

# Agenda Report

November 6, 2006

**TO:** City Council

**THROUGH:** Municipal Services Committee

**FROM:** City Manager

**SUBJECT:** APPROVAL OF A STRANDED INVESTMENT RESERVE FUND UTILIZATION PLAN TO MITIGATE SHORT AND LONG-TERM STRANDED ENERGY COSTS

## RECOMMENDATION

It is recommended that the City Council:

1. Approve Pasadena Water and Power's (PWP's) proposed plan (The Plan) to utilize funds in the Stranded Investment Reserve (SIR) to mitigate stranded investment (SI) and provide funds for electric rate stabilization as follows:
  - A. **Direct Defeasance:** Commit \$80 million to offset debt service requirements for Intermountain Power Plant (IPP) bonds from FY 2008 through FY 2023 including \$6.5 million for FY 2007
  - B. **Contingent Mitigation:** Retain approximately \$50 million in the Reserve Fund to mitigate variable and unexpected SI resulting from very low market conditions, increases in power costs or unplanned outages associated with IPP or the Palo Verde Nuclear Power Plant (Palo Verde); and
  - C. **Refund Excess Funds:** Transfer the remaining \$15 million in the Reserve Fund to the Power Cost Adjustment Charge Fund (PCACF) and "refund" this amount to customers by deferring increases to the Power Cost Adjustment Charge (PCAC) during the remainder of fiscal years 2007 and 2008.
2. Authorize the City Manager to enter into a Prepay Agreement with Intermountain Power Agency (IPA) to defease approximately \$80 million of outstanding debt from FY 2008 through FY 2023, the timing of which is based on the economic feasibility for retirement of each selected bond issue.

**UTILITY ADVISORY COMMISSION:** Reviewed proposal and agrees in concept.

## **BACKGROUND**

The Stranded Investment Reserve (SIR) was established in November of 1997 to ensure that PWP could sell energy at market-competitive rates. The impending deregulation of the electricity market was expected to drive the market price of energy much lower than PWP's existing long term commitments to IPP and Palo Verde. This would cause the cost of these long-term commitments for energy to be above market or "stranded" until the majority of the debt associated with these resources was paid off in FY 2023. The SIR was to be utilized to cover the difference between these two costs.

In addition, the deregulated energy market provided for "open" access for PWP customers. City Council approved open access for PWP's electric customers, thereby potentially allowing customers within PWP service territory to obtain electric service from competing service providers. Deregulation legislation provided for implementation of a Competitive Transition Charge (CTC) when open access was granted to allow utilities to recover stranded costs. The City's intent when establishing the stranded investment surcharge (SIS) was to recover these costs.

During FY 2002, the Reserve balance reached a level deemed adequate to defease the projected SI from FY 2002 through FY 2023. In July 2002, the SIS was discontinued and the surcharges collected from customers during that fiscal year were refunded. Since then, \$27.1 million has been earned in interest and \$32.3 million has been withdrawn from the Reserve to pay costs deemed stranded based on then-current energy prices. The Reserve balance was \$145.5 million at June 30, 2006 after withdrawal of \$359,000 in FY 2006.

## **STRANDED INVESTMENT RESERVE ANALYSIS**

As shown in the table below, the remaining SI for FY 2007 to FY 2023 is currently estimated to be approximately \$89 million in FY 2007 dollars, assuming a return of 4.25% on SIR fund. Due to increased actual and forecast average market energy prices, the actual withdrawal from SIR through 2006 has been about \$32 million less (approximately one-half) than originally planned in the FY 2000 base case. The projected SIR withdrawals through FY 2023 are \$52 million less than originally planned, as summarized in the table below. Based on current market price forecasts, no withdrawals from the SIR are expected prior to FY 2009.

<b>Stranded Investment Summary</b>					
<b>Fiscal Years</b>	<b>Current Estimate</b>		<b>Original Plan</b>		<b>Difference</b>
	<b>Avg Mkt (¢/kwh)</b>	<b>Amount (\$000)</b>	<b>Avg Mkt (¢/kwh)</b>	<b>Amount (\$000)</b>	<b>Amount (\$000)</b>
FY 2003-06 Actual	4.49	32,252	3.36	64,297	-32,045
FY 2007 Budget	5.97	0	3.60	11,524	-11,524
FY 2008-23 Forecast*	5.12	88,970	3.74	129,428	-40,458
<b>Remaining SI</b>	<b>5.17</b>	<b>88,970</b>	<b>3.73</b>	<b>140,952</b>	<b>-51,982</b>

\*Amount is net present value (NPV) in FY 2007 dollars at 4.25% discount rate

Attachment A is the most recent Stranded Investment Update presented to the Municipal Services Committee in May 2006. The attachment presents detailed information on the stranded investment calculation, cash flows since inception of the Reserve, and projected stranded costs and required cash flows. Attachment A also provides present value figures computed using 6% (historical), 5% (updated), and 4% (low case) interest rates for SIR fund returns, whereas the information in the table above is based on current projections of 4.25% returns to reflect the current rate of return on the investment portfolio.

Assuming actual market prices and production costs follow current projections, the SIR currently has more funds than necessary to mitigate estimated stranded costs through FY 2023. If no action is taken and use of the SIR adheres to the original intent, the Reserve is projected to have a substantial balance in FY 2023 (approximately \$110 million).

### **STRANDED INVESTMENT RESERVE FUND UTILIZATION PLAN**

PWP is proposing to implement a Stranded Investment Reserve Fund Utilization Plan as outlined below:

#### **A. Direct Defeasance**

Commit \$80 million to offset debt service requirements for Intermountain Power Plant (IPP) bonds from FY 2008 through FY 2023 including \$6.5 million for FY 2007 to permanently reduce average retail energy rates by approximately 0.5¢/kWh.

This proposed use of the direct defeasance funds includes the establishment of an escrow to fund a formal defeasance program for PWP's pro-rata share of outstanding bonds associated with IPP. The plan will be implemented utilizing the defeasance and prepayment program offered by the Intermountain Power Agency (IPA.) PWP staff has analyzed outstanding IPA debt and has identified

individual bond issues for which an economic benefit would be realized to PWP through early retirement. Annual deposits to the escrow fund would average approximately \$6.5 million, although actual payments may vary depending on the economic benefits realized by retirement of specific bonds. This \$6.5 million represents approximately 30% of PWP's annual debt service requirement for IPP debt.

The Department of Finance and PWP will partner to determine the ideal timing and selection of specific bond issues for defeasance to make best use of Reserve funds while minimizing impact on the City's investment portfolio and continuing to maximize investment earnings. Initial implementation of the defeasance and prepayment program is expected to require three to four years to minimize program implementation costs. Deposits to the escrow fund each year may vary based on timing and maximization of economic impact.

#### **B. Contingent Mitigation**

Retain approximately \$50 million in the Reserve Fund to mitigate variable and unexpected SI resulting from very low market conditions, increases in power costs or outages associated with IPP or Palo Verde. Duration of investments to support contingent mitigation will be structured to meet cash flow requirements.

This portion of the proposal is a continuation of the stranded investment strategy in place since 2003. The primary use for this portion of the Reserve is to protect ratepayers from increased energy charges during those periods of time when PWP's long term contract prices exceed market prices. Planned withdrawal of funds from the Reserve protects ratepayers from market fluctuations by providing a "stabilization" effect.

#### **C. Refund Excess Funds**

Transfer the remaining \$15 million in the Reserve Fund to the Power Cost Adjustment Charge Fund (PCACF) and "refund" this amount to customers during the remainder of fiscal years 2007 and 2008. The transferred amount would span two years with \$10 million in FY 2007 and \$5 million in FY 2008 to minimize impact on the City's investment portfolio. These funds will be applied against costs which would otherwise be billed to customers.

### **EVALUATION OF ALTERNATIVE ACTIONS**

In developing the proposed stranded investment defeasance plan, PWP considered several alternative actions to the plan proposed herein. Alternate considerations included:

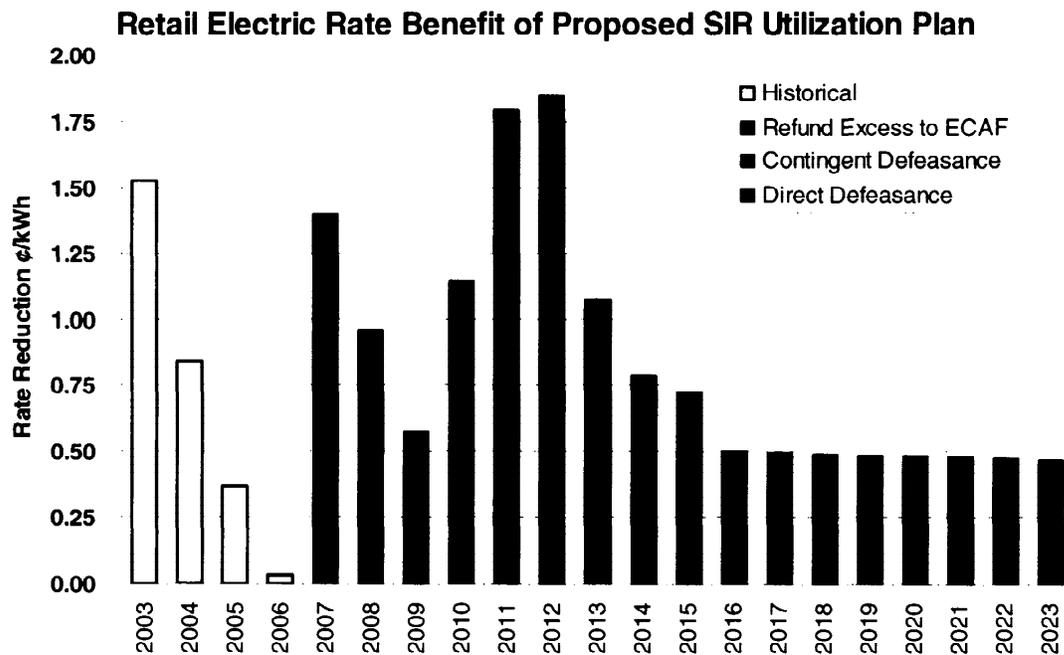
- **Take no action.** Based on currently projected market prices and production costs, the balance in the SIR would be approximately \$110 million in 2023 when the outstanding debt related to IPP and Palo Verde have been paid off. In the meantime, the Energy Cost Adjustment Charge would be increased as required to offset increased energy costs.

- **Refund the entire Reserve balance.** This alternative would shift all stranded investment uncertainties and risks to future electric customers. In addition, if the entire Reserve balance was refunded, PWP would recommend that the City rescind its open access policy for electric customers to reduce exposure to competitive pressures.

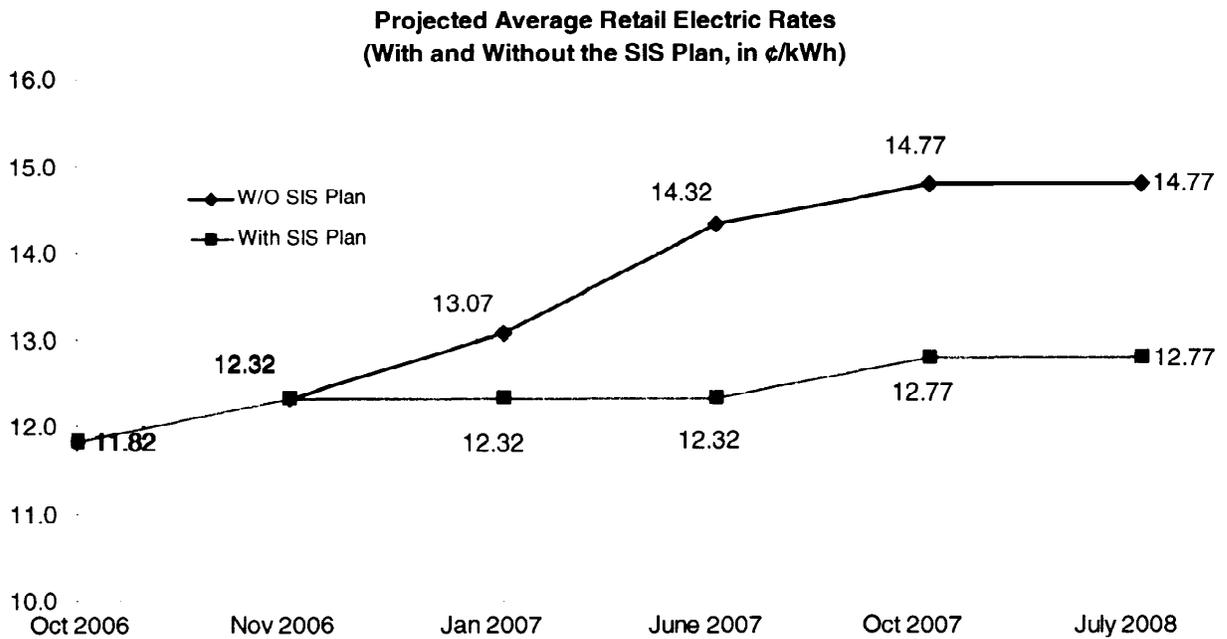
The Plan is consistent with the SI provisions in the Light and Power Rate Ordinance and the original imposition of the SIS.

**IMPACT OF PROPOSED PLAN ON RETAIL ELECTRIC RATES**

The graph below depicts the retail rate benefit (deferred increase or rate reduction) of the proposed Plan, assuming that the Direct Defeasance offsets an average of \$6.5 million annually of IPA debt from FY 2007 through FY 2023 and the Contingent Defeasance is used to mitigate any residual SI per the current forecast of annual SI.



If The Plan is not implemented, PWP will be required to implement several increases to the Power Cost Adjustment Charge over the next two years to generate additional energy revenues of approximately \$20 million. These increases will restore the balance in the PCACF account and maintain the minimum required level of \$8 million in the Reserve. The chart below illustrates the projected average electric rates with and without the proposed plan.



**Note:**

Rates shown reflect planned PCA increases in November 2006, January 2007, and June 2007 to cover increasing energy supply costs, and the approved October 2007 Distribution rate increase. Other rates are assumed to remain constant.

Attachment B illustrates the bill impact of the projected January 2007 and June 2007 power cost adjustments without the SIS Plan for various categories of residential and commercial customers. With the adoption of the SIS Plan, the projected January 2007 and June 2007 power cost adjustments will not be necessary and there will be no change in the current customer monthly bill for energy costs. It is noteworthy that the projected impact relates only to the energy charge component of the bill.

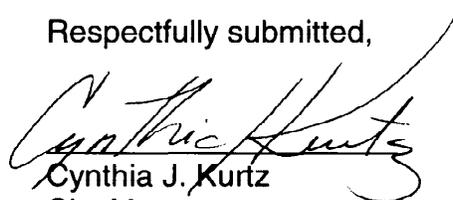
**FISCAL IMPACT**

The fiscal impact of The Plan will be to reduce PWP's exposure to stranded costs by lowering the cost of energy associated with PWP's long term contracts with IPP and retaining Reserve funds to pay any remaining above market energy costs as they occur. The reduced energy costs will be passed along to the customers through offsets to future increases in the Energy Cost Adjustment Charge component of rates.

Withdrawals from the Reserve to reduce energy rates will cause a dollar-for-dollar reduction in net income to the Power Fund and may impact the General Fund Transfer. Net income will be lower as offsets to future energy charge increases also offset revenues generated by this component of the rate. Presuming that all energy charge costs would be billable, the transfer of \$15 million to the Energy Cost Adjustment Charge Fund (ECACF) would offset potential additional revenues by an equal amount. Based on the current rate for the General Fund Transfer of 8.35% and subject to net income limitations, a maximum of \$1.2 million in additional General Fund Transfer revenues will be offset during fiscal years 2007 and 2008.

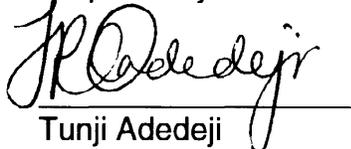
The impact to the General Fund Transfer for the other components of the plan are more difficult to quantify since the Direct Defeasance of debt service requirements does not have a comparably direct impact on revenues or cost reductions and cash flows from the Contingent Mitigation cannot be determined at this time.

Respectfully submitted,



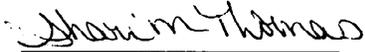
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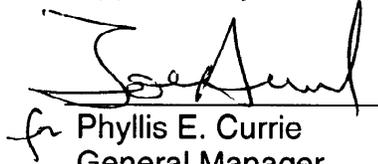
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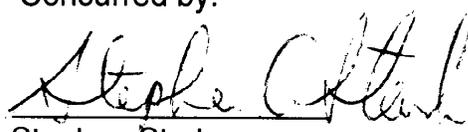
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City Attorney

Concurred by:



Stephen Stark  
Director of Finance  
City of Pasadena

## ATTACHMENTS

Attachment A: Stranded Investment Update - 2006

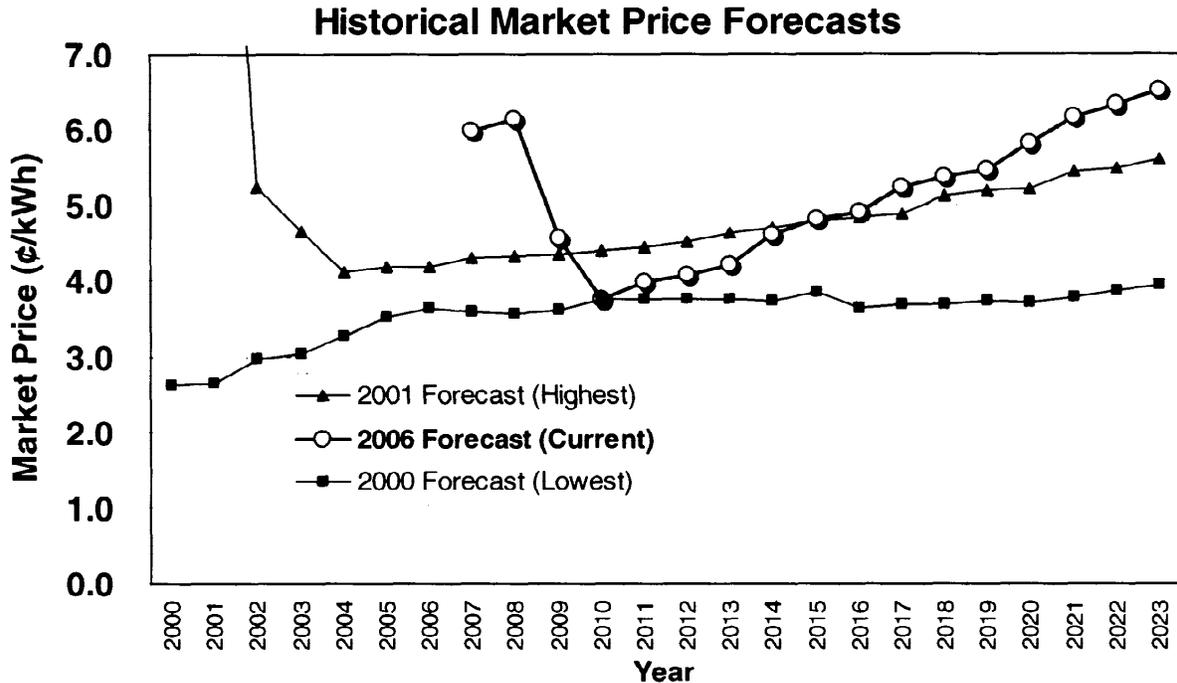
Attachment B: Customer Bill Impact of Projected Power Cost  
Adjustments without the SIS Plan

# Attachment A

## Stranded Investment Update Presented to Municipal Services Committee May 17, 2006

### 2006 Market Forecast

Pasadena Water and Power (PWP) has contracted with Global Energy Decisions (GED), formerly Henwood Energy Services Inc., to produce an updated market energy price forecast each year since 1998 to enable PWP to update the Stranded Investment (SI) calculations. GED's Spring 2006 market price forecast is shown below in comparison to their highest and lowest forecasts produced for PWP since 1998, which occurred in their Spring 2001 and Spring 2000 forecasts, respectively.



Some key observations and assumptions in the forecast

- Natural gas prices and volatility continues to be high. California current \$6.00 to \$8.00/mmbtu average annual natural gas prices are projected to decline over the next 3 years to prices in the range of \$4.53/mmbtu in 2009, then steadily increasing to \$6.34/mmbtu in 2023 (prices in constant 2007 dollars);
- Peak load growth is forecast at 1.91% annually, down slightly from last year;
- While the generation boom has created excess regional capacity and low profit margins for suppliers, excess reserve capacity is forecast to steadily decline;

**Attachment A**  
**Stranded Investment Update to Municipal Services Committee May 17, 2006**

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- Certain local areas including Southern California experience tight reserves during peak hours due to transmission constraints, but the forecast assumes these constraints are addressed over time on an economic basis;
- As a result of Renewable Portfolio Standards and higher gas prices, more renewable and coal resources included in the out years (less gas demand).

***Long-Term Stranded Investment Calculation – Base Case***

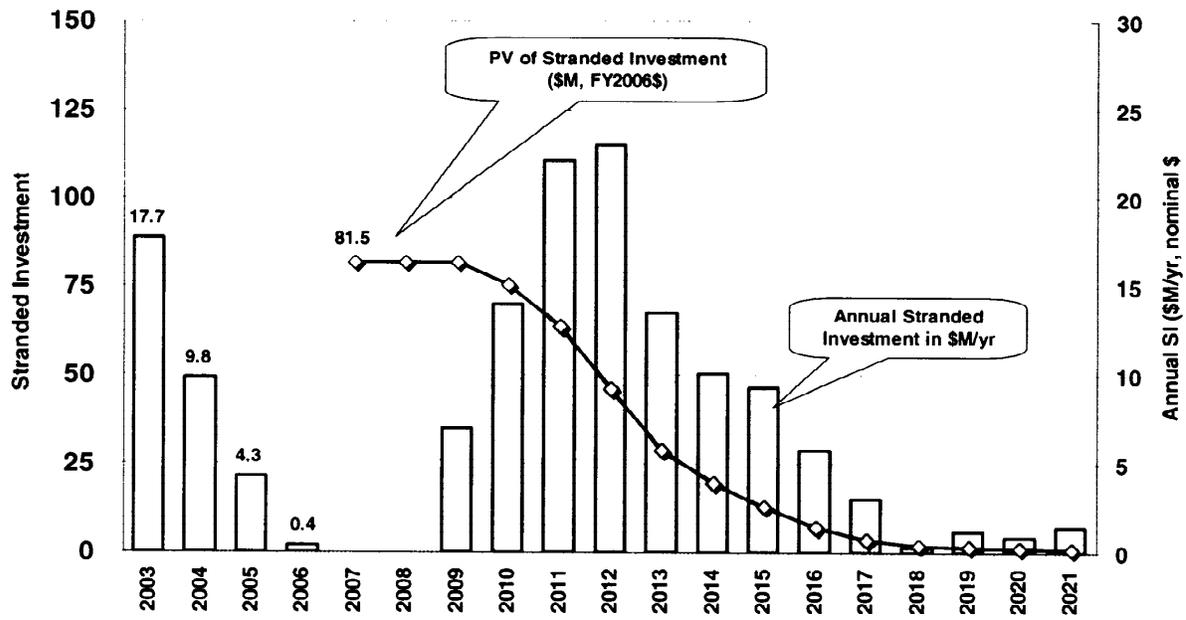
The method used to calculate the long-term stranded investment (SI) was adopted by the City Council in 1997. It compares the forecast delivered cost of energy delivered to PWP from the Intermountain Power Plant (IPP) and the Palo Verde Nuclear Generating Station (Palo Verde) to the forecast market value of this energy in the local Southern California market (SP15).

In addition to generation costs, the cost of delivering IPP to SP15 over the Southern Transmission System (STS) is also included in the long-range SI estimate, because STS may be deemed a generation tie-line (rather than network transmission) and therefore should be included in the cost of generation.

The target SI Reserve Fund (SIR) balance is calculated by taking the present value (PV) of each year's estimated stranded cash flows from the subsequent fiscal year (i.e., FY2007) through FY2023 in current year dollars using a 6.0% discount rate.

The graph below depicts the 2007 Base Case annual SI calculations (read on the right-hand scale), and the corresponding PV of remaining SI at the beginning of each fiscal year (read on left-hand scale). The SI PV for FY2007-2023 has been estimated at approximately \$81.6 million in FY2007 dollars. This means that, assuming a return of 6% on SIR fund investments, the SIR balance must be approximately \$81.6 million at the beginning of FY2007 to fully defease the estimated stranded investment. Assuming a more likely investment return of about 5%, the SIR fund balance target would be approximately \$86 million.

**Attachment A**  
**Stranded Investment Update to Municipal Services Committee May 17, 2006**

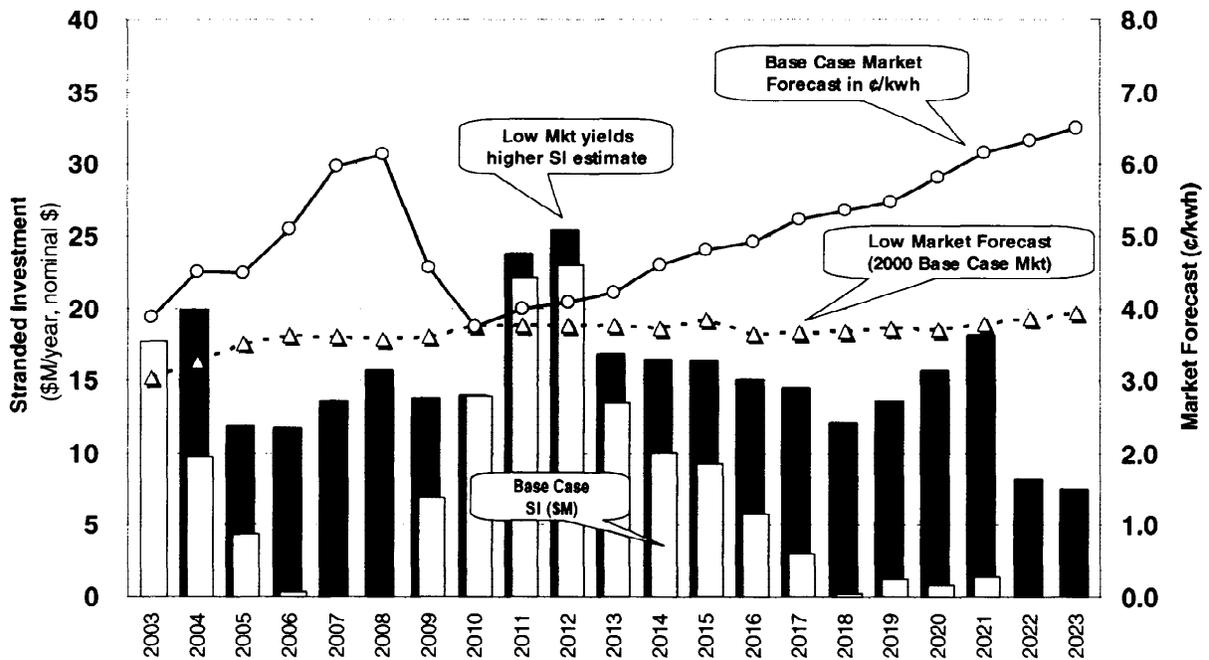


**PV of remaining stranded investment is \$81.6 million  
in FY2007 dollars assuming 6% rate of return.**

**Long-Term Stranded Investment Calculation – “Low Market” Case**

The graph below depicts the market prices and annual SI for an assumed “Low Market” scenario with market prices set equal to the 2000 Base Case projection, which is the lowest market forecast recorded since 1996. The figure also depicts the Base Case market forecast and annual calculations of SI.

For the Low Market case, the FY2007-2023 SI net present value (NPV) has been estimated at approximately \$175 million in FY2007 dollars, assuming a 6% discount rate. The SIR is not funded sufficiently to pay down stranded costs in the event market prices follow the Low Market scenario. Although market prices are likely to be depressed periodically, with prices in individual years following the Low Market projection, it is extremely unlikely that prices would follow the Low Market trend for the extended durations of time required to fully deplete the SIR fund.



**Attachment A**  
**Stranded Investment Update to Municipal Services Committee May 17, 2006**

**Projected FY2007 SIR Withdrawal**

The projected FY2007 withdrawal from the SIR was determined using the same method that was used to calculate the long-term SI and the actual withdrawals in prior years. As shown in the table below, the projected FY2007 SIR withdrawal is zero due to the fact that there are no projected stranded costs associated with IPP or Palo Verde. Assuming no funds are withdrawn from the SIR, there will be no associated decrease in PWP's retail energy charge rate and the SIR fund balance will *increase* by about \$7 million during FY2007 from estimated interest earnings, assuming a 5% return.

<b>FY2007 Generation Cost for Base Load Resources (\$000) [1]</b>			
	<b>IPP</b>	<b>Palo Verde</b>	<b>Total</b>
Net Debt Service	17,051	665	17,715
Other Fixed Costs	18,756	1,729	20,485
Variable Costs	268	465	732
Delivery Costs [2]	4,134	0	4,134
<b>Total Cost (\$000)</b>	<b>40,209</b>	<b>2,859</b>	<b>43,067</b>

<b>Market Value of Delivered Energy</b>			
	<b>IPP</b>	<b>Palo Verde</b>	<b>Total</b>
Delivered Energy (MWh)	756,993	70,298	827,291
Energy Value (\$/MWh) [3]	59.71	59.71	59.71
<b>Energy Value (\$000)</b>	<b>45,199</b>	<b>4,197</b>	<b>49,397</b>

<b>Stranded Cost (\$000)</b>	<b>0</b>	<b>0</b>	<b>0</b>
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- 1) Based on IPP Final FY2007 date May 2006 and PV Final budget dated 1/6/2006.  
 2) Stranded Investment calculations include 98/113 of the STS line used for IPP deliveries.  
 3) Based on Spring 2006 Global Energy Decisions long-term market forecast for SP15.

<b>Rate Reduction for FY2007</b>	
Projected Withdrawal (\$000)	<b>0</b>
Forecast Retail Sales (GWh)	<b>1,190</b>
<b>Rate Impact ¢/kwh</b>	<b>0.00</b>

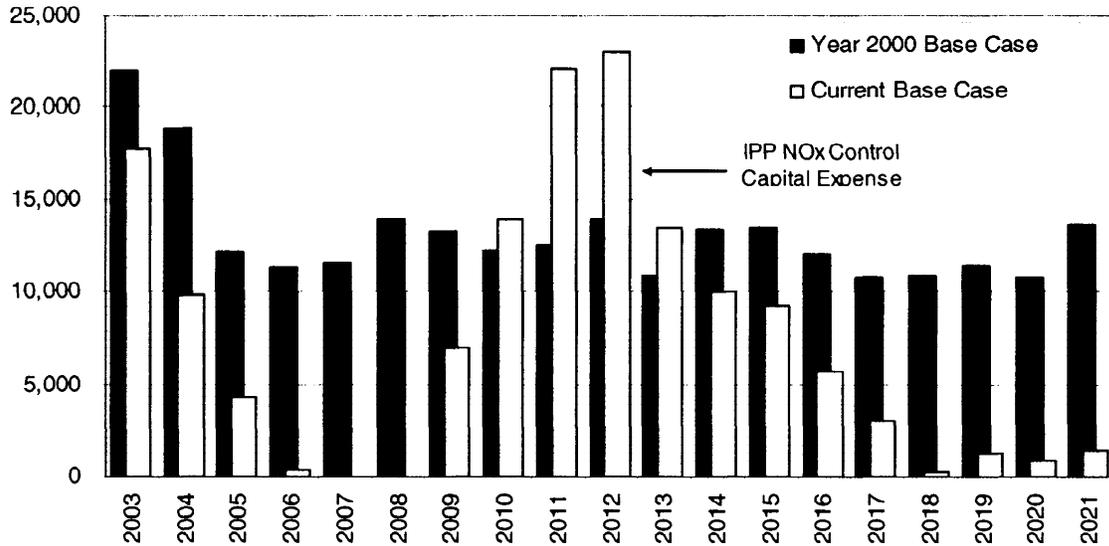
← *FY 2007 Withdrawal*  
 ← *No rate reduction*

By way of comparison, PWP obtained a \$61.92/MWh market quote for FY2007 power in SP15 on May 10, 2006. This market quote was slightly than the \$59.71/MWh forecast market value and leads to the same conclusion regarding the projected SIR withdrawal for FY2007.

**Comparison of SI Cash Flow and Remaining SI Estimates**

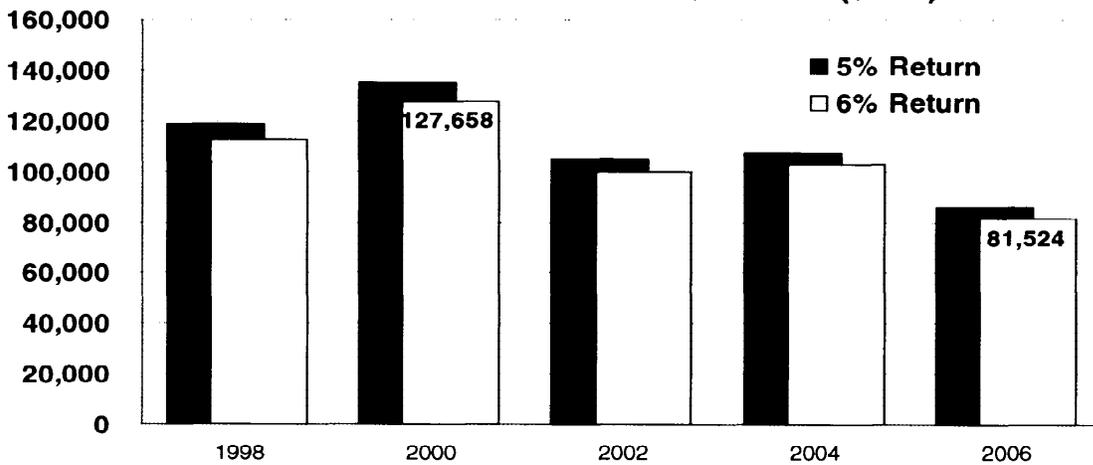
The following chart compares the SI cash flows estimated in the Year 2000 Base Case versus the current estimates. As of the end of FY 2006, \$64 million would have been withdrawn from the fund under the Year 2000 Base Case, whereas only \$32 million will actually have been withdrawn.

**SI Cash Flow Projections (\$000)**



The following chart compares the present value of remaining SI as of July 1, 2006 based on SI cash flows from prior year estimates performed since 1998. As indicated on the chart, while this year's calculation indicates a reserve balance of \$81.5 million is required, the equivalent value based on the year 2000 estimate would be \$127.7 million.

**PV of FY2007 - FY2023 in \$FY2006 (\$000)**



Note that these variations in cash flows reflect changes in the forecast costs of IPP and Palo Verde over time as well as the updated market forecasts.

## Attachment B

### Customer Bill Impact of Projected Power Cost Adjustments Without the SIS Plan (Taxes Inclusive)

Selected Customer Type	Current Monthly Bill (Nov. 06)	Projected Jan. 2007 PCA Increase Of 0.75 ¢/kWh		Projected June 2007 PCA Increase Of 1.25 ¢/kWh	
		Projected Average Annualized Monthly Bill	Change From Current (\$)	Projected Average Annualized Monthly Bill	Change From Current (\$)
Residential Customer, 300 kWh per month	\$40.25	\$42.77	\$2.52	\$46.97	\$6.72
Residential Customer, 500 kWh per month	\$81.54	\$85.74	\$4.20	\$92.74	\$11.20
Residential Customer, 750 kWh per month	\$124.66	\$130.96	\$6.30	\$141.46	\$16.80
Residential Customer, 1000 kWh per month	\$158.92	\$167.32	\$8.40	\$181.32	\$22.40
Small Commercial & Industrial Customer, 2000 kWh per month	\$294.45	\$311.81	\$17.36	\$340.74	\$46.29
Small Commercial & Industrial Customer, 4000 kWh per month	\$583.19	\$618.46	\$35.27	\$677.25	\$94.06
Medium Commercial & Industrial Customer; 100 KW; 35,000kWh / month	\$4,739.37	\$5,050.67	\$311.30	\$5,569.49	\$830.12
Medium Commercial & Industrial Customer, 250 KW; 35,000 kWh / month	\$6,235.62	\$6,546.91	\$311.29	\$7,065.73	\$830.11
Large Commercial & Industrial Customer, 500 KW; 200,000 kWh/ month	\$25,603.17	\$27,366.16	\$1,762.99	\$30,304.48	\$4,701.31
Large Commercial & Industrial Customer, 1,000 KW; 450,000 kWh	\$54,729.46	\$58,654.36	\$3,924.90	\$65,195.87	\$10,466.41