double what the Corporation generated in best year of FY2003 of \$2,909,060 which, loosely estimated, would translate to \$5,818,180. But, possibly, as a result of a decrease in demand for electricity brought on by the increase in rates, the 2006 rate only generated \$4,299,949 in electric sales during its first twelve months. This is an increase of only 48% over what was collected in fiscal year 2003. Accordingly, we believe that some percentage of revenue that may be lost if the current rates are reduced might be offset with a resurgence in customer demand for electricity.

(3) **Yet, the 69% increase in electric sales is more than enough to pay for the increase in production fuel expense.** Just the 69% increase in revenue generated by the 2006 rate when compared to FY2004 revenue is \$987,121 more than the increase in production fuel expense in FY2004 as compared to the twelve months of the variable fuel charge. This indicates then that the revenue from the variable fuel charge will ultimately be utilized for something else other than fuel expenses. Expectedly, the extra cash would be used to service the loans from ADB and Yap State mentioned earlier. Perhaps, the Corporation could obtain postponement of the servicing of the Yap State loan until a future period when conditions are more favorable in order to reduce the current electric rates and provide customers some respite from the current high cost of electricity.



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**B. However, to prevent the recurrence of deficits, the Corporation must adopt and implement an ongoing cost reduction/containment program.**

The above point is based on the premise that YSPSC has a mandate to streamline its operations to rid itself of nonessential costs and reduce wherever possible essential costs before raising electric rates. YSPSC should do no less given its mandate to provide public utility services at reasonable costs to consumers. We believe cost reduction must be a priority of the Corporation if it is to fulfill its mandate to become self-sufficient. It would be unrealistic to expect YSPSC to become self-sufficient if costs were not restricted to levels that consumers could reasonably pay through user fees.

This concept is crucial because the Corporation’s mandate was not only to be “self-sufficient” (i.e., to operate without Government subsidies), but also to provide services at “reasonable costs” to customers. Therefore, even if YSPSC had the lowest percentage of indirect costs to total costs when compared to other utility corporations within Micronesia, but its higher direct costs had contributed to the cost of electricity to Yap customers being much higher than other utility companies, than YSPSC would probably not be fulfilling its mandate, especially if the direct costs could be substantially lowered.

Cost containment is also important when discussing the components of the Corporation’s electric rate structure. While no legal limit was placed on the base rate, except that it must be “reasonable”, a cap was placed on the amount of surcharges such as for fuel that the Corporation could add to the base rate. This is because the base rate is supposed to reflect the per-unit marginal costs of the production and delivery of the utility service that is billed to customers. In order to keep the marginal costs affordable, both indirect and direct costs have to be restricted to levels that could be reasonably sustained through user fees without placing undue burden on customers.

**The Corporation’s previous attempt at cost containment has not been very effective.**

We again analyzed revenues and expenses from FY2000 to 2006 including the FY2007 budget request which would come after the FY2005 and 2006 increases in utility revenues. We used the average operating revenues and expenses from 2000 to 2003 as the basis of our comparison to FY2004 and 2005 – the periods when cost containment measures were supposedly in place, and FY2006 and 2007 – the periods where the 2006 rate would be effective and the temporary cost containment adopted in 2004 would be suspended.

**Table 5.1 – Percentage Changes in Revenues and Expenses for Periods Before, During and After Cost Containment Directives issued by Corporations compared to averages from FY00-03.**

	<b>Cost Containment Period (FY04)</b>	<b>During Fuel Surcharge (FY05)</b>	<b>During Variable Fuel Charge (FY06)</b>	<b>Planned Rev &amp; Exp (FY07)</b>
<b>Operating Revenue</b>	<b>(7%)</b>	<b>11%</b>	<b>42%</b>	<b>64%</b>
<b>Operating Expenses</b>				
Production fuel	8%	34%	55%	88%
Salaries & wages	18%	14%	5%	15%

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General & admin	(20%)	(5%)	(9%)	9%
Other production costs	(28%)	(51%)	(29%)	(25%)
Depreciation expense	6%	6%	10%	5%
<b>Percentage changes in Total</b>				
<b>Operating Expenses</b>	<b>2%</b>	<b>10%</b>	<b>21%</b>	<b>38%</b>

YSPSC's Management's Discussion and Analysis for FY2006 audit stated that "the cost containment measures described in FY2004 audit report will continue in effect until operating costs are effectively managed within its revenue". But the table above showed that even with the implementation of the so called "cost containment measures", overall expenses continued to increase. FY07 budget details showed that in addition to fuel expenses, salaries and wages and general and administrative expenses were budgeted for increases in FY07.

**The same pattern continues into the twelve months of the Variable Fuel Charge**

In reference to the financial results of the VFC Year which are presented in Table 3.1 on page 26, we find the same trend of increased spending we discussed in Part 1.

**Direct costs decreased while indirect costs increased.** The above results of activities during the twelve months of the variable fuel charge confirm our concerns discussed previously relating to the lack of a comprehensive cost containment policy adopted in conjunction with the implementation of the 2006 variable fuel charge. Most troubling is that the increases are in indirect costs which are not directly tied to the delivery of services. In comparison with FY05, we find a \$41,400 increase in general and administrative costs during the implementation of the variable fuel charge – an increase of 15%. While salaries and wages is still below the FY05 levels of \$813,323, the resurgence in this expense is due to the filling of vacant administrative positions beginning in fiscal year 2006.

The pattern is obvious even within the VFC year when the first six months (April to September 2006) is compared to the last six months from October 2006 to March 2007:

**Table 5.2 – Financial Results of first six months of under the 2006 Rate compared to the last six months.**

	Apr. to Sept. 2006	Oct. 2006 to Mar. 2007	\$ Change	% Change
<b>Operating Revenues</b>				
Electric Sales	\$2,215,453	\$2,084,496	(\$130,957)	(6%)
Water Sales	211,940	250,868	38,928	16%
	<b>2,427,393</b>	<b>2,335,364</b>	<b>(92,029)</b>	
<b>Operating Expenses</b>				
Production fuel	1,246,542	1,272,675	26,133	2%
Salaries & wages	358,956	396,159	37,203	9%
Other production costs	150,804	122,050	(28,754)	(24%)
General & administrative	153,938	158,066	4,128	3%
Depreciation	399,897	372,260	(27,637)	(7%)
	<b>2,310,137</b>	<b>2,321,210</b>	<b>11,073</b>	
<b>Operating Income</b>	<b>\$117,256</b>	<b>\$14,154</b>	<b>(\$103,102)</b>	

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We are also concerned about the continued reduction in direct costs such as other production costs. The Corporation averaged approximately \$600,000 yearly prior to fiscal year 2003 in this expense category, but since 2003, other production costs have been significantly reduced to below \$400,000 annually. If the reductions cannot be sustained permanently at current levels, than the current reductions in this area may in reality be a deferral of necessary costs to future periods. Unless the Corporation takes seriously its mandate to provide services to the public at reasonable costs, extra revenue brought in by higher rates would merely be offset by ever-increasing administrative costs.

### C. Which areas of its operations should YSPSC examine for potential cost savings?

Presented below are the results of the comparisons between YSPSC's financial information and information for certain utility corporations within Micronesia in response to the second question put forth by the Governor.

#### **General and Administrative Expenses**

Our conclusions of YSPSC G&A expenses as compared to other utility companies were based on a comparison of YSPSC to other three utility corporations, namely Commonwealth Utilities Corporation, Pohnpei Utilities Corporation and Kosrae Utilities Authority. Unfortunately, we were not able to obtain sufficient information from Palau Public Utilities Corporation (PPUC) and Guam Power Authority (GPA) was found to be incomparable to YSPSC in size and setting. Chuuk Public Utilities Corporation (CPUC) on the other hand did not have reliable information that can be used for our comparison. Due to time limitations, we were not able to obtain any financial information on from the utility company in the Marshall Islands.

*Table 5.3 – Comparison of YSPSC's operating expenses to other utilities corporations.*

<b>Components of Operating Exp</b>	<b>YSPSC</b>	<b>KUA</b>	<b>PUC</b>	<b>CUC</b>
Production fuel	44%	42%	40%	40%
Other production costs	12%	3%	19%	16%
Salaries & wages related	19%	20%	N/A	N/A
<b>General &amp; administrative costs</b>	<b>7%</b>	<b>8%</b>	<b>21%</b>	<b>32%</b>
Depreciation expense	18%	27%	20%	12%
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Our review of the accompanying notes to financial statements for Pohnpei Utilities Corporations and Commonwealth Utilities Corporation found that salaries and other expenses indirect to production were presented as general and administrative costs. YSPSC and KUA strictly presented salaries as a separate item on their financial statements, resulting in unreasonably low G&A expenses. For better comparability, we allocated the costs of the administrative and accounting staff to G&A expenses on YSPSC financial reports. (KUA's report did not have sufficient details to allow us to departmentalize salaries and wages). After this adjustment, YSPSC's G&A increased to 14% of total operating expenses, which was still lower than CUC's 15% and PUC's 22%.

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**Salaries and wages**

We believe that YSPSC can realize some savings by reviewing the current personnel level of 80 permanent full-time positions to identify and eliminate nonessential positions. As we saw in our review of prior financial statements for YSPSC, from FY2002 to 2004, the percentage increases in salaries were greater than the percentage increases in fuel purchases. Salaries decreased in FY2005, when the number of the employees decreased from 95 employees in FY2004 to 80 with the termination of temporary contract laborers. The decrease in salaries in FY2006 was due to the departure of YSPSC comptroller who was not replaced until June 2006. Our review found no substantive changes to reduce personnel despite YSPSC's dismal financial situation.

To determine whether the YSPSC's salary expense was reasonable, we compared the Corporation's salary expense to other utility companies in Micronesia as follows:

- (1) Cash payments to employees as a percentage of annual cash receipts
- (2) Salaries as a percentage of total operating expenses

The financial information used in the analysis was obtained from the audited cash flow statements for the utility companies. Therefore, cash payments to employees include payroll for permanent, full-time positions and part-time, or temporary workers, if such payments were classified as salaries and wages in the accounting records. The information also would include all salaries whether funded by operating revenues or outside grants. Information on the total number of employees for the other entities was also not available.

**Table 5.4 – YSPSC's cash payment to employees as a percentage of total cash receipts compared to certain other utility corporations**

**Cash payments to employees as a percent of total cash receipts**

<u>FY</u>	<u>YSPSC</u>	<u>PUC</u>	<u>KUA</u>	<u>CUC</u>
<b>2002</b>	25%	21%	28%	20%
<b>2003</b>	25%	23%	31%	22%
<b>2004</b>	29%	22%	29%	0%
<b>2005</b>	23%	19%	26%	0%
	<b>26%</b>	<b>21%</b>	<b>29%</b>	<b>21%</b>

The results above showed that YSPSC came in second to Kosrae with the highest percentage of cash to employees as compared to total cash received. In other words, YSPSC paid on average 26% of cash collection to employees from FY2002 through 2005. Pohnpei and the CNMI were lower at 21%. The results above could be an indication that either YSPSC had more employees in proportion to its operating revenues than PUC and CUC or the other entities could have a lower percentage of collections to salaries than YSPSC. At any rate, because personnel costs is the second largest expense of the Corporation, next to production fuel expense, the Corporation should analyze personnel costs for potential costs savings in any cost containment measures it undertakes.

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**Table 5.5 – YSPSC salaries as a percent of total operating expenses compared to certain other utility corporations**

**Salaries as a percent of total operating expenses**

<b>FY</b>	<b><u>YSPSC</u></b>	<b><u>PUC</u></b>	<b><u>KUA</u></b>	<b><u>CUC</u></b>
<b>2002</b>	22%	19%	20%	19%
<b>2003</b>	21%	18%	19%	21%
<b>2004</b>	21%	17%	21%	0%
<b>2005</b>	19%	14%	17%	0%
	<b>21%</b>	<b>17%</b>	<b>19%</b>	<b>20%</b>

In our comparison of salaries to total operating expense, YSPSC came out highest overall for all four years compared with an average of 21%. In 2005, YSPSC salary expense comprised 19% or almost one-fifth of its total operating expenses compared to PUC's 14% and KUA's 17%.

Given the results above, we believe that there is room for reductions in personnel. The first course of action that management should take is to adopt a salary freeze and ban creation of new positions. (According to employees, there is a salary freeze currently in effect, but it's not consistently enforced. Some employees are accorded salary increases in the guise of promotions). The salary and hiring freeze should remain in effect until such time that the Corporation has somehow reversed its declining financial position and has managed to fully break even. Unfortunately, in spite of the ban on filling vacancies adopted in July 2004 and reiterated before the 2005 rate increase, we found that YSPSC continued to fill vacancies and had even created new positions, in addition to salary increases.

Reducing the number of full-time positions might prove difficult to implement given the human factors involved. However, through careful planning, management could utilize existing vacancies to shift individuals in nonessential positions to the vacant essential positions and thus over time, begin to reduce its workforce to sustainable levels. Management must realize that it has no choice but to cut costs, therefore, the one-fourth to one-third of cash generated by the Corporation currently being spent on salaries has to be reduced to an affordable level.

**Outer Islands Power Plants**

Continued electrification of the small outer islands using diesel fuel is an expensive venture and one whose continuance needs to be considered carefully by YSPSC management. Everyone recognizes that it is difficult to make the operation viable. In fiscal year 2005, losses as a percentage of revenue for the Outer islands operation was 228%. Even with the substantial increase in electric rates in fiscal year 2006, the Corporation's unaudited financial information for the twelve months ended February 28, 2007, showed that while the Yap Proper electric utility operation was in the black, the outer islands operation was still showing losses for all three power plants.

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The small customer base and the high cost of fuel coupled with the cost of transporting it to the outer islands, plus high maintenance costs of plant assets mean that the cost of energy production could never be borne entirely by customers. YSPSC's former comptroller in his submission of the 2006 budget recommended that the Outer Islands operation be discontinued or be subsidized by the State Government. We share the same sentiment, except that we believe the State cannot afford to be paying indefinitely in excess of \$200,000 a year to support the power plants in Falalop and Mogmog, Ulithi and Falalop, Woleai.

Perhaps State funds could be better invested to explore other alternate energy sources for the outer islands. We understand that YSPSC is currently seeking a grant scheme where coconut oil is used in place of diesel fuel to power generators. This should be the type of programs that YSPSC should invest in for the outer islands. We encourage management to continue to explore other energy options for the outer islands to replace the expensive diesel fuel.

#### **D. What can be done by the State to lower the cost of fuel to the Corporation and the residents to be comparable to the cost of fuel in the other islands in Micronesia?**

It is not lost on anyone who travels to the other Micronesian islands that gasoline and diesel prices are much higher in Yap than anyone else in Micronesia. While fuel prices in the other islands never reached the \$4 mark at the height of the escalation of fuel prices in the summer of 2006, prices in Yap went over the \$4 mark and has stayed there ever since. Even now in April 2007, fuel prices are once more climbing. Who is to protect the residents of Yap from price gouging?

Despite the high prices at local gas stations, until April 2007, it appeared that YSPSC was shielded from these unreasonably high fuel prices. Now with the new fuel supply agreement with Mobil, YSPSC's customers would be faced with a significant increase in their utility rates that is possibly unmatched by any other islands in Micronesia. Why has nothing been done to curtail the increase in fuel prices in Yap? In this regard, we believe that the \$300,000 that the State Legislature spent to pay for resident's utility bills for only four months could have been better spent to provide a more permanent solution to the problem of high fuel prices.

## **Yap State Public Service Corporation Comments to Audit Report**

The Board and Management of Yap State Public Service Corporation would like to thank the Yap State Public Auditor's Office for the report on the questions raised regarding the justification of electric rate increase and the company's comparability of its administrative cost to other similar industry.

While YSPSC is generally in agreement with the Report's conclusions, it is not in agreement with the breadth of most of the discussions that lead up to the conclusions. Therefore, YSPSC will present its point of view on the two issues raised in the Report and go on to discuss its internal business analysis using an integral approach that would show the resilience of YSPSC.

**Question 1** – Since January 1, 2005, are the increases in electricity (utility rates) justified and proportional to the increases in fuel prices over this time?

For eight years since 1997, the Board of YSPSC, being mindful of the general dismal state of economic condition of the State and thus its ratepayers, did not increase its rates. However, during this period the cost of diesel, spares/tools, repairs and maintenance, payroll, and shipping cost were all steadily escalating. More than 50% of the company's operating expense was production fuel. In 1997, the cost of a gallon of diesel was \$0.95 and the gallon rate reached \$1.74 by January 2005. During these years, the company was operating at a loss, but managing to maintain the quality of its services until it became inevitable to increase its electric rate in January 2005. However, the projection of revenue was short and another increase was proposed and implemented the following year. And because world fuel prices have become quite volatile, YSPSC introduced a variable fuel charge to the revised electric rate. (As an indication that volatile fuel prices was similarly impacting the operation of utility providers in the region, other sister utilities followed suit in including a variable fuel charge in their electric rate structures.)

Based on the current fuel supply agreement with Mobil, cost of diesel has reached \$3.56 per gallon in September 2007. Calculated under the present variable fuel charge formula, this per gallon diesel cost in September will translate into a fuel charge of \$0.254 per kWh for Yap Proper and \$0.410 per kWh for the outer island electric customers. Since the 1997 per gallon diesel price of \$0.95, this expected diesel price in September reflects an increase of 275%! A proportional increase can be reflected in billed electrical consumption. A residential ratepayer who was consuming 100 kWh a month in 1997 was paying \$19.00 then and assuming a constant consumption the same ratepayer will be paying a total of \$38.00 in combined base kWh charges and fuel charges in September 2007. In the ten-year period, that's a \$19.00 increase or 100%. On the other hand, a commercial ratepayer with a 1,000 kWh consumption a month in 1997 was paying \$207.50 then and by September 2007 will be paying a combined total of

\$438.00 for the same amount of kilo-watt consumption. The increase would be \$230.50 or 111%.

**Question 2** – Are administrative costs as a percent of the total operating expense excessive, relative to other utilities of similar size and setting?

YSPSC is pleased to know that the Audit Report considers that YSPSC's general and administrative expenses as a percent of the total operating expenses was the lowest among the other utilities like Commonwealth Utilities Corporation and Pohnpei Utilities Corporation.

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The management has developed the following analysis of the Corporation which presents the challenges faced by the company, strengths and opportunities for growth, and planned improvements being undertaken to improve YSPSC's efficiency.

**Challenges:**

YSPSC has been challenged by typhoons which had caused significant damages to YSPSC infrastructures and systems and it has also faced a major challenge from the general downturn of economic activities in the State which has resulted in the closure of companies and in turn affected employment and consumer activities. These challenges have placed undue pressure on YSPSC's operating costs. In terms of typhoons, YSPSC has benefited from FEMA financial assistance and the diligence of its workforce. The lack of economic activity is a challenge that is more difficult to overcome. It presents a situation where YSPSC's customer base has remained stagnant. The slow economy is hindering business investments and expansions which means that the demand for utilities is not increasing. The slow economy is also responsible for the conservation of utility consumption in all categories of YSPSC utility customers. This has resulted in stagnant income for YSPSC. Simply put, a stimulation of the economy can enable YSPSC to achieve greater efficiency in the production of its utility services.

Public utilities like YSPSC operate on high fixed cost and high variable cost, both of which happen to be priced based on world market. This means YSPSC has no control of these costs. This is another challenge that somehow makes our company reactive rather than proactive in its decision regarding prices of its services. For the company to break even, it needs a certain large number of customers, but since obtaining a large customer base has yet to be achieved our average cost per customer remains high.

YSPSC has yet to see the increase of the number of consumers that can enable YSPSC to break even. YSPSC remains hopeful that the State economy will improve. Meantime, YSPSC will continue to utilize the outstanding skills of its personnel to maintain the capital assets of its utilities to assure that that once consumption picks up, YSPSC will be ready to satisfy the increased demands in the Yap proper and in other islands.



In terms of the variable costs, the major one is fuel. Unfortunately, fuel price is controlled by global factors. Every time YSPSC needs to purchase fuel, the supplier dictates the price. To avoid being frequently at the mercy of dictated prices, YSPSC needs to build up its fuel inventory. Again, unfortunately, YSPSC presently does not have the sufficient storage facility nor the financial capacity to invest in expanding its storage capacity which would be a costly undertaking at this point. While YSPSC may not have sufficient funds to enable it to maintain a large fuel inventory to avoid the adverse effects of volatile fuel prices, at least the company continues to be able to pay for its dollar obligations to assure the good consumer and credit name for YSPSC.

Under the current rate structure, there is a transfer of the variable cost in electric utility to the consumers. While this may sound harsh, YSPSC does not have much choice. Besides, many companies in the world has this practice when a certain external variable cost exist that the billing company has no control over and such variable cost is too significant to be absorbed by the company. The transfer of the cost is certainly not to gain profit or pay for other fixed costs, but simply to pay for the variable cost. This is the situation for YSPSC. Of course, the situation can improve and the transferred cost to customers could decrease when distributed among a larger customer base in the event that the economy picks up, or a decrease could also be realized in the event, although unlikely for now, that world fuel prices fall.

**Strengths:**

One of the prominent strengths of YSPSC is the well-maintained and quality facilities and infrastructures. YSPSC has facilities and infrastructures that are ready for expansion anytime the economy picks up. Should the state decide to open up to new international investments, YSPSC will be ready to meet the demand.

YSPSC maintains a well-trained and highly qualified on-site maintenance and engineering team whose training has been helpful in dealing with calamity-related and depreciation-related problems in our markets.

The attitude of the YSPSC personnel is a great asset. They swallowed the bitter pill of salary freeze so as to share in the burden of increasing cost to consumers and of keeping the company afloat. The timely and continuous delivery of service even before our company meets its lowest average cost or economies of scale is also noteworthy.

**Planned Improvements:**

There is certainly room for improvements at YSPSC. The Board and Management acknowledge this fact. Strategic management in terms of long term goal setting, financial management along areas of cash management and short term investment, operations management specifically inventory management and human resource management need to be developed and implemented. At this critical juncture, public relations management is essential to inform and consult the public in a manner that would make price decisions and company directions clear to the consumers.

**Conclusion:**

YSPSC has been in a financial challenge for years. The rising cost of power largely due to fuel costs is unavoidable because of the great dependency on diesel fuel in our production process. This is not only a problem and a dilemma for YSPSC, but a problem and dilemma that is Pacific-wide and especially true in Micronesia. The Board and Management recognize this and therefore continue to strive to select the most efficient direction for YSPSC to tread. The identification and selection of alternative energy sources to be studied and explored for the benefit of our customers is believed to be an efficient direction for YSPSC. To carry out this effort, YSPSC has tapped the expertise of the European Development Fund for funding a renewable energy pilot project for the outer islands of Yap. However, in any case, YSPSC remains committed to providing sewer service, potable water, and uninterrupted electric service to the people of Yap at the most reasonable price it can afford.