RISK & UNCERTAINTY ANALYSIS BRIEFING ELECTRIC with the second **RESOURCE PLANNING**

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October 1997

Summary of Sensitivity Analysis

Sensitivity analysis was performed to determine the critical uncertain factors that may impact resource planning decisions. Each of the factors investigated were varied individually while all other parameters were held constant. Optimal expansion plans were developed for each of the following uncertain factors:

- Increased Forced Outage Rates of Existing Base Load Units
- Reduced Economy Coal Purchases
 - High and Low Construction and O&M Costs and Escalation Rates
 - High and Low Fuel Costs

- High and Low SO₂ Allowance Costs
- No Probable Environmental Costs

The evaluation indicates that the expansion plan is relatively insensitive to all uncertain factors, except for probable environmental costs. If no probable environmental costs are included, the least cost plan involves the addition of combustion turbines instead of combined cycle units in 2002. Since the selection of the type of unit to be built in 2002 is a near term decision, it was included in the risk analysis.

The results also showed that the expansion plan is relatively insensitive to fuel prices. However, since fuel costs are a large component of the total cost, it was also included in the risk analysis.

Optimized Expansion Plans For Various Sensitivities (Probable Environmental Costs Included)

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	Base	· · · .			Sens	itivity				
			Reduced	High Const.	Low Const.					
	Nominal	Increased	Economy	and	and	High Fuel	Low Fuel	High SO2	Low SO2	WOPEC
Year	Conditions	F.O.R	Purchases	O&M Costs	O&M Costs	Costs	Costs	Costs	Costs	Costs
Tedi	Conditions	1.0.1	T UIGHAGGG	Odin Costs		60313	00313		60313	003(3
1997	Sx IMP-16 MW	Sx IMP-16 MW	Sx IMP-16 MW	Sx IMP-16 MW	Sx IMP-16 MW	Sx IMP-16 MW	Sx IMP-16 MW	Sx IMP-16 MW	Sx IMP-16 MW	Sx IMP-16 M
	PP-140 MW	PP-140 MW	PP-140 MW	PP-140 MW	PP-140 MW	PP-140 MW	PP-140 MW	PP-140 MW	PP-140 MW	PP-140 MW
1998	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW
	CIPS PP-150 MW	CIPS PP-150 MW	CIPS PP-150 MW	CIPS PP-150 MW		CIPS PP-150 MW	CIPS PP-150 MW	CIPS PP-150 MW	CIPS PP-150 MW	CIPS PP-150
1999	2-KGR-7 MW	2-KGR-7 MW	2-KGR-7 MW	2-KGR-7 MW	2-KGR-7 MW	2-KGR-7 MW	2-KGR-7 MW	2-KGR-7 MW	2-KGR-7 MW	2-KGR-7 M
· .	TS IMP-80 MW	TS IMP-80 MW	TS IMP-80 MW	TS IMP-80 MW	TS IMP-80 MW	TS IMP-80 MW	TS IMP-80 MW	TS IMP-80 MW	TS IMP-80 MW	TS IMP-80 M
	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW	PP-80 MW
2000	PP-100	PP-100	PP-100	PP-100	PP-100	PP-100	PP -100	PP-100	PP-100	PP-100
2001	PP-190 MW	PP-190 MW	PP-190 MW	PP-190 MW	PP-190 MW	PP-190 MW	PP-190 MW	PP-190 MW	PP-190 MW	PP-190 MW
2002	Extend AP&L	Extend AP&L	Extend AP&L	Extend AP&L	Extend AP&L	Extend AP&L	Extend AP&L	Extend AP&L	Extend AP&L	Extend AP&
	6-KGR-8 MW	6-KGR-8 MW	6-KGR-8 MW	6-KGR-8 MW	6-KGR-8 MW	6-KGR-8 MW	6-KGR-8 MW	6-KGR-8 MW	_ 6-KGR-8 MW	6-KGR-8 MV
	2 CC-300 MW	2 CC-300 MW	2 CC-300 MW	2 CC-300 MW	2 CC-300 MW	2 CC-300 MW	2 CC-300 MW	2 CC-300 MW	2 CC-300 MW	4 CT-520 MV
2002										
2003	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	A OT 400 1414	4 OT 400 MM	1 OT 400 101	1 OT 100 MIN	4.07.400.101	1 CT-130 MV
2004 2005	1 CC- 300 MW	1 CC- 300 MW	1 CC- 300 MW	1 CC- 300 MW	1 CT-130 MW 1 CC- 300 MW	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	1.00.00010
2005		1 CC- 300 MW	TCC-300 MAA		1 CC- 300 MW	1 CC- 300 MW	1 CC- 300 MW	1 CC- 300 MW	1 CC- 300 MW	1 CC- 300 M
2000	1 CC- 300 MW	1 CC- 300 MW	1 CC- 300 MW	1 CT-130 MW	1 CC- 300 MW	1 CC- 300 MW	1 CC- 300 MW	1 CC- 300 MW	1 CT-130 MW	1 CT-130 MV
2008	1 00- 300 19199	1 CC- 300 WW	1 CC- 300 WW	1 CC -300 MW	1 66- 300 10100	1 CC- 300 WW	1 00-300 10100		1 CC- 300 MW	1 CC- 300 M
2009	1 CC -300 MW	1 CC -300 MW	1 CC -300 MW	100-500 1414	1 CC -300 MW	1 CC -300 MW	1 CC -300 MW	1 CC -300 MW		1 CT-130 MV
2010			Extra Joppa	1 CC -300 MW	100-000 1111	100-000 1411	100-000 1010	100-300 000	1 CT-130 MW	1 CT-130 MW
							· .			Extra Joppa
2011				·		Extra Joppa		- :	1 CT-130 MW	
2012	1 CT-130 MW	1 CT-130 MW	1 CC-300 MW		1 CT-130 MW	1 CT-130 MW	1 CC- 300 MW	1 CT-130 MW		1 CT-130 MV
2013	1 CT-130 MW	1 CT-130 MW		1 CT-130 MW	1 CT-130 MW	1 CT-130 MW		1 CT-130 MW	1 CT-130 MW	1 CT-130 MV
2014	Extra Joppa	Extra Joppa			Extra Joppa			Extra Joppa	Extra Joppa 1 CT-130 MW	
2015	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	1 CT-130 MW	•	1 CT-130 MV
T (MW)	520	520	260	520	520	520	260	520	780	1430
C (MW)	1500	1500	1800	1500.	1500	1500	1800	1500	1200	600
pgrades (MW)	111	111	111		111	111	111	111	111	111
otal - Supply (MW)	2131	2131	2171	2131	2131	2131	2171	2131	2091	2141
SM (MW)	0	0	0	0	0 :	0	0	0	0	0
otal (MW) - 2014	2131	2131	2171	2131	2131:	2131	2171	2131	2091	2141
(IMP) (GR (GR		urchase or Rewinds 6.8 MW	Capacity Equivalenc Capacity Equivalenc	8	CC CT TS IMP DSM	Combined Cycle-30 CombustionTurbine Taum Sauk Runne Demand-Side Man	e-130 MW r Replacement - 80			
'S PP		from CIPS 1998-20			Extra Joppa					
			05		Extra Joppa	Increased Utilizatio	n Of Joppa Energy			

150 MW Purchase from CIPS 1998-2005 Extend The Present Purchase Contract With AP&L From 2002 to 2008 t segi

Schedule 2-3

Extend AP&L

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Summary of the Risk Analysis

Based on the results of the sensitivity analysis performed with EGEAS, environmental regulations appears to be the key uncertainty which can impact the preferred resource plan. By its very nature, load forecast uncertainty could have the effect of significantly changing the timing of the preferred resource plan. In addition, due to the selection of gas fueled technologies as the primary resource options in the post 2000 period, fuel cost was included as an additional uncertainty to consider.

The major resource decisions faced by the Company appear to be whether to include DSM in the resource plan and what supply-side resources to select in the early and late 2000's time period, combustion turbines (CT) or combined cycle (CC) units.

An analysis was performed for an expansion with and without the set of DSM programs which had been determined to be cost effective. For each of these DSM alternatives, five supply-side expansion strategies were considered, an all CT expansion, an all CC expansion, a mixture of both CT and CC units, an expansion of CC units in the early 2000's followed by CT units in the late 2000's, and finally an expansion of CT units in the early 2000's followed by CC units in the late 2000's. These ten strategies were all evaluated under the uncertainty of environmental regulations, load forecast and fuel cost.

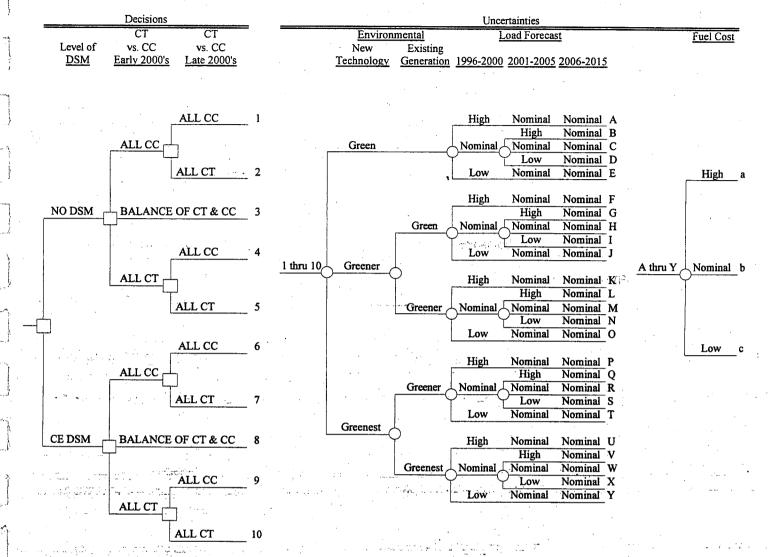
On the basis of expected values, the analysis indicates that the expansion plans which included DSM and CC units are preferred when PVRR was used as the evaluation criteria. When levelized rates was used, the expansion plans without DSM and with CC units are preferred. DSM programs offer a reduction in PVRR of approximately \$80-\$100 million but at a rate premium of 0.004-0.007 cents/kWh.

In addition to these expected value results, risk profiles, histograms, calculations of means and standard deviations were prepared for the various decisions described above. All of these methods are ways to describe the riskiness of the various decisions. An examination of all these results support the expected value results. The riskiest strategy is one which does not include DSM and relies on CT units exclusively during the early 2000's or over the entire planning period. Including DSM improves the economics somewhat, but it is still riskier than other resource strategies.

The following pages contain the supporting tables and figures for the discussion contained in the preceeding paragraphs.

Figure X-X

Risk Analysis Decision Tree



Probability Distributions of Uncertain Factors

·	High	Nominal	Low
Forecasted Peak	1.8%	1.0%	0.0%
Growth Rate			
Probability	15%	70%	15%
Environmental	Green	Greener	Greenest
Prob - New Tech	10%	80%	10%
Prob - Existing Gen	80%	15%	5%
Fuel Cost			
Probability	25%	50%	25%

750 Endpoints

Expected Value Results

Strategy	Levelized System Rate	Utility Cost	Total Resource Cost
	(Levelized ¢/kWh)	(30 Yr PVRR - \$ in Millions)	(30 Yr PVRR - \$ in Millions)
W No DSM Programs			
All CC Expansion	6.975	26,081.56	26,081.56
All CC thru 2008; All CT after 2008	6.973	26,073.05	26,073.05
Balanced- Alternating CT and CC additions	6.973	26,071.70	26,071.70
All CT thru 2007; All CC after 2007	6.987	26,124.64	-26,124.64
All CT Expansion	7.015	26,232.01	26,232.01
W 10 DSM Programs All CC Expansion	6.980	25,983.10	25,996.66
All CC thru 2008; All CT after 2008	6.980	25,984.85	25,998.41
Balanced- Alternating CT and CC additions	6.979	25,977.75	25,991.31
All CT thru 2007; All CC after 2007	6.991	26,024.02	26,037.58
All CT Expansion	7.019	26,127.40	26,140.97
DIFFERENCE FROM LOWEST COST PLAN:	. a		· · · ·
W No DSM Programs All CC Expansion	0.002	103.81	90.25
All CC thru 2008; All CT after 2008	0	95.30	81.74
Balanced- Alternating CT and CC additions	u u o sta	93.95	80.39
All CT thru 2007; All CC after 2007	0.014	146.89	133.33
All CT Expansion	0.042	254.26	240.70
W 10 DSM Programs All CC Expansion	0.007	20. (* 1994) and (* 1 12. ^{(*} 12. [*] 12. [*] 13.	5.35
All CC thru 2008; All CT after 2008	0.007	7.10	7.10
Balanced- Alternating CT and CC additions	0.006	0	• 0
All CT thru 2007; All CC after 2007	0.018	46.27	46.27
All CT Expansion	0.046	149.65	149.66

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Expected Value of Perfect Information (EVPI)

Evaluation Criteria: Levelized Average System Rates

Expected Value: 6.973 ¢/kWh

·	N	EVPI
Uncertainty		¢/kWh
Future Environmental Costs		0.003
Load Forecast	•	0.003
Fuel Cost		0.000

Evaluation Criteria: Utility Cost

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Expected Value: \$25,977.75 Mil

•		EVPI
Uncertainty		\$ Millions
Future Environmer	tal Costs	10.22
Load Forecast		8.14
Fuel Cost		0.18

Evaluation Criteria: Total Resource Cost

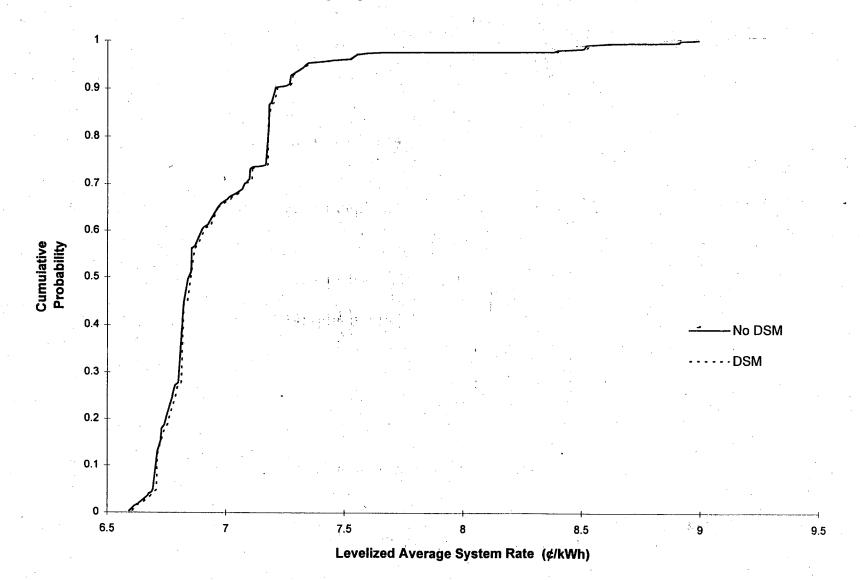
Expected Value: \$25,991.31 Mil

		·		÷	EVPI
Uncertainty			:		\$ Millions
Future Environmenta	al Costs	<u></u>			10.22
Load Forecast			· · ·		8.14
Fuel Cost				• • • • •	0.18

Expected Value of Perfect Information (EVPI)

				No DSM; Balanced Expansion of CT & CC
	Uncertainty		EVPI	Alternate Preferred Strategy
	Future Environmental Costs		0.003	No DSM; All CT Early 2000's; All CC Late 2000's or No DSM; All CC Expansion
	Load Forecast		0.003	No DSM; All CC Early 2000's; All CT Late 2000's or
	· *	• · ·		No DSM; All CC Expansion
	Fuel Cost		0.000	
• •	. • •			
aluatio	n Criteria: Utility Cost	Expected Value: \$25,977	7.75 Mil Pi	referred Strategy:
		· · ·		With DSM; Balanced Expansion of CT & CC
	Uncertainty	· · · ·	EVPI	Alternate Preferred Strategy
	Future Environmental Costs	Alter Met Materia and Later	10.22	With DSM; All CT Early 2000's; All CC Late 2000's of With DSM; All CC Expansion
	Load Forecast		8.14	With DSM; All CC Expansion
	Fuel Cost		0.18	With DSM; All CC Expansion
	· · · · · · · · · · · · · · · · · · ·	品合的 机分配 网络白鹭 计		
				-fame d Oto 1
luatio	n Criteria: Total Resource Cost	Expected Value: \$25,99	1.31 Mil Pr	referred Stratedy.
iluatio	n Criteria: Total Resource Cost	Expected Value: \$25,991	1.31 Mil Pi	referred Strategy: DSM20: All CT Expansion: Ven 5&6 Repower 2008
aluatio	n Criteria: Total Resource Cost	Expected Value: \$25,99	1.31 Mil Pr	
aluatio	n Criteria: Total Resource Cost Uncertainty	Expected Value: \$25,99	1.31 Mil Pr EVPI	DSM20; All CT Expansion; Ven 5&6 Repower 2008
aluatio		Expected Value: \$25,99	۲.۰. پ	DSM20; All CT Expansion; Ven 5&6 Repower 2008 Alternate Preferred Strategy
aluatio	Uncertainty	Expected Value: \$25,99	EVPI	DSM20; All CT Expansion; Ven 5&6 Repower 2008 Alternate Preferred Strategy With DSM; All CT Early 2000's; All CC Late 2000's of
aluatio	Uncertainty	Expected Value: \$25,99	EVPI	DSM20; All CT Expansion; Ven 5&6 Repower 2008

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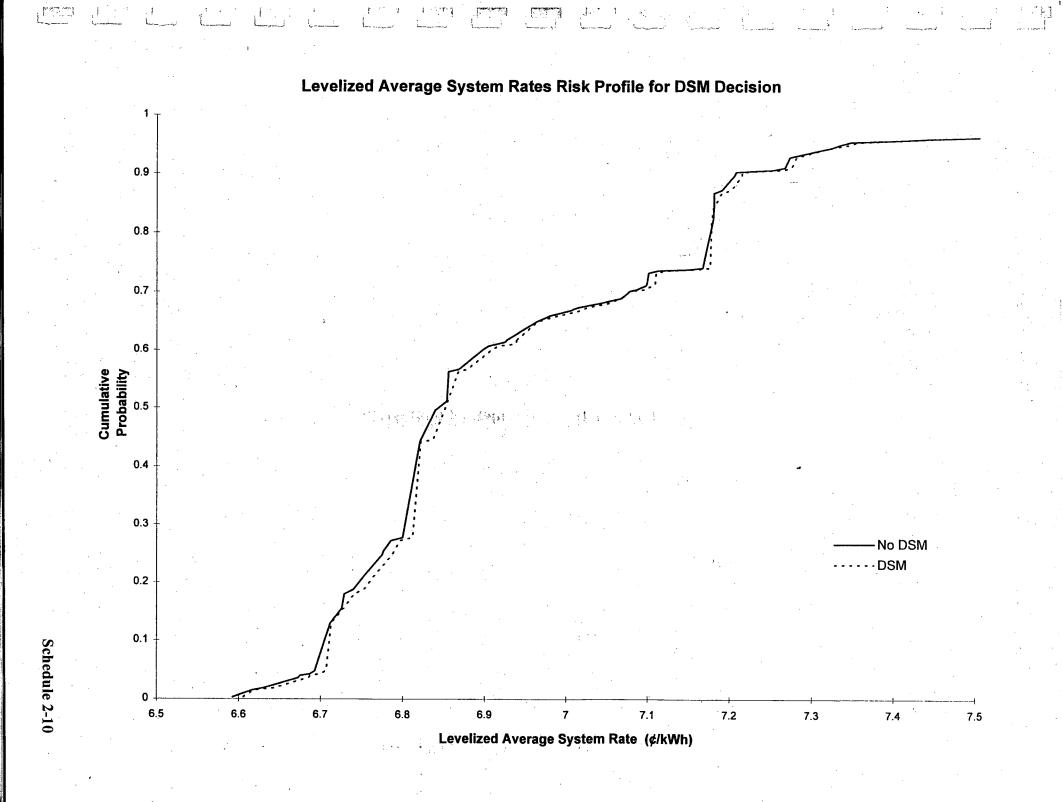


Levelized Average System Rates Risk Profile for DSM Decision

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Utility Cost Risk Profile for DSM Decision

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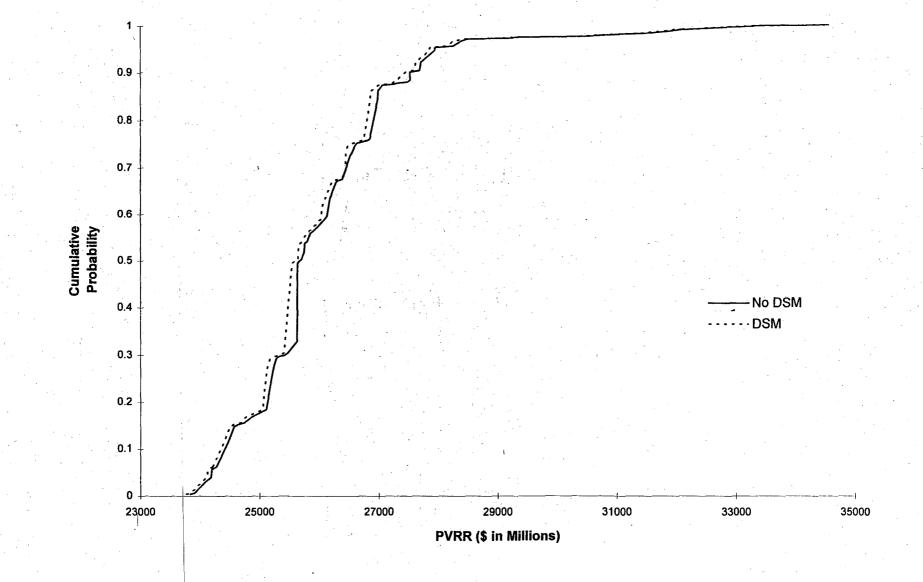
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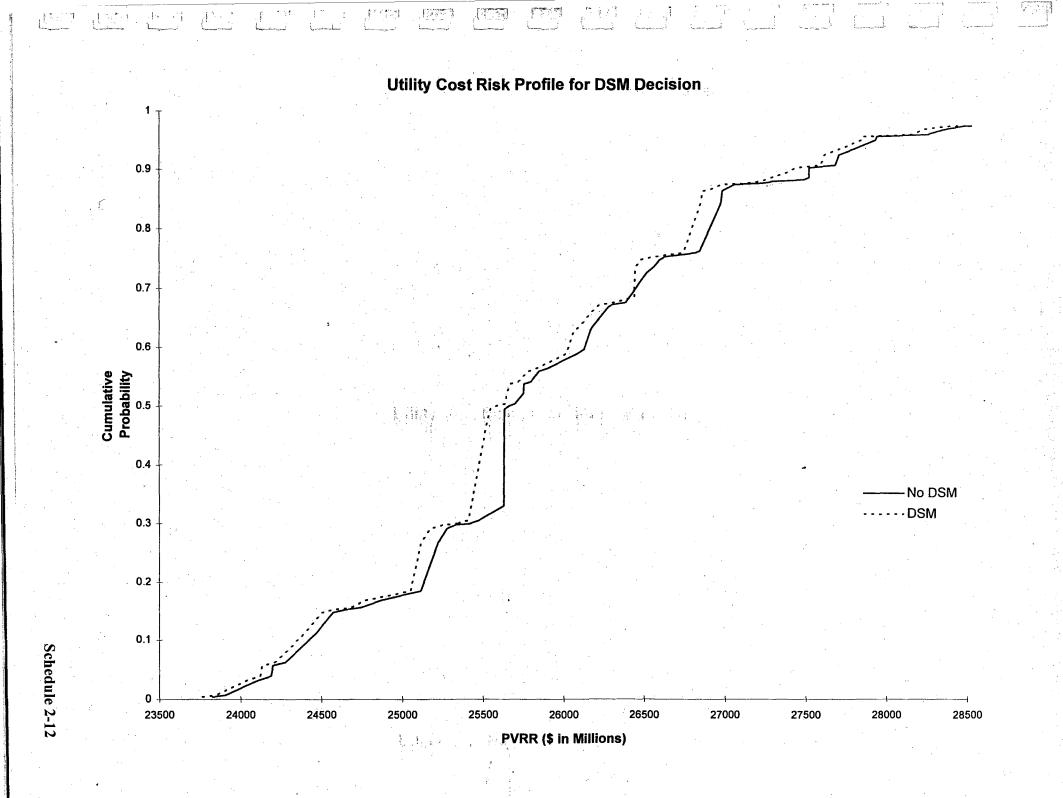
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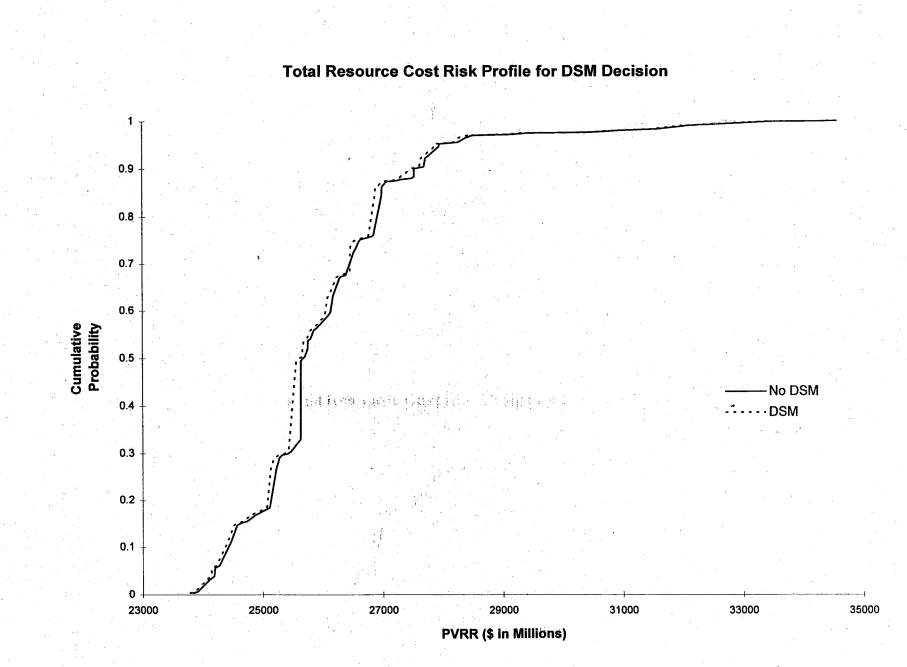
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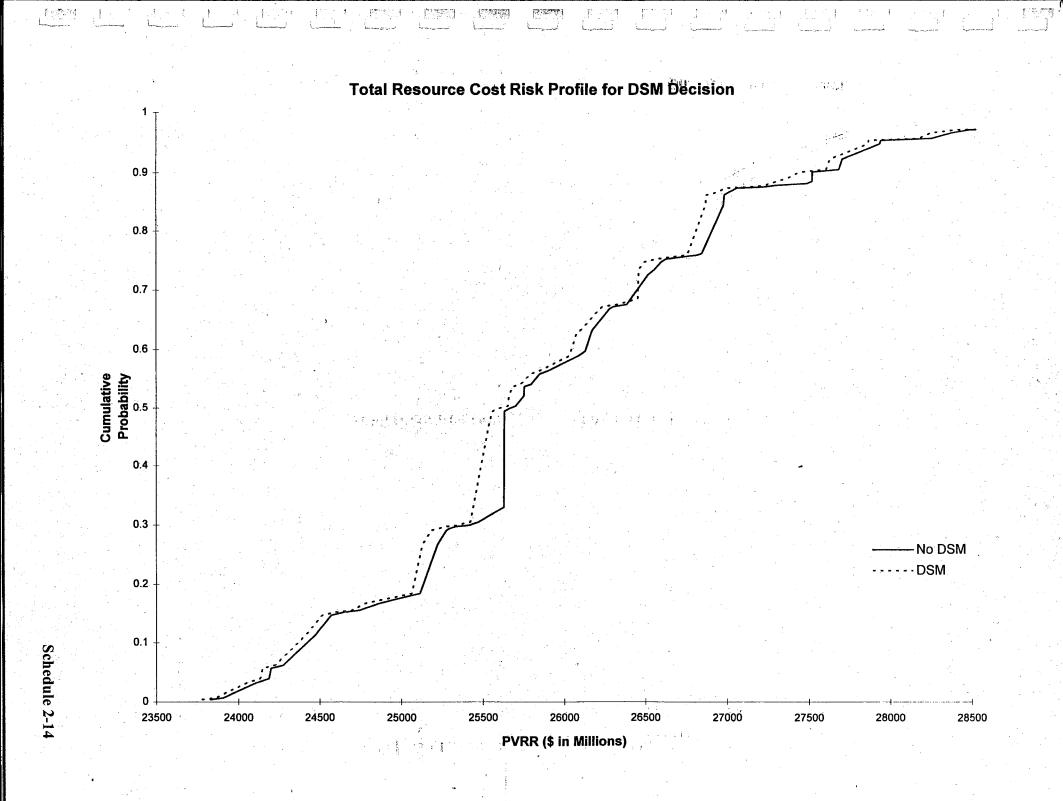
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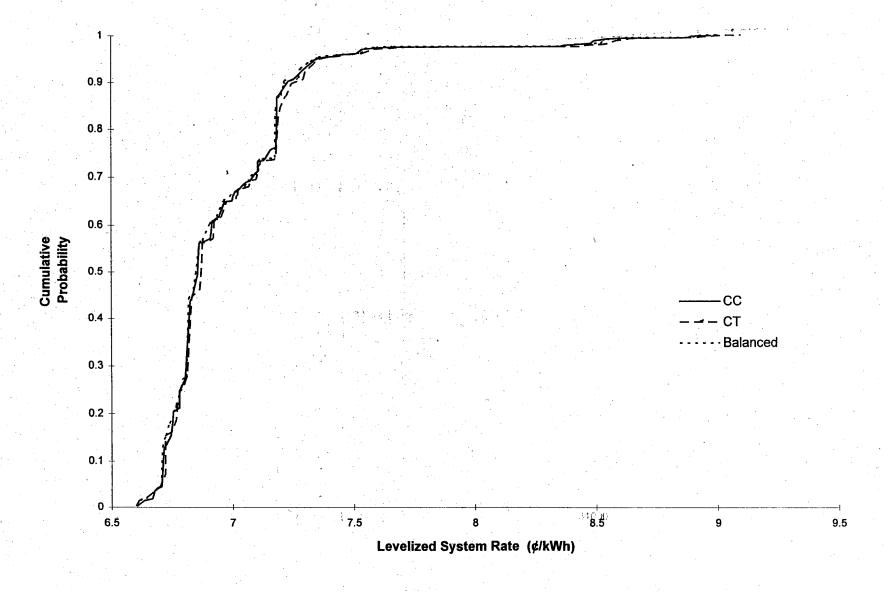


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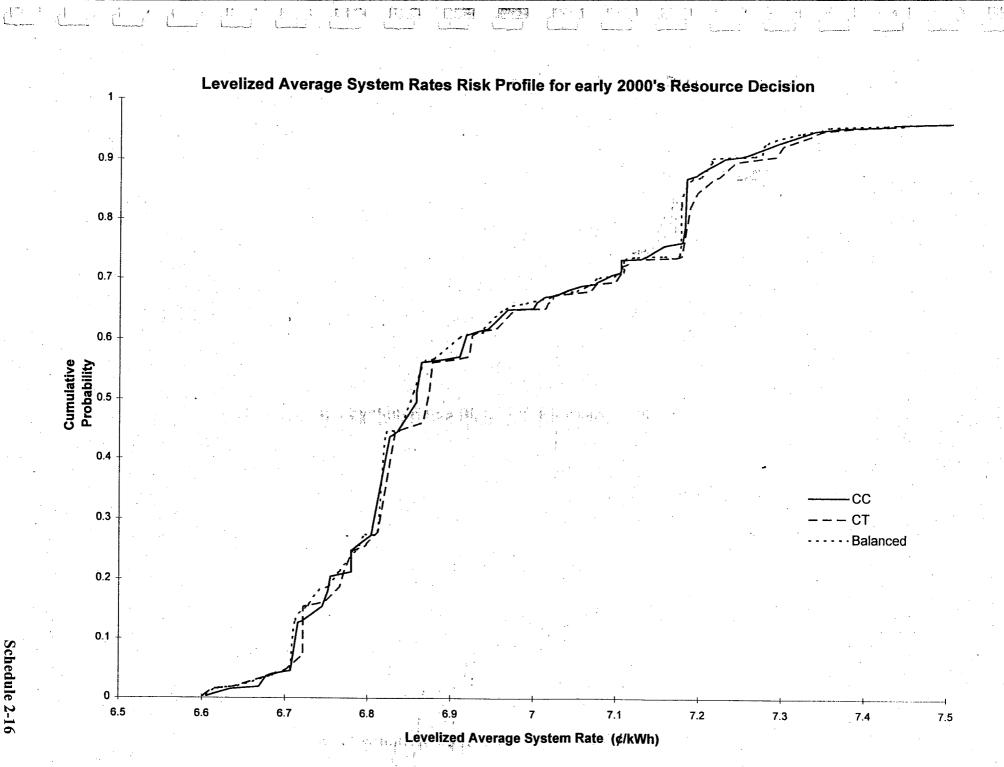
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Utility Cost Risk Profile for 2002 Resource Decision

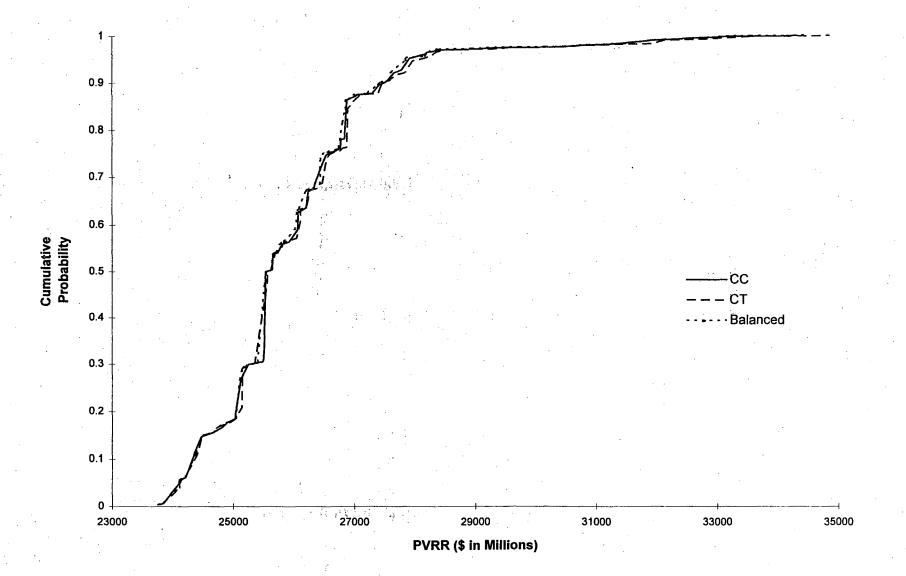
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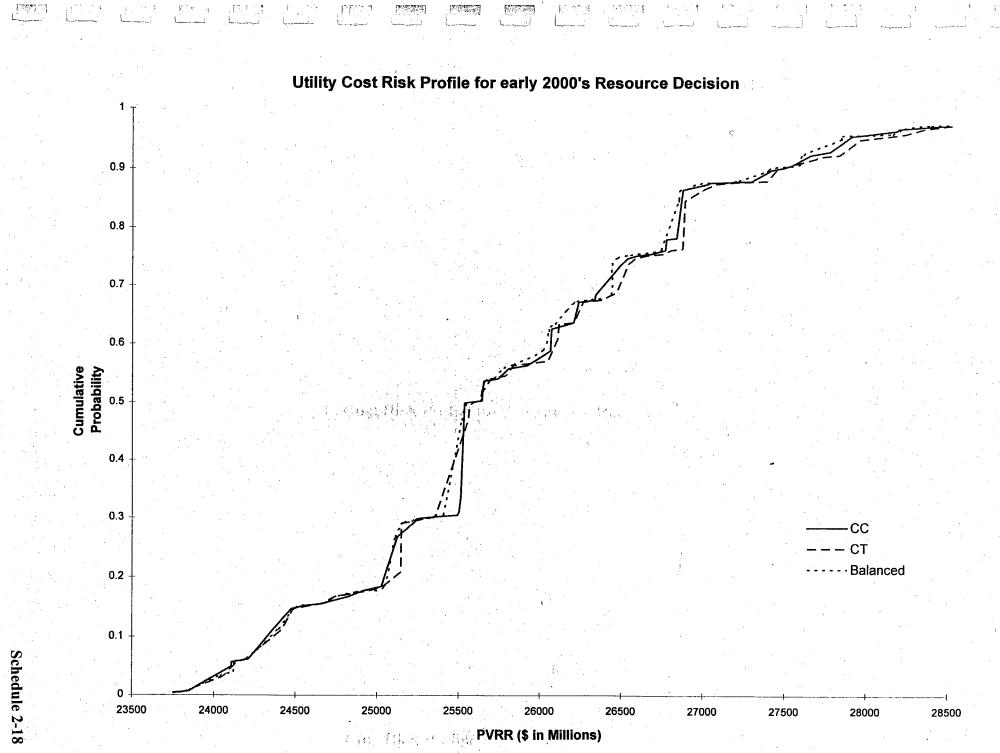
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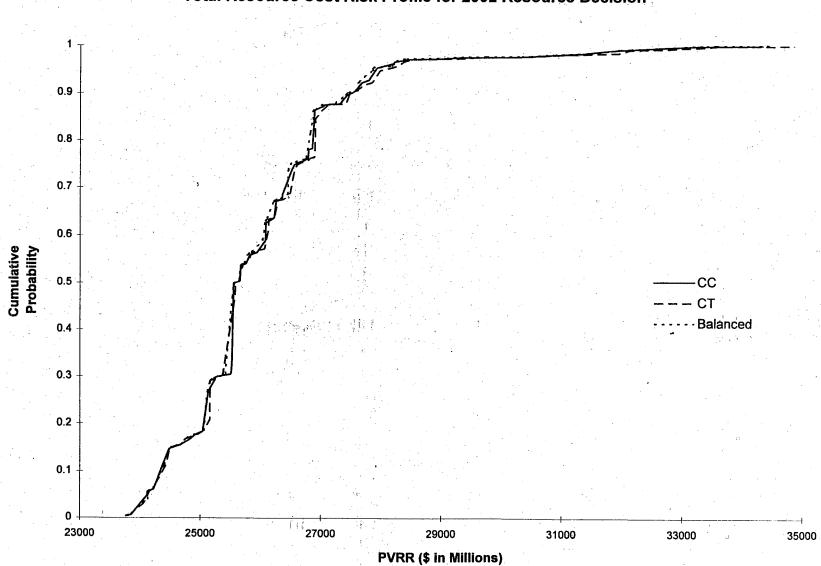
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Total Resource Cost Risk Profile for 2002 Resource Decision

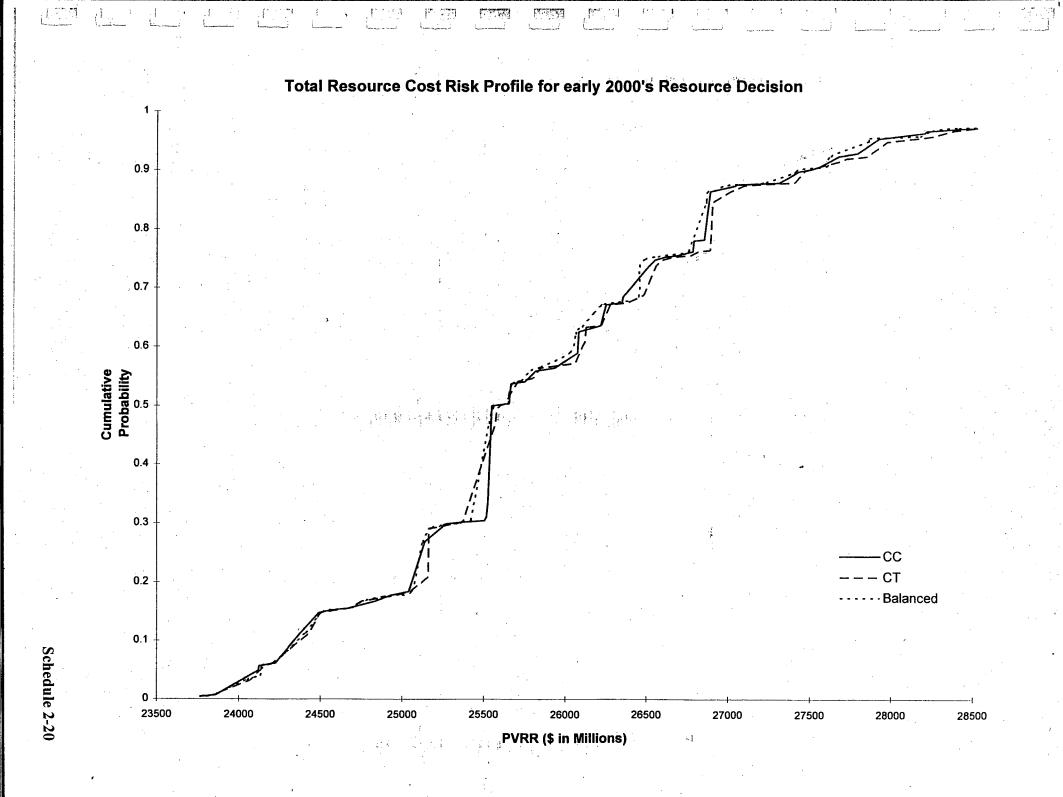
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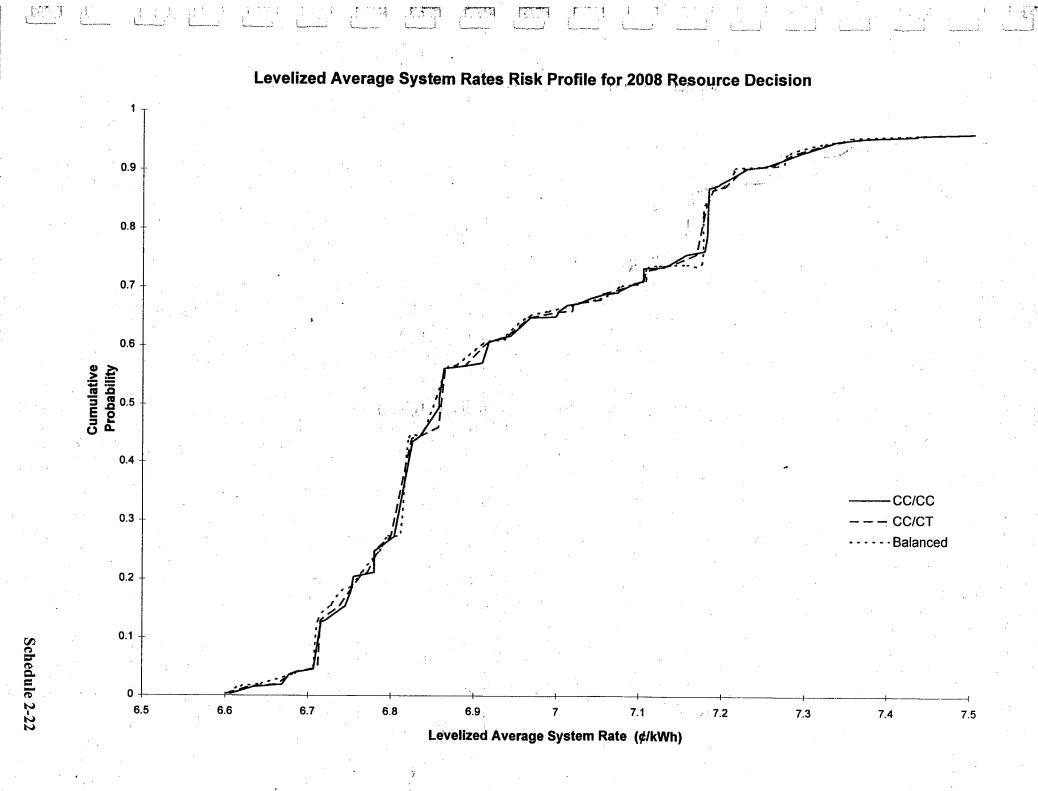
Levelized System Rates Risk Profile for 2008 Resource Decision

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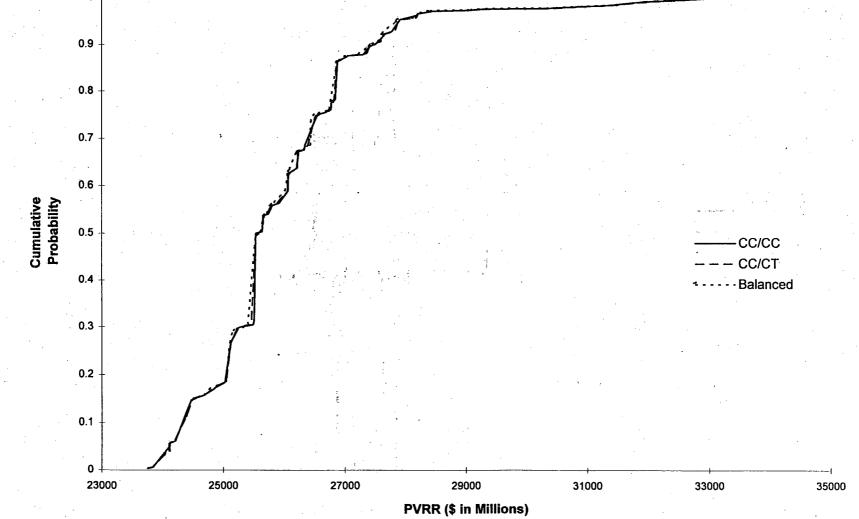


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Utility Cost Risk Profile for 2008 Resource Decision

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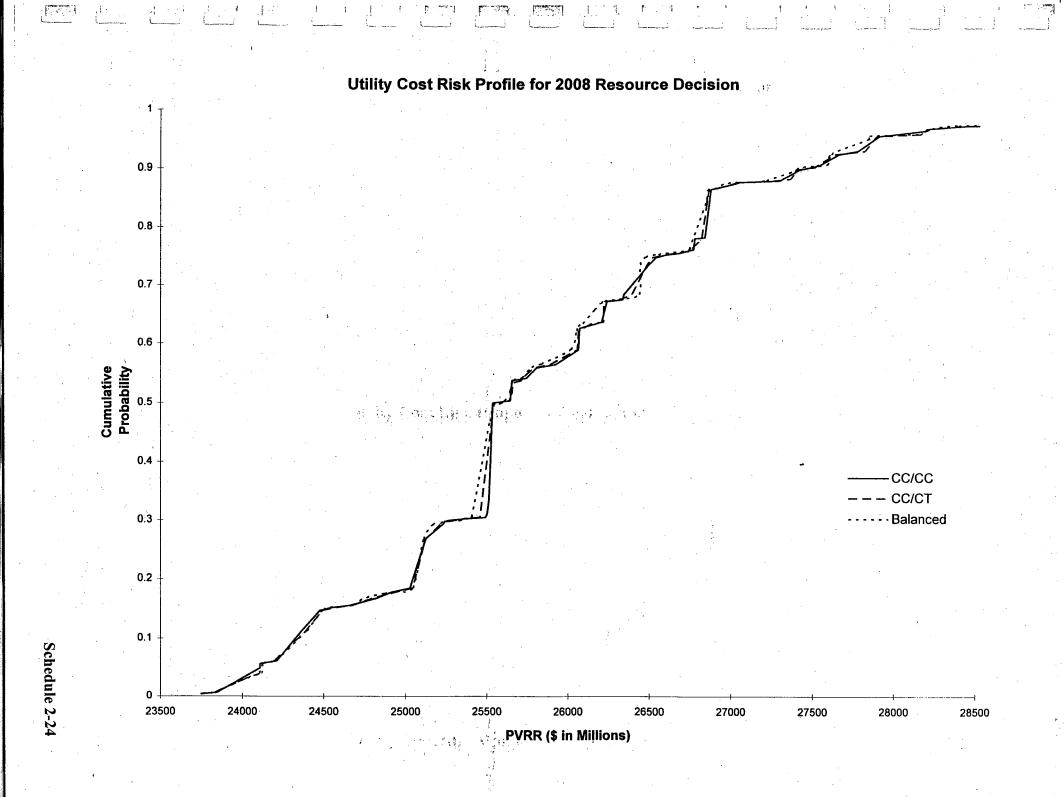
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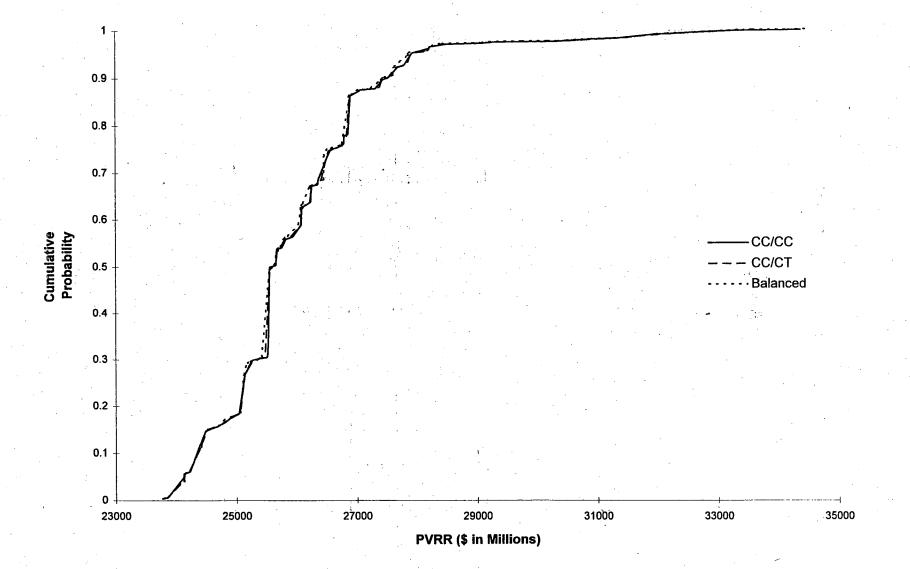


Total Resource Cost Risk Profile for 2008 Resource Decision

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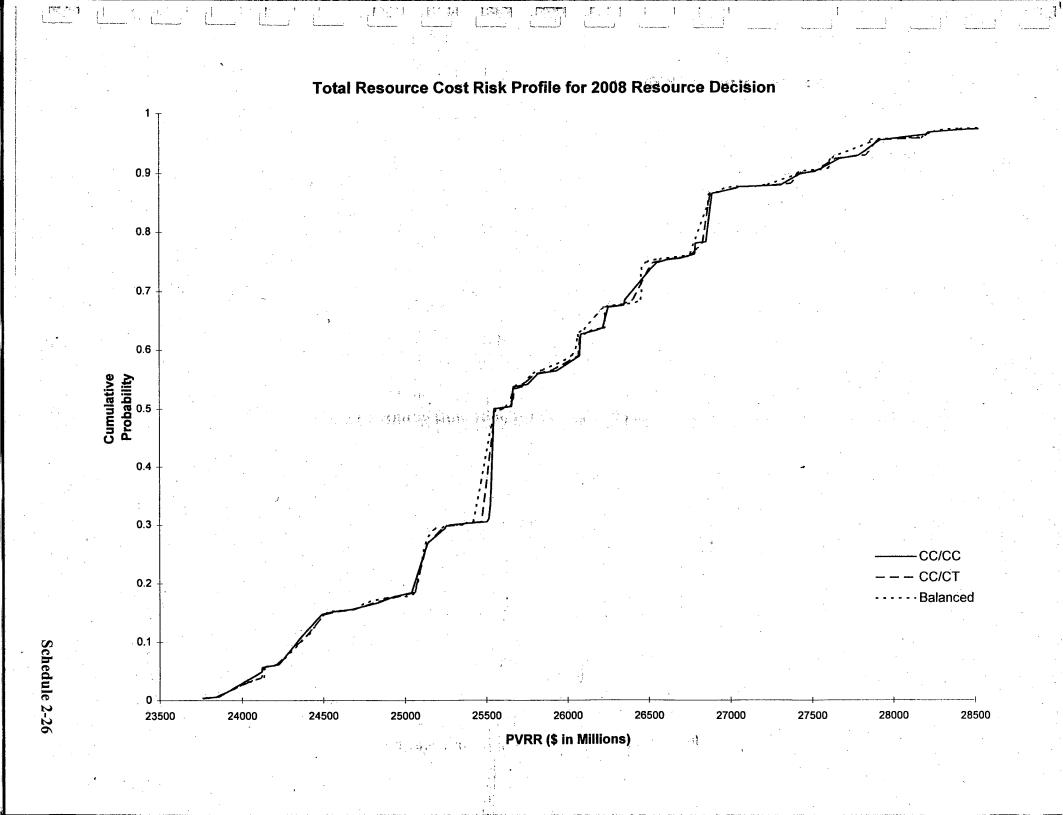
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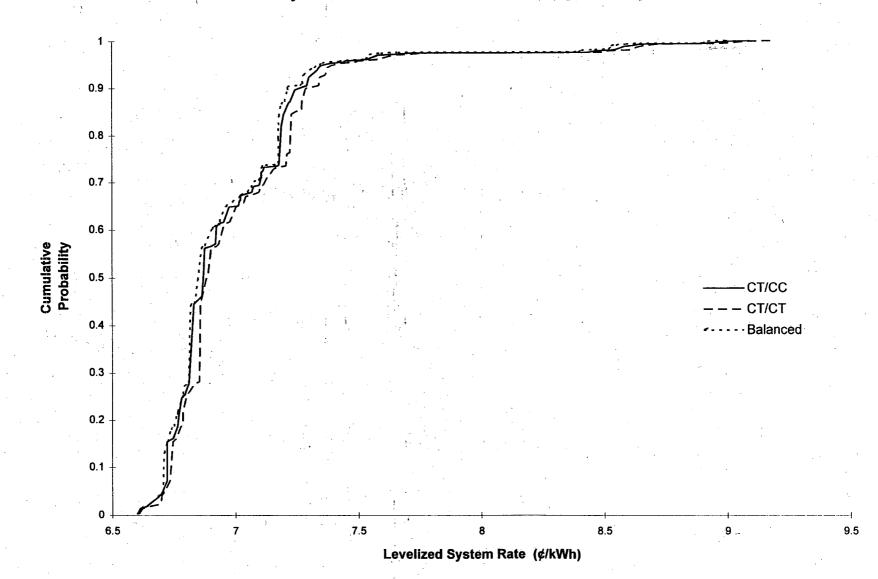


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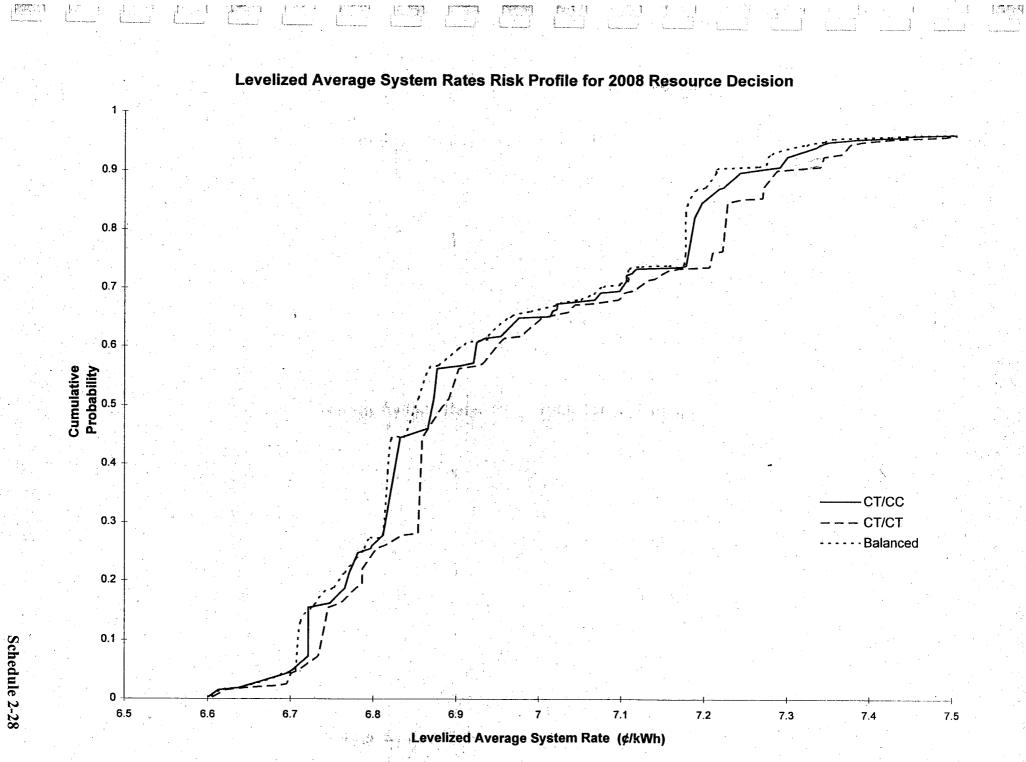




Levelized System Rates Risk Profile for 2008 Resource Decision

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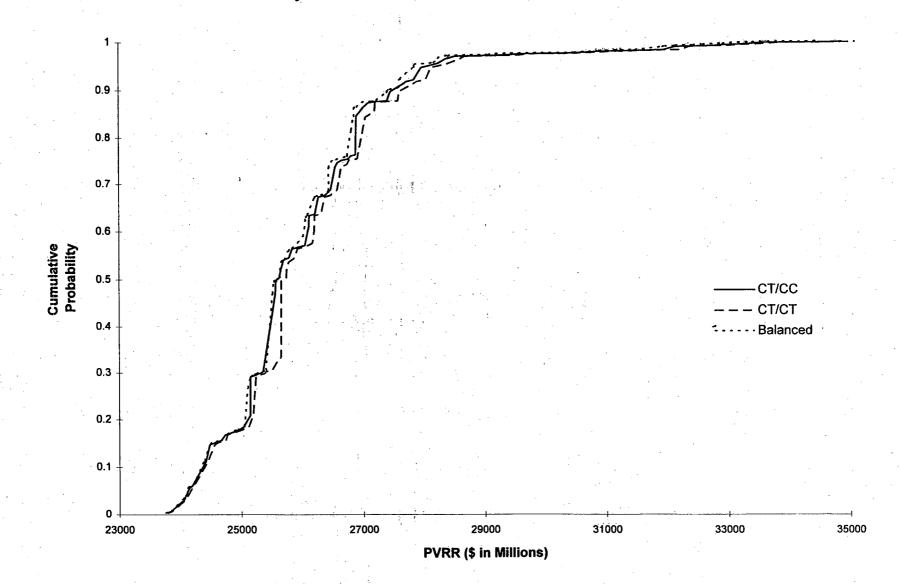


Utility Cost Risk Profile for 2008 Resource Decision

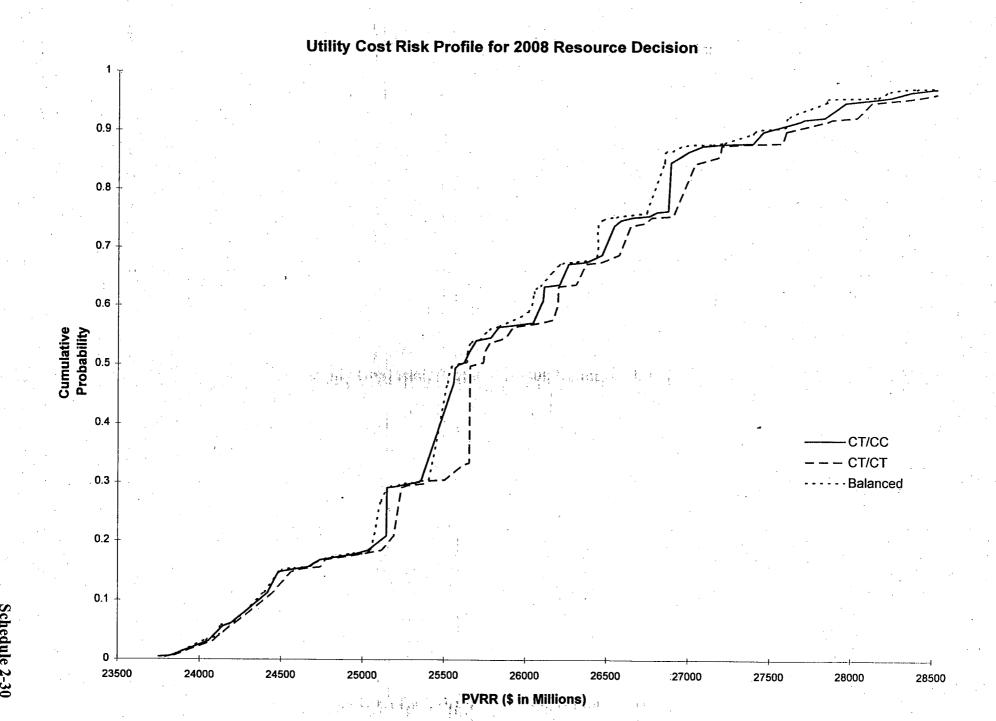
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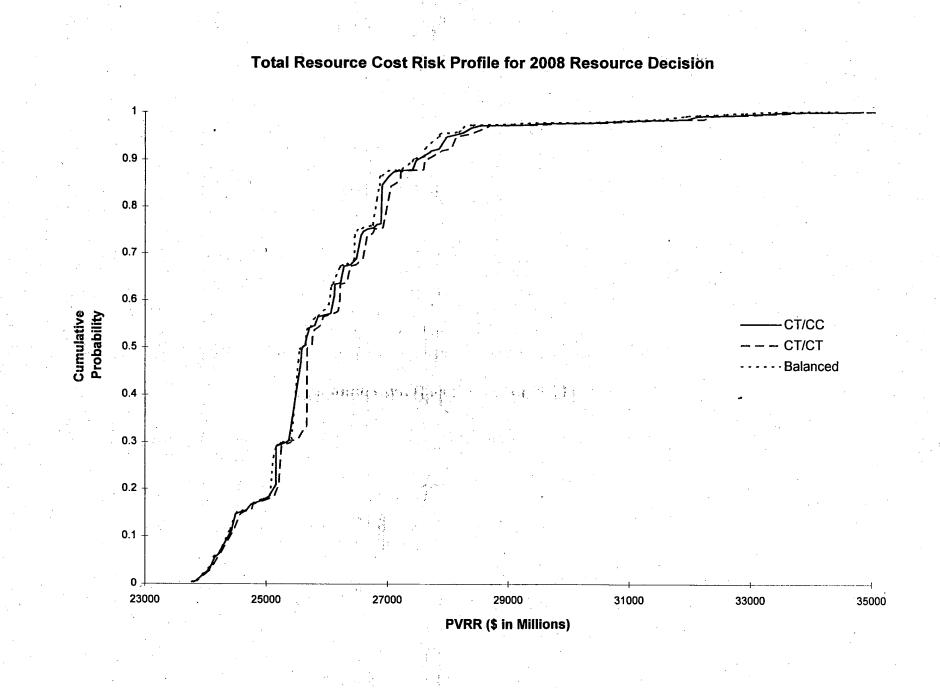
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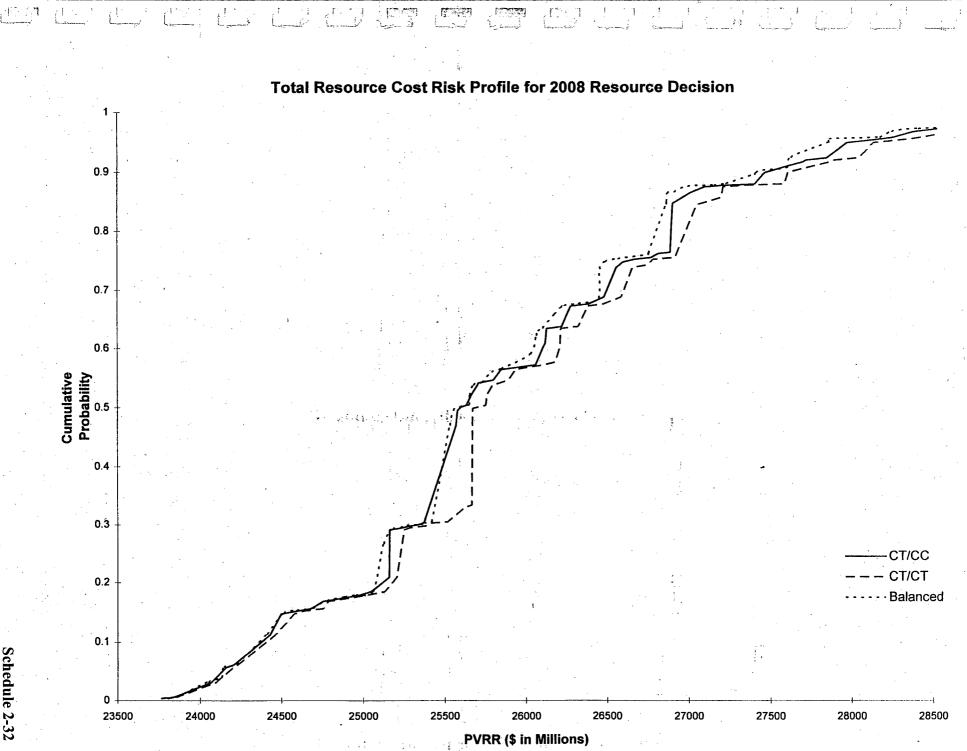
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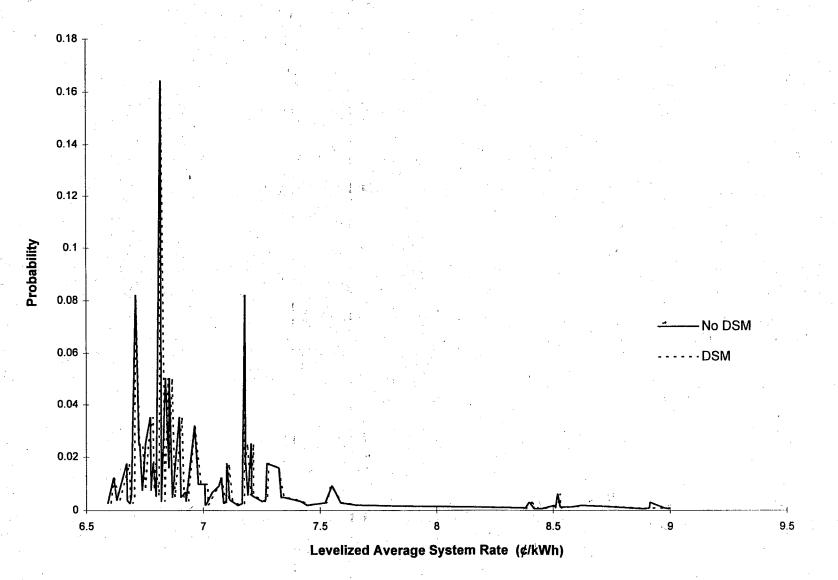
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Levelized Average System Rates Histogram for DSM Decision

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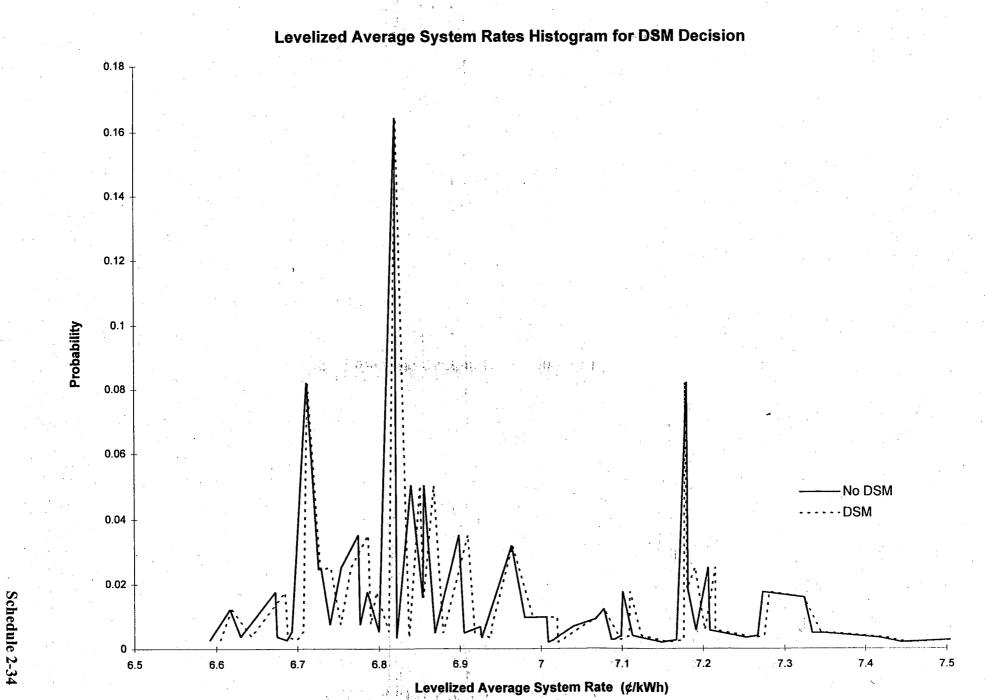
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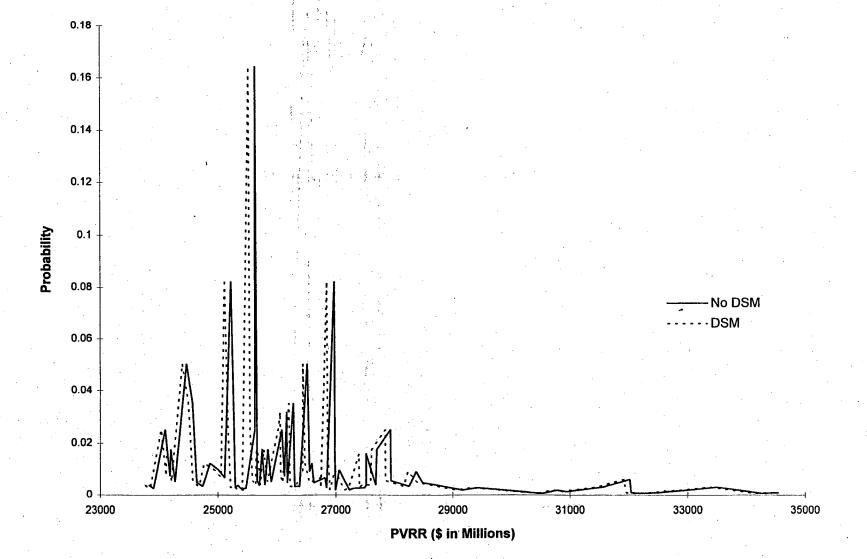
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Utility Cost Histogram for DSM Decision

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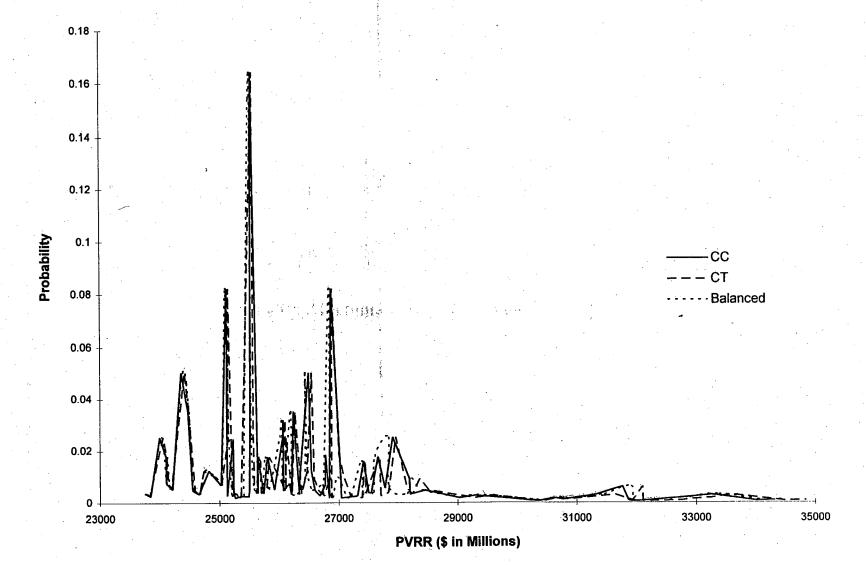
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Utility Cost Histogram for 2002 Resource Decision

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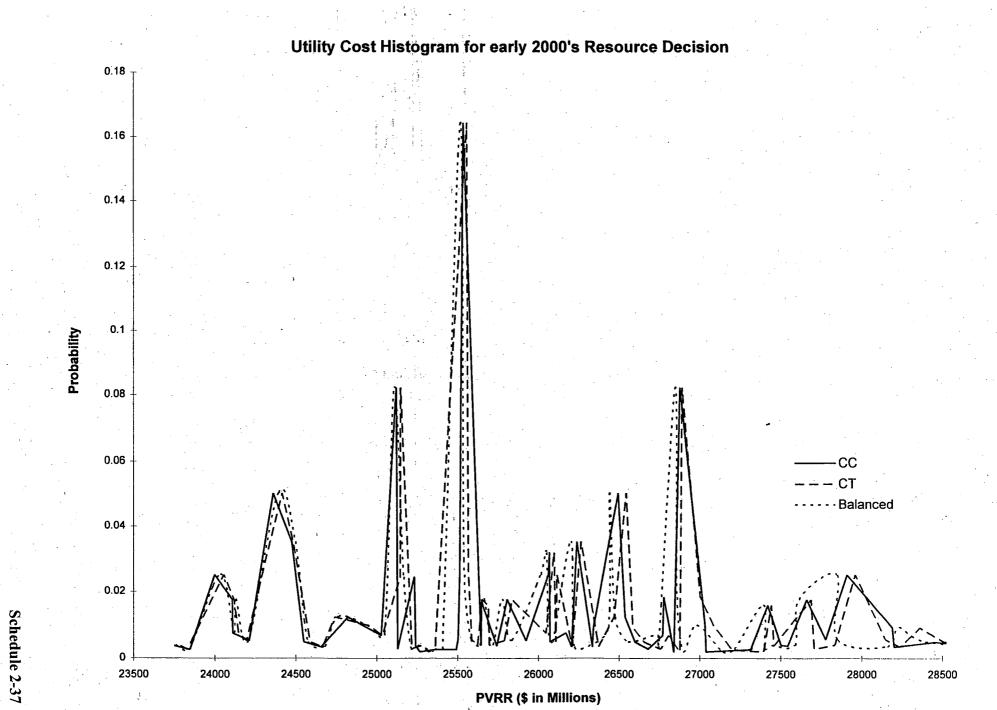
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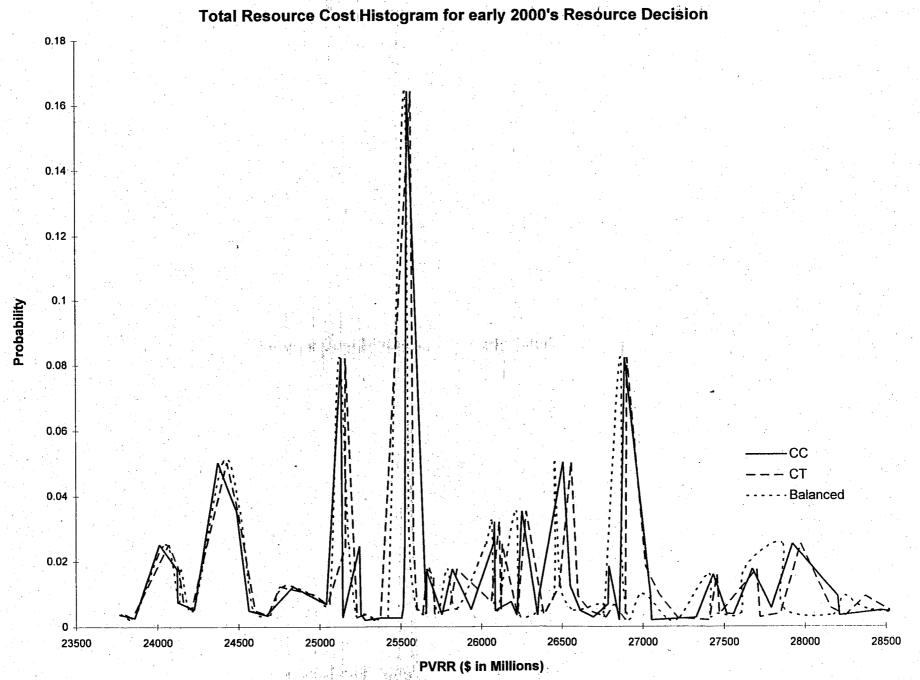
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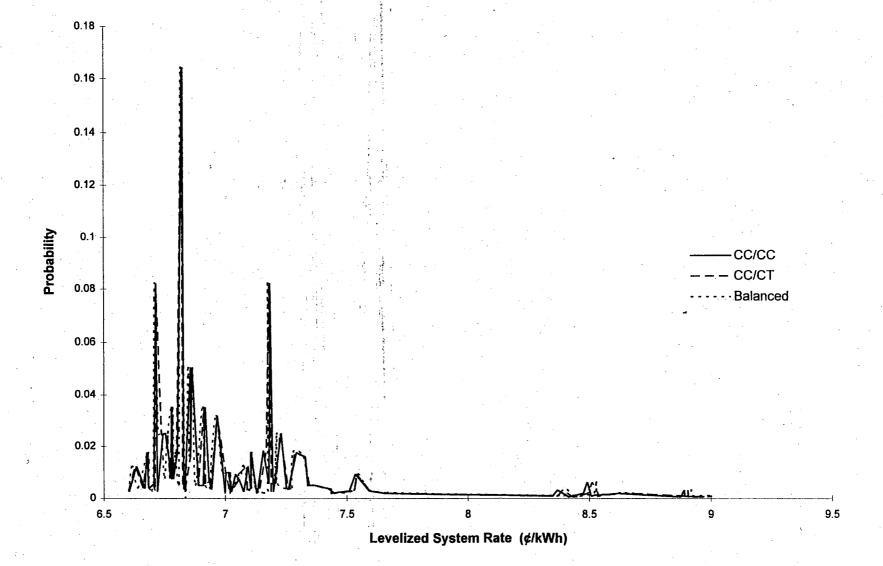


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Levelized System Rates Histogram for 2008 Resource Decision

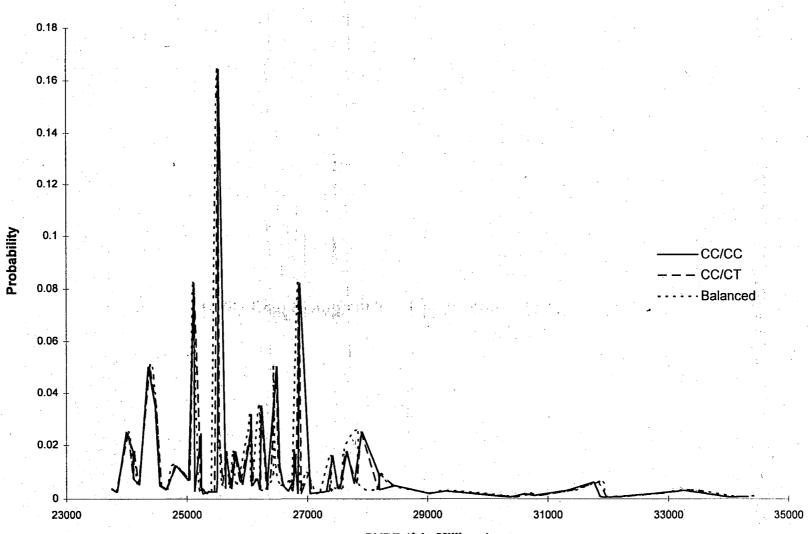
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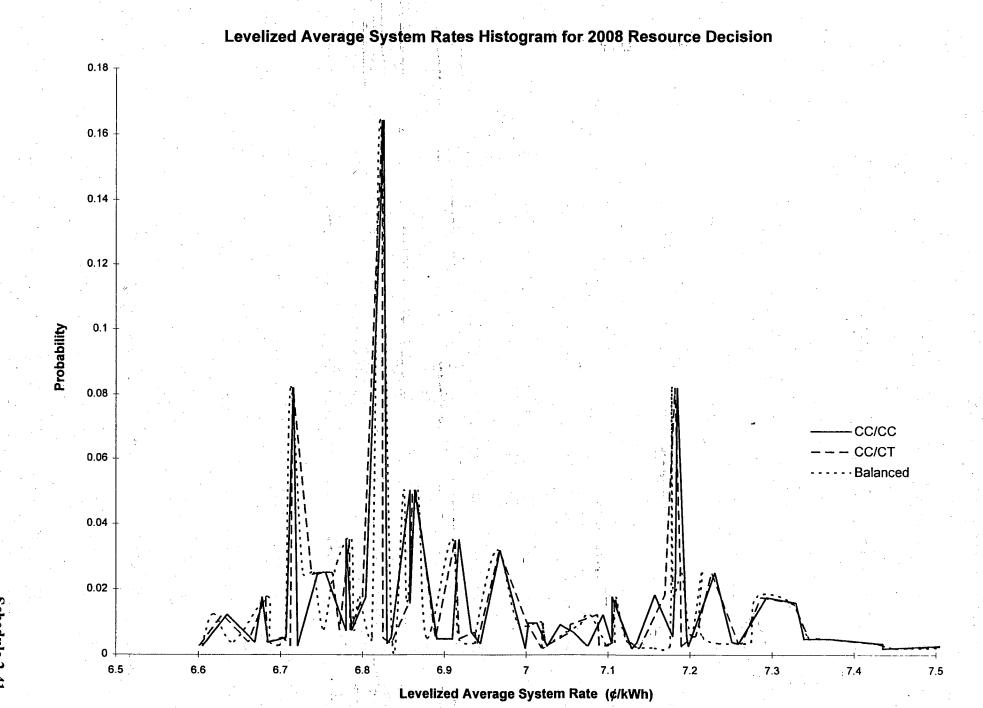
Utility Cost Histogram for 2008 Resource Decision

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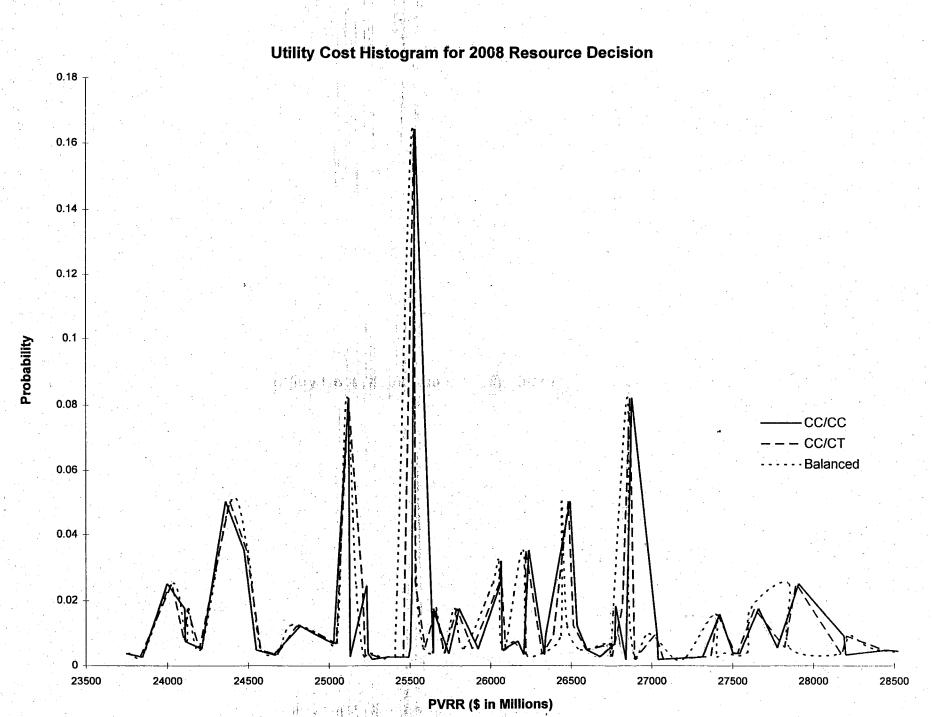
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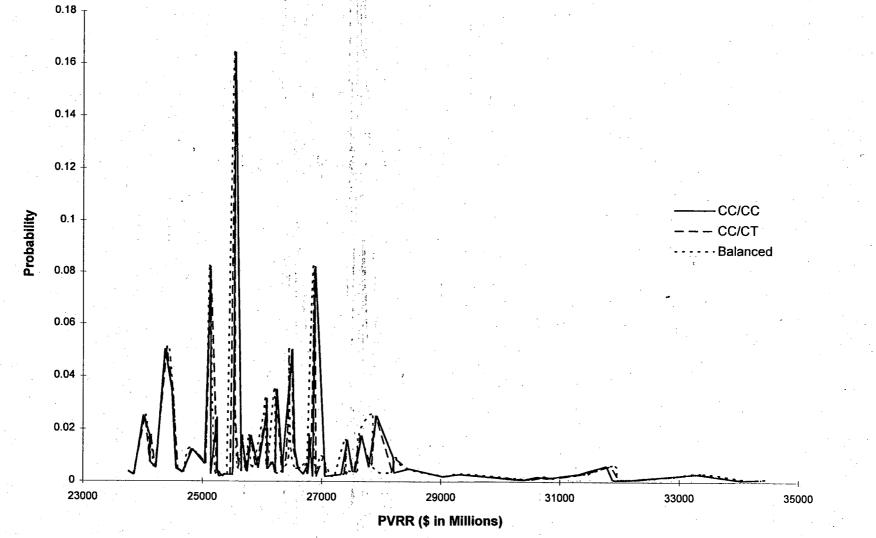
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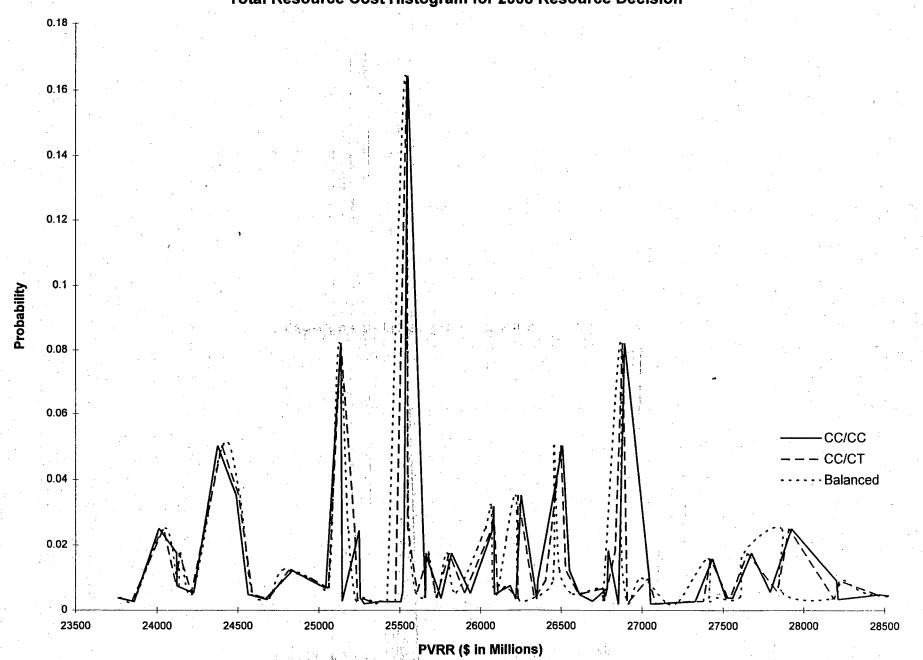
Total Resource Cost Histogram for 2008 Resource Decision

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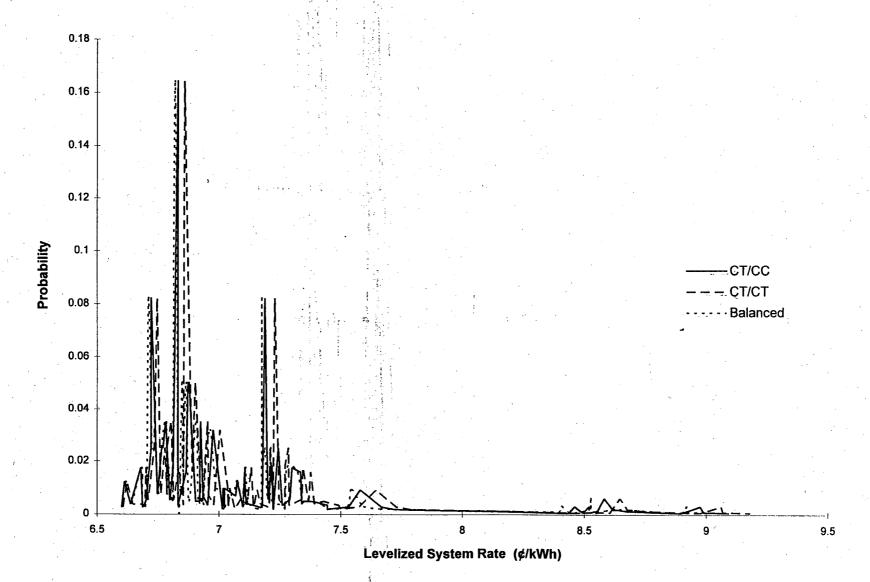
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Total Resource Cost Histogram for 2008 Resource Decision

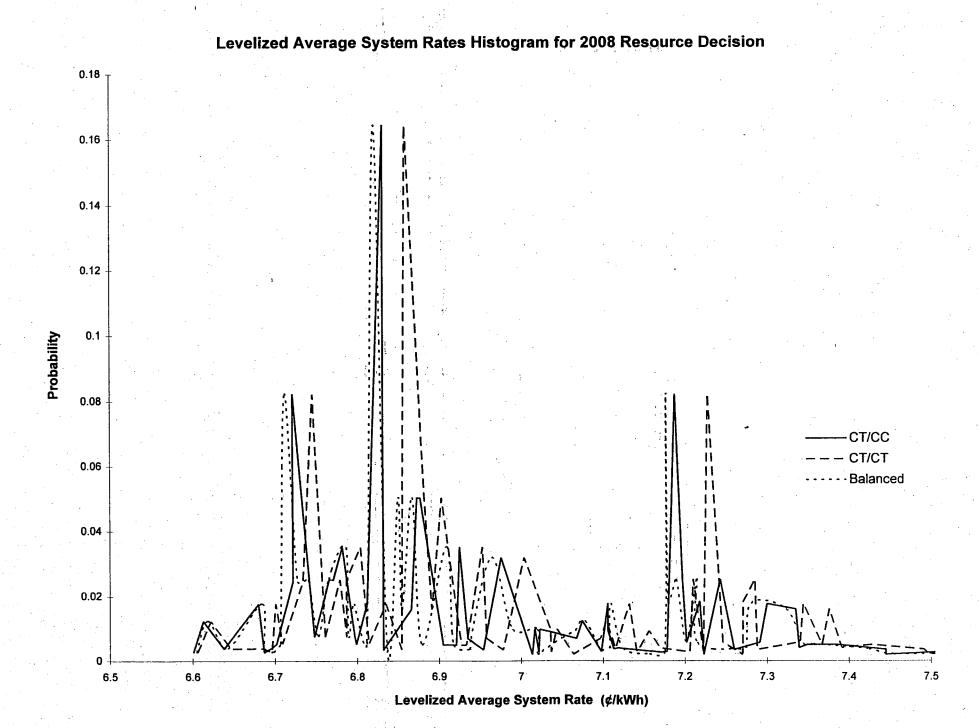
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Schedule 2-44



Levelized System Rates Histogram for 2008 Resource Decision

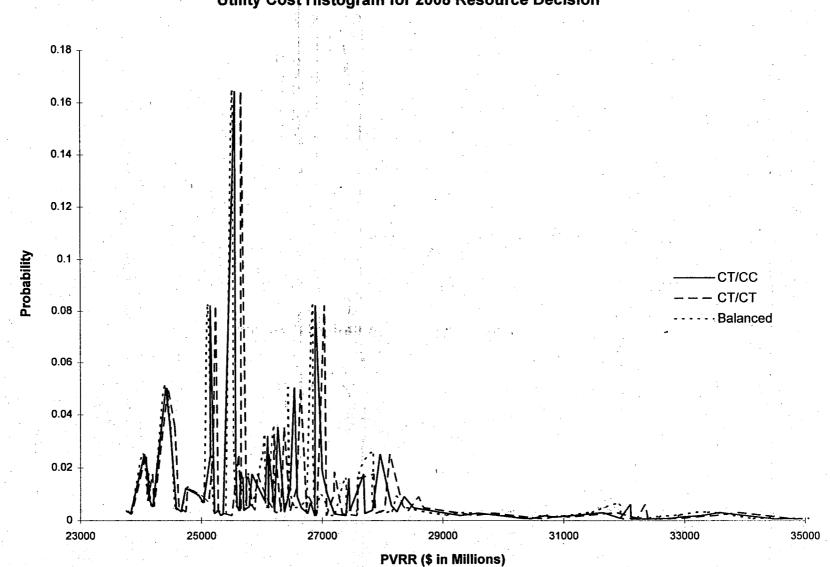
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Schedule 2-46

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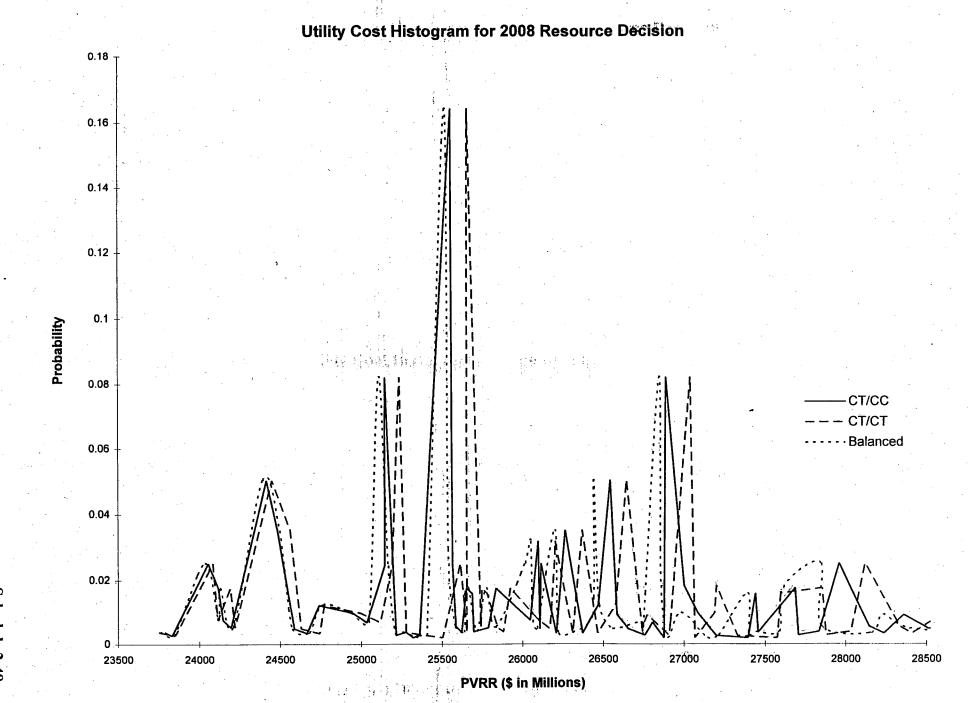
Utility Cost Histogram for 2008 Resource Decision

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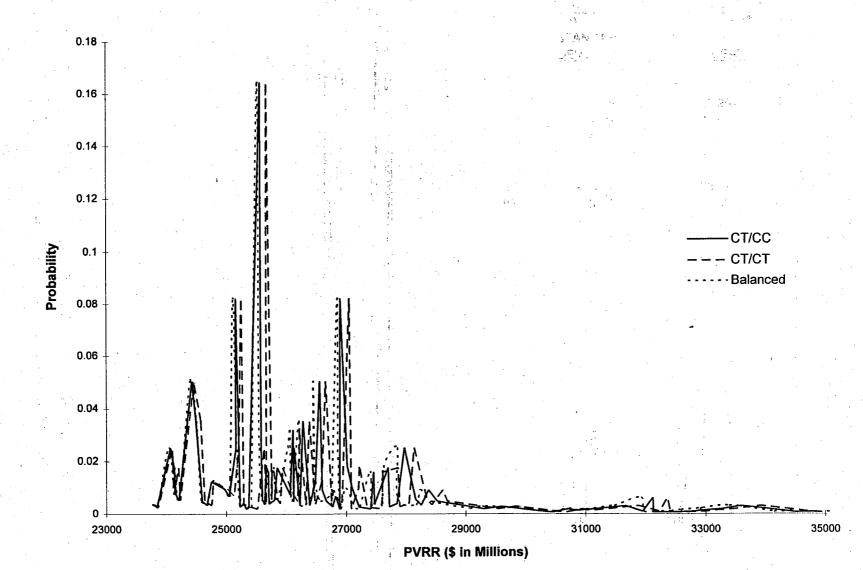
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Schedule 2-48

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Total Resource Cost Histogram for 2008 Resource Decision

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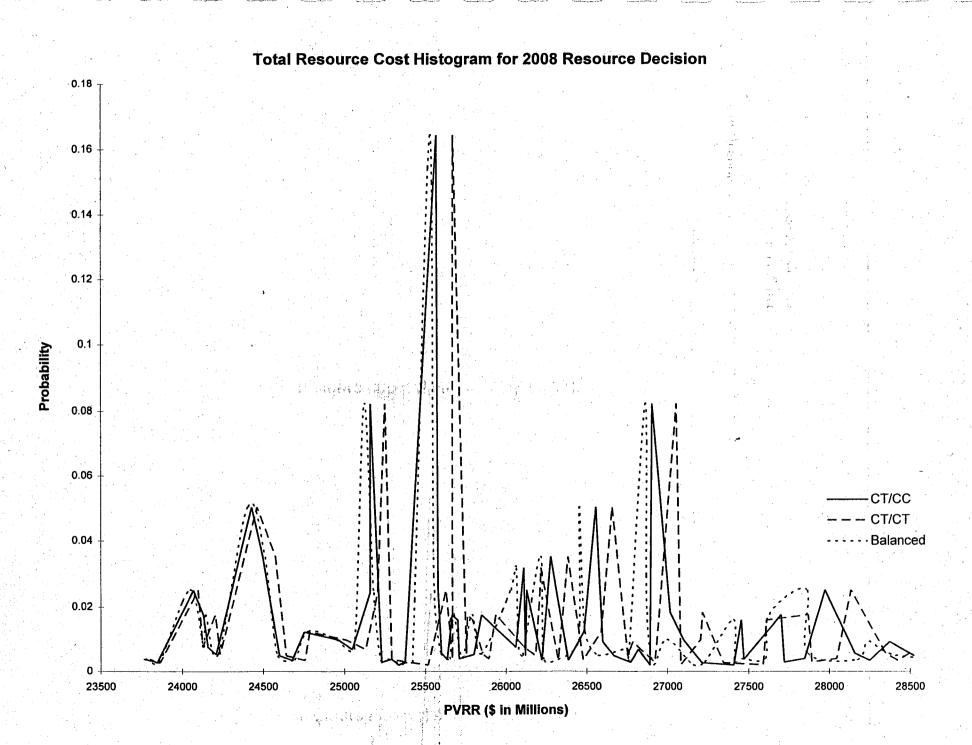
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Schedule 2-49

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Schedule 2-50

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		E SYSTEM RATES	UTILITY	COST	TOTAL RESC	URCE COST
	(¢/k)	Vh)	(\$ in Mil	lions)	(\$ in M	lillions)
	·	STANDARD		STANDARD	4. 7	STANDARD
STRATEGY	MEAN	DEVIATION	MEAN	DEVIATION	MEAN	DEVIATION
DSM DECISION:						
DSM	6.979	0.335	25,977.92	1,427.89	25 004 40	4 407 00
NO DSM	6.973	0.335	26,071.87	1,434.37	25,991.49 26,071.87	1,427.89 1,434.37
	0.070	0.000	20,071.07	1,404.07	20,071.07	1,434.37
EARLY 2000s		51 				
RESOURCE DECISION:						
CC	6.980	0.329	25,983.27	1,421.58	25,996,84	1,421.58
BALANCE of CT & CC	6.979	0.335	25,977.92	1,427.89	25,991.49	1,427.89
СТ	6.991	0.343	26,024.19	1,469.47	26,037.75	1,469.47
					(\tilde{x})	
LATE 2000s						
RESOURCE DECISION:	e de la construcción de la constru La construcción de la construcción d		· · · ·			
(EARLY 2000s CC)					. ·	
CC	6.980	0.329	25,983.27	1,421.58	25,996.84	1,421.58
BALANCE of CT & CC	6.979	0.335	25,977.92	ji 1,427.8 9	25,991.49	1,427.89
СТ	6.980	0.333	25,985.02	1,425.05	25,998.58	1,425.05
	н. -				7	
LATE 2000s RESOURCE DECISION:						
			t see a s	: :		
(EARLY 2000s CT) CC	6.991	0.949	00.004.40		00 007 77	
BALANCE of CT & CC	6.979	0.343	26,024.19	1,469.47	26,037.75	1,469.47
CT	· · · · · · · · · · · · · · · · · · ·	0.335	25,977.92	1,427.89	25,991.49	1,427.89
U I	7.019	0.354	26,127.58	1,514.50	26,141.14	1,514.50

MEAN AND STANDARD DEVIATION*

* Results for the mean values may differ slightly from the expected value results due to rounding. This table used MIDAS reported results to three and two decimal places. The expected values are computed internally by MIDAS and use values with more decimal places. All values cover the period, 1996-2015, with a 10 year extension period. The cost evaluation criteria are expressed as a 1996 present value of revenue requirements.

Summary of the Scenario Analysis

The scenario analysis consisted of three scenarios - high growth, nominal growth and low growth. The preferred all supply strategy and the preferred strategy with DSM were compared under these three scenarios. Each scenario used assumptions which were consistent with the economic trend suggested by the scenario. The results indicate that the strategy with DSM is preferred over the all supply strategy when the total resource cost test is used as the evaluation criteria. Using the levelized average system rates test as the evaluation criteria would cause the all supply strategy to be preferred.

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The following page contains a table which summarizes these results.

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Scenario Analysis Strategy Comparison*

Levelized Average System Rates (¢/kWh)

Strategy	Scenario			
	Nominal	Low	High	
All Supply	0	0	0 .	
DSM	0.003	0.003	0.005	

Utility Cost (\$ in Millions)

Strategy	Scenario			
	Nominal	Low	High	
All Supply	107.81	73.73	99.02	
DSM	0	. 0	0	

Total Resource Cost (\$ in Millions)

(internet)

<u>....</u>

Strategy	Scenario			
	Nominal	Low	High	
All Supply	94.19	60.76	85.26	
·		······································	· · · · · · · · · · · · · · · · · · ·	
DSM	0	0	0	
	<u> </u>		<u> </u>	

* The results shown for each scenario are the differences between the strategy cost and the low cost strategy expressed in either present value of revenue requirements or levelized rates over the period, 1996-2025.

Summary of DSM Load Impact Sensitivity

A DSM sensitivity was performed to determine the impact of changing the load impact of each DSM program. The load impact of each DSM program was increased and decreased by 20%. The expected value results were summarized and compared to the nominal case. The results indicate no change from the nominal case except for the 20% increase case. In that case, the preferred plan is essential equal in cost (total resource cost test) to the all CC units in the early 2000's and CT units in the late 2000's.

These results indicate that the level of DSM does not seem to have a significant impact on the selection of CC and CT units as future resources. Clearly, if more or less DSM is placed into the preferred strategy, it would have the effect of delaying or advancing and reducing or increasing the level of purchases in the early 2000's and advancing or delaying the timing of CT/CC units in the early 2000's.

The following pages contain tables which summarize the results described in the preceeding paragraphs.

Strategy	System Rate	Utility Cost	Total Resource Cost
	(Levelized ¢/kWh)	(30 Yr PVRR - \$ in Millions)	(30 Yr PVRR - \$ in Millions)
/ No DSM Programs All CC Expansion	6.975	26,081.56	26,081.56
All CC thru 2008; All CT after 2008	6.973	26,073.05	26,073.05
Balanced- Alternating CT and CC additions	6.973	26,071.70	26,071.70
All CT thru 2007; All CC after 2007	6.987	26,124.64	26,124.64
All CT Expansion	7.015	26,232.01	26,232.01
/ 10 DSM Programs All CC Expansion	6.980	25,983.10	25,996.66
All CC thru 2008; All CT after 2008	6.980	25,984.85	25,998.41
Balanced- Alternating CT and CC additions	6.979	25,977.75	25,991.31
All CT thru 2007; All CC after 2007	6.991	26,024.02	26,037.58
All CT Expansion	7.019	26,127.40	26,140.97
IFFERENCE FROM LOWEST COST PLAN:			· · ·
V No DSM Programs All CC Expansion	0.002	103.81	90.25
All CC thru 2008; All CT after 2008	0	95.30	81.74
Balanced- Alternating CT and CC additions	0	93.95	80.39
All CT thru 2007; All CC after 2007	0.014	146.89	133.33
All CT Expansion	0.042	254.26	240.70
V 10 DSM Programs All CC Expansion	0.007	5.35	5.35
All CC thru 2008; All CT after 2008	0.007	7.10	7.10
Balanced- Alternating CT and CC additions	0.006	0	0
All CT thru 2007; All CC after 2007	0.018	46.27	46.27
All CT Expansion	0.046	149.65	149.66

Expected Value Results

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Expected Value Results DSM Load Impacts Increased by 20%

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Strategy(Levelized System Rate Levelized ¢/kWh)	Utility Cost (30 Yr PVRR - \$ in Millions)	Total Resource Cost (30 Yr PVRR - \$ in Millions)
W No DSM Programs	• •		
All CC Expansion	6.975	26,081.56	26,081.56
All CC thru 2008; All CT after 2008	6.973	26,073.05	26,073.05
Balanced- Alternating CT and CC additions	6.973	26,071.70	26,071.70
All CT thru 2007; All CC after 2007	6.987	26,124.64	26,124.64
All CT Expansion	7.015	26,232.01	26,232.01
W 10 DSM Programs			
All CC Expansion	6.980	25,958.94	25,972.50
All CC thru 2008; All CT after 2008	6.978	25,953.85	25,967.42
Balanced- Alternating CT and CC additions	6.978	25,953.89	25,967.45
All CT thru 2007; All CC after 2007	6.990	25,997.59	26,011.15
All CT Expansion	7.019	26,104.98	26,118.55
DIFFERENCE FROM LOWEST COST PLAN:			
W No DSM Programs			
All CC Expansion	0.002	127.71	114.14
All CC thru 2008; All CT after 2008	0	119.20	105.63
Balanced- Alternating CT and CC additions	0	117.85	104.28
All CT thru 2007; All CC after 2007	0.014	170.79	157.22
All CT Expansion	0.042	278.16	264.59
W 10 DSM Programs	an an a stat	Marine Marine State	a da anti-ara anti-ara anti-ara
All CC Expansion	0.007	5.09	5.08
All CC thru 2008; All CT after 2008	0.005	0	0
Balanced- Alternating CT and CC additions	0.005	0.04	0.03
All CT thru 2007; All CC after 2007	0.017	43.74	43.73
All CT Expansion	0.046	151.13	151.13

Expected Value Results DSM Load Impacts Decreased by 20%

Strategy	Levelized System Rate	Utility Cost	Total Resource Cost
	(Levelized ¢/kWh)	(30 Yr PVRR - \$ in Millions)	(30 Yr PVRR - \$ in Millions)
W No DSM Programs All CC Expansion	6.975	26,081.56	26,081.56
All CC thru 2008; All CT after 2008	6.973	26,073.05	26,073.05
Balanced- Alternating CT and CC additions	6.973	, 26,071.70	26,071.70
All CT thru 2007; All CC after 2007	6.987	26,124.64	26,124.64
All CT Expansion	7.015	26,232.01	26,232.01
W 10 DSM Programs All CC Expansion	6.983	26,017.46	26,031.02
Ail CC thru 2008; All CT after 2008	6.983	26,016.35	26,029.92
Balanced- Alternating CT and CC additions	6.980	26,005.83	26,019.39
All CT thru 2007; All CC after 2007	6.991	26,047.63	26,061.20
All CT Expansion	7.019	26,152.95	26,166.51
DIFFERENCE FROM LOWEST COST PLAN:	· ·		
W No DSM Programs All CC Expansion	0.002	75.73	62.17
All CC thru 2008; All CT after 2008	0	67.22	53.66
Balanced- Alternating CT and CC additions	0	65.87	52.31
All CT thru 2007; All CC after 2007	0.014	118.81	105.25
All CT Expansion	0.042	226.18	212.62
W 10 DSM Programs All CC Expansion	0.010	11.63	11.63
All CC thru 2008; All CT after 2008	0.010	10.52	10.53
Balanced- Alternating CT and CC additions	0.007	0	0
All CT thru 2007; All CC after 2007	0.018	41.80	41.81
All CT Expansion	0.046	147.12	147.12

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