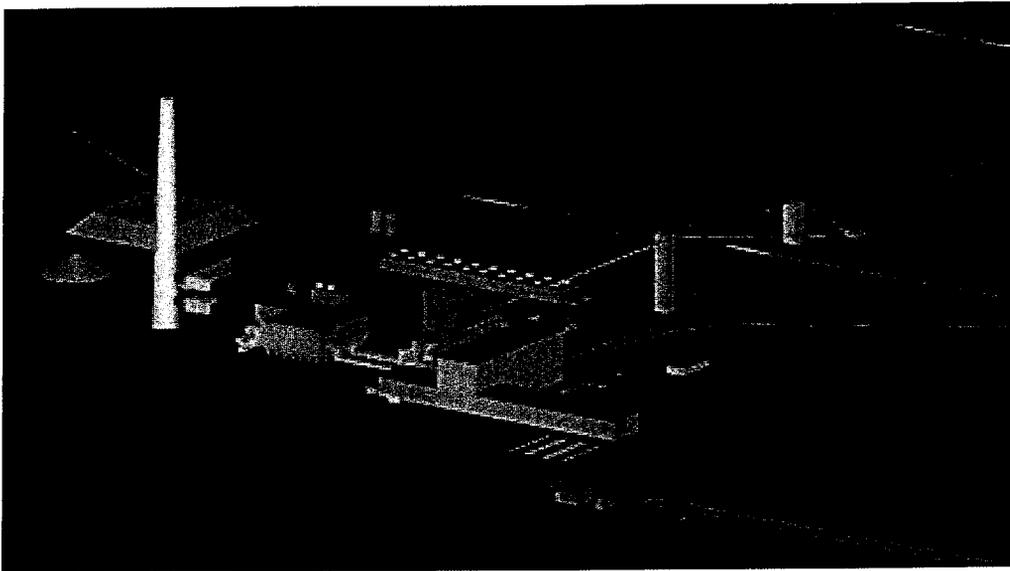


Florida Electrical Power Plant Siting Act Need for Power Application

Taylor Energy Center



Submitted by:
**Florida Municipal Power Agency
JEA**
**Reedy Creek Improvement District
City of Tallahassee**
September 2006



**REEDY CREEK
IMPROVEMENT DISTRICT**

City of Tallahassee
Your Own UtilitiesSM 

Prepared by:
Black & Veatch Corporation
 **BLACK & VEATCH**
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ENERGY WATER INFORMATION GOVERNMENT

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Abbreviations

AFUDC	Allowance for Funds Used During Construction
BACT	Best Available Control Technology
CAIR	Clean Air Interstate Rule
CAMR	Clean Air Mercury Rule
CEP	Central Energy Plant
CO ₂	Carbon Dioxide
CPWC	Cumulative Present Worth Cost
CT	Combustion Turbine
DSM	Demand-Side Management
ECEP	Epcot Central Energy Plant
EIS	Energy Information System
EPA	Environmental Protection Agency
EPC	Engineering, Procurement, and Construction
FMPA	Florida Municipal Power Agency
FGD	Flue Gas Desulfurization
FGT	Florida Gas Transmission Company
FPL	Florida Power & Light Company
FPSC	Florida Public Service Commission
FRCC	Florida Reliability Coordinating Council
FTS	Firm Transportation Service
GE	General Electric
Hg	Mercury
HVAC	Heating, Ventilation, and Air Conditioning
IGCC	Integrated Gasification Combined Cycle
LOLP	Loss of Load Probability
NERC	North American Electric Reliability Council
NO _x	Nitrogen Oxide
O&M	Operations and Maintenance
OCL	Orlando Cogen Limited
OUC	Orlando Utilities Commission
PEF	Progress Energy Florida
petcoke	Petroleum Coke
PR	Partial Requirements
PRB	Powder River Basin
RCID	Reedy Creek Improvement District

SCADA	Supervisory Control and Data Acquisition
SCR	Selective Catalytic Reduction
SO ₂	Sulfur Dioxide
Southern	Southern Power Company
TCEC	Treasure Coast Energy Center
TEC	Taylor Energy Center
TECO	Tampa Electric Company
WDW	Walt Disney World Resort Complex
WESP	Wet Electrostatic Precipitator



D.1.0 RCID Introduction

D.1.1 RCID Overview

Reedy Creek Improvement District (RCID) is a public corporation of the State of Florida and is located in Orange and Osceola Counties, about 15 miles southwest of the City of Orlando. RCID encompasses approximately 25,000 acres, or 38.6 square miles. Approximately 18,800 acres of RCID's property are located in Orange County and 6,200 acres are located in Osceola County. Two cities are located within the boundaries of RCID, the City of Lake Buena Vista and the City of Bay Lake.

In accord with its enabling legislation, RCID is responsible to the owners of land within its service territory and the public to provide for surface water control and drainage; utilities and mosquito control; roads and bridges; land use regulation and planning; fire protection; emergency medical services; environmental services; data collection and evaluation; building and other construction codes enforcement and inspections; and interface with local, regional, state and federal regulatory agencies.

RCID owns, operates, and maintains facilities associated with the electric generation, and distribution of power solely within RCID. RCID's current net summer generating capacity includes a 55 MW LM6000 1x1 combined cycle unit and two 2.5 MW diesel generating units. In addition to its own generating capacity, RCID purchases the remaining portion of its electric system requirements from other suppliers.

RCID is a summer peaking system; it expects incremental annual demand increases of between 1 MW and 3 MW over the 2006 to 2010 forecast period, and approximately 1 MW incremental annual demand increases from 2010 through 2025. The firm summer peak demand is projected to increase from 191 MW in 2006 to 213 MW in 2025.

The Taylor Energy Center (TEC) is being proposed as a joint development project by four municipal entities, including the Florida Municipal Power Agency (FMPA), JEA, RCID, and the City of Tallahassee (collectively, the Participants). The Participants are developing TEC to realize the benefits associated with the economies of scale inherent in constructing and operating a large power plant. TEC will be developed on a site consisting of approximately 3,000 acres, to be located approximately 5 miles southeast of Perry, in Taylor County, Florida. The land is bordered by Highway 27 on the north and the Fenholloway River on the west. The plant is proposed to be a 765 MW (net) supercritical pulverized coal unit, with a net heat rate of 9,238 Btu/kWh when firing a blend of Latin American coal and petroleum coke (petcoke). Additional details regarding TEC are included in Section A.3.0 of this Application. RCID's ownership interest in TEC will be 9.3 percent, or about 71 MW (net at average ambient operating conditions).

In addition to providing a reliable, cost-effective resource to meet RCID's growing electric capacity and energy needs, TEC will provide additional benefits to the State of Florida. The project will use proven supercritical boiler technology and advanced pollution control equipment to limit emissions, while burning a variety of solid fuels including Powder River Basin (PRB) coal (which has the largest coal reserves of any region within the United States), as well as Central Appalachian coals, Latin American coals, and petcoke. TEC will provide RCID and the other Participants with fuel diversity. The State of Florida will benefit from having the ability to source fuel from locations outside the hurricane-susceptible natural gas producing regions within the Gulf Coast. In addition, RCID's customers will have access to an energy supply source with less volatility than natural gas, which should help electric energy rates become more stable and predictable over time.

D.1.2 RCID Summary

Information specific to RCID is included in this Volume D. The remainder of Volume D of this Application is comprised of nine additional sections:

- Section D.2.0 - Description of RCID's Existing System
- Section D.3.0 - Forecast of RCID's Electrical Demand and Consumption
- Section D.4.0 - RCID's Need for Capacity
- Section D.5.0 - RCID's Economic Analysis
- Section D.6.0 - RCID's Sensitivity Analyses
- Section D.7.0 - RCID's Demand-Side Management
- Section D.8.0 - RCID's Strategic Considerations
- Section D.9.0 - RCID's Consequences of Delay
- Section D.10.0 - RCID's Financial Analysis

The information and analyses presented throughout this Volume D and the complete Application demonstrate that the proposed TEC satisfies the requirements set forth in Section 403.519, Florida Statutes. In particular, TEC is the most cost-effective alternative available to RCID to satisfy forecast capacity requirements in a reliable, environmentally responsible manner. TEC will provide RCID, and the State of Florida as a whole, with increased fuel diversity and supply reliability. There are no additional cost-effective conservation measures that could mitigate RCID's need for TEC.



D.2.0 Description of RCID's Existing System

RCID is a public corporation of the State of Florida and is located in Orange and Osceola Counties, about 15 miles southwest of the City of Orlando. RCID encompasses approximately 25,000 acres, or 38.6 square miles. RCID presently owns and operates electric, water, natural gas, chilled water and hot water utilities; a sanitary sewage collection system; a wastewater treatment system; a reclaimed water system; and a solid waste collection, recycling, and disposal system, in addition to other authorized functions of fire protection, highway maintenance, and water and flood control facilities.

D.2.1 Generation System

RCID owns, operates, and maintains facilities associated with the electric generation and distribution of power solely within RCID. Current net summer generating capacity totals 60 MW. In addition to its own generating capacity, RCID purchases the remaining portion of its electric system requirements from other suppliers.

D.2.1.1 Existing Generating Units

RCID's primary generating unit is located at the Central Energy Plant (CEP). The electric generation facilities at the CEP consist of a 1x1 combined cycle unit utilizing a General Electric (GE) LM6000 combustion turbine (CT), with a net summer output of 55 MW. A 1,200 kW diesel generator provides emergency backup capability to this facility.

In addition to the CEP generation facilities, additional generation facilities are located at the Epcot Central Energy Plant (ECEP), which consists of two packaged diesel generating units, each with maximum permitted capacity limits of 2,500 kW. These generators were placed in service in 1983, to provide peaking and emergency backup electrical service to certain vital loads.

D.2.1.2 FRCC Operating Reserve Capacity

As a member of the Florida Reliability Coordinating Council (FRCC), RCID is required to provide for its operating reserves. In accordance with FRCC rules and the designations of the FRCC Reserve Sharing Group, RCID is obligated to provide spinning operating reserves that are estimated at 2 MW and non-spinning operating reserves that are estimated at 4 MW, for a total of 6 MW of operating reserves. RCID currently purchases its spinning reserves from Florida Power & Light Company (FPL) and provides its non-spinning reserves from existing resources.

D.2.1.3 Power Sales Contracts

RCID has no firm long-term capacity or energy sales contracts in place.

D.2.1.4 Purchase Power Contracts

RCID purchases the majority of its capacity and energy requirements through agreements with Tampa Electric Company (TECO), Progress Energy Florida (PEF), and Orlando Cogen Limited (OCL). Table D.2-1 summarizes RCID's purchase power capacities reflected in this Application.

Table D.2-1 RCID Purchase Power Contracts		
Supplying Entity	Term	Capacity
TECO ⁽¹⁾	Through 2006	20 MW
PEF ^{(2), (3)}	Through 2010	94 MW (2006), 122 MW (2007 - 2008), 123 MW (2009), 124 MW (2010)
OCL	Through 2013	35 MW
⁽¹⁾ RCID's purchase power contract with TECO includes options for additional power purchases of up to 75MW capacity through 2017, with a 1 year minimum notice. ⁽²⁾ Capacity purchased from PEF varies monthly. Capacity shown above represents available summer capacity. ⁽³⁾ The PEF purchase power contract includes additional 5 MW purchase options.		

D.2.1.5 Planned Unit Retirements or Shutdowns

RCID does not anticipate retiring any units within the planning horizon of this Application.

D.2.1.6 Total System Resources

RCID's total summer net generating capacity is 60 MW, which is primarily gas fired, with fuel oil as the backup fuel for the LM6000 unit and the primary fuel for the ECEP diesel generating units. RCID's power purchase agreements increase its total system resources by the capacities summarized in Table D.2-1.

D.2.2 Distribution System

RCID's distribution system is operated in a closed loop configuration with accurate microprocessor-based relaying schemes that provide highly selective and secure system protection and operation. There are 16 power transformers distributed among seven substations that transform the power to the distribution system, which is operated at a nominal voltage of 12.47 kV. Power distribution is accomplished via 90 distribution

feeders routed from the power substations across a complex network. The distribution system currently employs approximately 260 circuit miles of 15 kV distribution line, of which 254 miles are underground and 6 miles are overhead. The distribution system is typically loop-fed and operated in a radial configuration.

The electric system is monitored and controlled via a supervisory control and data acquisition (SCADA) system connected through dedicated fiber-optic and leased telephone lines. System operators certified by the North American Electric Reliability Council (NERC) monitor, control, and coordinate system operations at the Energy Control Center. A tiled map board displays real-time status of the distribution devices with multi-screen, video display consoles that provide the operator interface to control and monitor the distribution system devices and states.

Electric system designs and configurations, operations, and maintenance practices are all directed toward providing excellent reliability. Advanced technologies are employed through engineering specifications across a wide range of electric system equipment, devices, and monitoring and control systems. Power distribution switchgear, distribution cabling, and transformers are evaluated on a total life-cycle cost basis, considering the physical operating environment and reliability expectations in order to minimize the possibility of premature failure and to maximize system operating integrity. This philosophy and the associated actions have provided system reliability performance that exceeds what is typically experienced across the industry, both in municipal as well as investor-owned utility systems.

D.2.3 Service Area

RCID currently provides electric service to customers within an area of approximately 20 square miles of the total 38.6 square miles that RCID encompasses. This service area includes the Orange County section of the RCID, north of U.S. Highway 192, and west of Interstate Highway 4. Although the RCID is empowered to serve within the district boundaries, the present service area is limited by existing agreements. On September 10, 1987, RCID and Florida Power Corporation (now Progress Energy Florida, or PEF), RCID's neighboring electric utility, entered into a territorial agreement. Pursuant to the terms of the agreement, which was approved by the PSC on September 30, 1987, both RCID and PEF agreed not to serve electric customers not presently served by either entity within the other's designated service area. Under the terms of the agreement, which expires on September 30, 2017, PEF is permitted to serve certain existing customers that are located within RCID's service area. At the direction of the RCID and in accordance with its bond indenture, PEF may be requested to extend service to new customers located in RCID's service area.

As of September 30, 2005, RCID provided electric, water, sewer and gas services, among others, to the Walt Disney World Resort Complex (WDW) (including the Magic Kingdom, Epcot Center, Disney-MGM Studios, Disney's Animal Kingdom, Disney's Wide World of Sports, Disney's Village Resort, Disney Vacation Club, Disney Institute, Disney's Boardwalk, Pleasure Island, Disney's Westside, Disney Village Marketplace, Discovery Island, Typhoon Lagoon, Blizzard Beach, 6 golf courses, 14 resort hotels, and the Fort Wilderness Campground), Crossroads Shopping Center, 7 hotels located in the Hotel Plaza at Lake Buena Vista, and 2 hotels at the Epcot resort areas. In addition to the Walt Disney accounts, RCID provides utility services to other entities including hotels, residential users, and small commercial customers.

D.2.4 Load and Electrical Characteristics

RCID has historically experienced peak annual demand in the summer months. The RCID's actual total peak demand during the summer of 2005 was 194 MW. This compares to an actual peak in the winter of 2005/2006 of 160 MW.



D.3.0 Forecast of RCID's Electrical Demand and Consumption

RCID's load forecasts are driven by its customers' base business models. RCID's primary customer is the WDW, which represents approximately 85 percent of RCID's load. The remaining 15 percent of RCID's load is primarily commercial customers, consisting of hotels, service businesses, and approximately 10 residential customers.

D.3.1 Load Forecast Methodology

In general, RCID's load growth occurs in increments and results from new facilities developed as part of its customer's business model. For each forecast, the initial year values are established on the basis of the previous year's actual loads, which are adjusted for anomalies and any known incremental additions or subtractions. Though RCID has defined the types and locations of future development within its boundaries, the timing of these developments is not known with certainty. As a consequence, the forecast is essentially a straight-line approximation of the growth rate. The actual pace of future development within RCID may vary significantly from these projected values. Incremental annual additions for the RCID load forecast range between 1 MW and 3 MW over the 2006 to 2010 time frame. Incremental additions beyond 2010 were based on the average additions over this period, approximately 1 MW per year for the base case forecast.

D.3.2 Forecast System Demand and Energy Requirements – Base Case

Table D.3-1 presents RCID's base case load forecast for the years 2006 through 2025.

D.3.3 Forecast System Demand and Energy Requirements – Sensitivity Cases

RCID developed high and low load growth sensitivity cases to address the uncertainty associated with forecast input variables by adjusting select load forecast assumptions. For the sensitivities to the base energy forecast, the key assumptions include the initial year peak demand and the average annual peak growth rate. The high load growth forecast assumes a load growth of 1.5 MW per year, while the low load growth forecast assumes a load growth of only 0.5 MW per year. As with the base case forecast, high and low load growth forecasts were developed for the years 2006 through 2025. Table D.3-2 presents the RCID's high and low load growth sensitivity cases.

Table D.3-1 RCID Load Forecast – Base Case		
Calendar Year	Net Annual Peak Demand (MW)	Annual Net Energy for Load (NEL) (GWh)
2006	191	1,259
2007	193	1,265
2008	194	1,273
2009	197	1,288
2010	198	1,294
2011	199	1,301
2012	200	1,307
2013	201	1,314
2014	202	1,321
2015	203	1,328
2016	204	1,334
2017	205	1,341
2018	206	1,348
2019	207	1,355
2020	208	1,361
2021	209	1,368
2022	210	1,375
2023	211	1,382
2024	212	1,388
2025	213	1,395

Table D.3-2 RCID Load Forecast – Sensitivity Cases				
Calendar Year	High Load and Energy Growth		Low Load and Energy Growth	
	Net Annual Peak Demand (MW)	Annual NEL (GWh)	Net Annual Peak Demand (MW)	Annual NEL (GWh)
2006	195	1,279	190	1,246
2007	196	1,286	191	1,254
2008	197	1,294	192	1,261
2009	200	1,313	195	1,280
2010	201	1,320	196	1,287
2011	202	1,330	196	1,290
2012	204	1,340	197	1,294
2013	205	1,349	197	1,297
2014	207	1,359	198	1,300
2015	208	1,369	198	1,303
2016	210	1,379	199	1,307
2017	211	1,389	199	1,310
2018	213	1,399	200	1,313
2019	214	1,409	200	1,317
2020	216	1,418	201	1,320
2021	217	1,428	201	1,323
2022	219	1,438	202	1,326
2023	220	1,448	202	1,330
2024	222	1,458	203	1,333
2025	223	1,468	203	1,336

this Application will be scheduled to address projected annual capacity shortfalls that coincide with the summer peak requirements.

Table D.4-1
RCID Base Case Capacity Balance

Year	Resources				System Peak Demand (MW)	Reserve Margin ⁽¹⁾ Percent	Excess/(Deficit) Capacity to Maintain 15 Percent Reserves
	Owned	Non-Partial Requirements Purchases ⁽²⁾	PR Purchases ⁽²⁾	Net System Capacity (MW)			
2006	60	35	114	209	191	23.4	6
2007	60	35	122	217	193	33.8	13
2008	60	35	122	217	194	31.9	12
2009	60	35	123	218	197	28.4	10
2010	60	35	124	219	198	28.4	10
2011	60	35	0	95	199	-52.3	(134)
2012	60	35	0	95	200	-52.5	(135)
2013	60	35	0	95	201	-52.7	(136)
2014	60	0	0	60	202	-70.3	(172)
2015	60	0	0	60	203	-70.4	(173)
2016	60	0	0	60	204	-70.6	(175)
2017	60	0	0	60	205	-70.7	(176)
2018	60	0	0	60	206	-70.9	(177)
2019	60	0	0	60	207	-71.0	(178)
2020	60	0	0	60	208	-71.2	(179)
2021	60	0	0	60	209	-71	(180)
2022	60	0	0	60	210	-71	(182)
2023	60	0	0	60	211	-72	(183)
2024	60	0	0	60	212	-72	(184)
2025	60	0	0	60	213	-72	(185)

⁽¹⁾Reserve margin calculated as (Net System Capacity – PR Purchases) – (System Peak Demand – PR Purchases) / (System Peak Demand – PR Purchases).

⁽²⁾The purchase power capacities shown in this table reflect the capacities under RCID's existing agreements with TECO, PEF, and OCL. Refer to Table D.2-1 for a summary of these purchase power capacities, and the additional purchase options that are available to RCID.



D.5.0 RCID's Economic Analysis

A detailed economic analysis was performed to evaluate the cost-effectiveness of RCID's participation in TEC and to determine the least-cost capacity expansion plan to meet RCID's forecast capacity requirements during the planning horizon, as presented in Section D.4.0. This section presents the assumptions and methodology used in the economic analysis, as well as the results of the base case analysis.

The economic analysis described herein compares the economics of the least-cost capacity expansion plan, including RCID's share of capacity and energy from TEC, versus the economics of the least-cost expansion plan for RCID's system that does not include participation in TEC. The capacity associated with RCID's share of TEC, as well as the construction of any of the supply-side alternatives presented in Section A.6.0, is only sufficient to satisfy RCID's forecast capacity requirements for a portion of the expansion planning horizon. To meet the forecast capacity requirements, multiple unit additions were selected from RCID's supply-side alternatives considered for individual participation that passed the supply-side screening described in Section A.6.6. Analyses of RCID's joint participation in supply-side alternatives other than TEC are presented as sensitivity cases in Section D.6.0.

D.5.1 Expansion Planning and Production Costing Methodology

The supply-side evaluations of generating unit alternatives were performed using POWROPT, an optimal generation expansion model that Black & Veatch developed as an alternative to other optimization programs. POWROPT has been benchmarked against other optimization programs and has proven to be an effective modeling program. Both POWROPT and its detailed chronological production costing module, POWRPRO, have been used in numerous Need for Power Applications filed with the Florida Public Service Commission (FPSC), including FMPA's Treasure Coast Energy Center (TCEC) Unit 1 Need for Power Application approved in July 2005, and the Orlando Utilities Commission (OUC) Stanton B Need for Power Application approved in May 2006.

POWROPT operates on an hourly chronological basis and is used to determine a set of optimal capacity expansion plans to satisfy forecast capacity requirements, simulate the operation of each of these plans, and select the most desirable plan based on cumulative present worth revenue requirements. POWROPT evaluates all combinations of generating unit alternatives and purchase power options, in conjunction with existing capacity resources, while maintaining user-defined reliability criteria. All capacity expansion plans were analyzed over a 30 year period from 2006 through 2035.

After the optimal generation expansion plan was selected using POWROPT, Black & Veatch's POWRPRO was used to obtain the annual production cost for the expansion plan. POWRPRO is a computer-based chronological production costing model developed for use in power supply systems planning. POWRPRO simulates the hour-by-hour operation of a power supply system over a specified planning period. Required inputs are carried forward from those used in POWROPT and include the performance characteristics of generating units, fuel costs, and the system hourly load profile for each year.

POWRPRO summarizes each unit's operating characteristics for every year of the planning horizon. These characteristics include, among others, each unit's annual generation, fuel consumption, fuel cost, average net operating heat rate, the number of hours the unit was on line, the capacity factor, variable operations and maintenance (O&M) costs, and the number of starts and associated costs. Fixed O&M costs were included only for new unit additions, since fixed O&M costs for existing units are generally considered sunk costs that will not vary from one expansion plan to another. The annual capacity charges for RCID's power purchases from TECO, PEF, and OCL were not included, since they also represent sunk costs. Similarly, fixed costs for firm natural gas transportation capacity from Florida Gas Transmission Company (FGT) for existing units are considered sunk costs and were not included. The operating costs of each unit were aggregated to determine the annual operating costs for each year of the expansion plan. Capital costs, fixed O&M costs, and incremental costs for natural gas transportation (for combined cycle capacity addition alternatives) were then added for each capacity addition selected, at which point the cumulative present worth cost (CPWC) of each expansion plan was calculated.

The CPWC calculation accounts for annual system costs (fuel and energy, fixed O&M for capacity additions, nonfuel variable O&M, startup, and levelized capital) for each year of the expansion planning period and discounts each back to 2006 at the present worth discount rate of 5.0 percent. These annual present worth costs were then summed over the 2006 through 2035 period to calculate the total CPWC of the expansion plan being considered. Such analysis allows for a comparison of CPWCs between various capacity expansion plans, and the plan with the lowest CPWC is considered the least-cost capacity expansion plan.

D.5.2 Least-Cost Capacity Expansion Analysis

The economic analysis consisted of comparing the economics of the optimal capacity expansion plan, including RCID's participation in TEC, versus the optimal capacity expansion plan not including participation in TEC. As described previously in

this section, Black & Veatch first used its optimum generation expansion program, POWROPT, to select unit additions from RCID's supply-side alternatives considered for individual participation, which was presented in Section A.6.0. Once the least-cost expansion plan for each case was determined, POWRPRO was used to determine the annual total system costs and to develop a comparison of CPWCs associated with each expansion plan.

D.5.2.1 Peak Demand and Energy Growth

As presented in Section D.3.0, a forecast of peak demand and NEL was provided for RCID's system through 2025. For evaluation purposes (as discussed in Section A.8.0), it has been assumed that there would be no load growth beyond 2025.

D.5.2.2 Supply-Side Candidate Unit Additions

As described in Section D.4.0, RCID's forecast capacity requirements are dictated by projected capacity shortfalls in the summer season of each year of the planning period. On a weather-normalized basis, RCID's summer peak typically occurs in June, July, or August of a given calendar year; however, RCID's actual summer peak could occur as early as May. To ensure that new capacity additions are available to meet forecast summer reserve margin requirements, all unit additions considered for RCID's individual ownership (as presented in Section A.6.0) are assumed to be installed by May 1.

As stated in Section A.6.0, for the purposes of this analysis, RCID will consider only LM6000 1x1 combined cycle brownfield unit additions at the CEP. Section A.6.0 presented the estimated cost and performance characteristics for the LM6000 1x1 combined cycle unit considered by RCID. The LM6000 1x1 combined cycle unit was assumed to be available beginning in 2011.

D.5.2.3 Fuel Prices and Natural Gas Transportation

As described in Section A.4.0 of this Application, projections of delivered fuel prices were developed by the TEC Fuels Committee. The base case fuel price projections presented in Section A.4.0 have been used for the evaluation presented in this section.

For all capacity expansion plan evaluations, it was necessary to account for natural gas transportation capacity associated with the new combined cycle unit alternatives. RCID currently has a contract in place with FGT for firm natural gas transportation to fuel its existing natural gas fired unit, which is located at CEP. For the LM6000 1x1 combined cycle option considered by RCID in this analysis, it was assumed that RCID would purchase firm transportation in accordance with FGT's tariff so that 6.0 percent of the daily natural gas transportation allocation would be adequate to operate the

unit at full load for an hour, based on the performance at average ambient conditions. This would require 8,452 MBtu of firm natural gas per day. Using the Firm Transportation Service (FTS) reservation charge of \$0.769 per MBtu (pursuant to FGT's April 2006, effective rates for incremental Firm Market Area Transportation), firm transportation costs of \$3.34 per kW-month were added to the fixed O&M costs of the LM6000 1x1 combined cycle alternative. Any natural gas required in addition to the firm natural gas transportation for the existing and new units is priced at an interruptible service rate of \$0.37 per MBtu, which was added to the annual commodity price forecasts for natural gas presented in Section A.4.0.

D.5.2.4 Emission Cost Considerations

To reflect the economic effects of the Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR) (as described in Section A.5.0), the forecast prices of emissions allowances were incorporated into the fuel costs for each unit, including existing units that will be regulated under CAIR and CAMR, beginning with the first phases of CAIR and CAMR. The allowance price forecast presented in Section A.5.0 provides emissions costs on a dollar per ton (dollar per pound for mercury [Hg]) basis. These costs were used to calculate a fuel cost adder for both existing units and candidate units, based on the emissions rates of each individual unit. As a result, each generating unit was modeled using different prices for fuel because of differences in emissions rates.

The forecast market value of the allowances allocated to RCID's existing generating units was not included in the economic analysis, since it represents the same credit for each capacity expansion plan. Since complete emissions control strategies, the resulting reductions in emissions rates, and the generating unit output and performance impacts from potential emissions control measures are not entirely known, no changes in emissions rates or unit output and performance for RCID's existing generating units were considered in this analysis. Table D.5-1 presents the emissions cost adders for RCID's existing units, as well as for TEC and the LM6000 1x1 combined cycle unit.

D.5.2.5 Dispatch Assumptions

Nonfuel variable O&M and forecast emissions allowance costs were included in the unit dispatch modeling in POWROPT and POWRPRO, along with the fuel costs. These costs were included in the dispatch modeling to ensure the most cost-effective dispatch of both existing and new generating units.

Table D.5-1 Combined SO ₂ , NO _x , and Hg Emissions Cost Adders (Nominal \$/MBtu)					
Calendar Year	CEP Existing LM6000 CC	ECEP Existing Diesel Unit 1 ⁽¹⁾	ECEP Existing Diesel Unit 2 ⁽¹⁾	Joint Candidate TEC	Candidate LM6000 Combined Cycle
2009	\$0.01	\$0.00	\$0.00	\$0.08	\$0.01
2010	\$0.01	\$0.00	\$0.00	\$0.15	\$0.01
2011	\$0.01	\$0.00	\$0.00	\$0.16	\$0.01
2012	\$0.01	\$0.00	\$0.00	\$0.16	\$0.01
2013	\$0.01	\$0.00	\$0.00	\$0.17	\$0.01
2014	\$0.01	\$0.00	\$0.00	\$0.18	\$0.01
2015	\$0.02	\$0.00	\$0.00	\$0.28	\$0.02
2016	\$0.02	\$0.00	\$0.00	\$0.30	\$0.02
2017	\$0.02	\$0.00	\$0.00	\$0.27	\$0.02
2018	\$0.02	\$0.00	\$0.00	\$0.30	\$0.02
2019	\$0.03	\$0.00	\$0.00	\$0.36	\$0.03
2020	\$0.03	\$0.00	\$0.00	\$0.42	\$0.03
2021	\$0.03	\$0.00	\$0.00	\$0.42	\$0.03
2022	\$0.03	\$0.00	\$0.00	\$0.41	\$0.03
2023	\$0.04	\$0.00	\$0.00	\$0.54	\$0.04
2024	\$0.06	\$0.00	\$0.00	\$0.74	\$0.06
2025	\$0.07	\$0.00	\$0.00	\$0.84	\$0.07
2026	\$0.07	\$0.00	\$0.00	\$0.90	\$0.07
2027	\$0.08	\$0.00	\$0.00	\$0.98	\$0.08
2028	\$0.08	\$0.00	\$0.00	\$1.05	\$0.08
2029	\$0.09	\$0.00	\$0.00	\$1.13	\$0.09
2030	\$0.09	\$0.00	\$0.00	\$1.21	\$0.09
2031	\$0.10	\$0.00	\$0.00	\$1.29	\$0.10
2032	\$0.11	\$0.00	\$0.00	\$1.39	\$0.11
2033	\$0.12	\$0.00	\$0.00	\$1.48	\$0.12
2034	\$0.12	\$0.00	\$0.00	\$1.59	\$0.12
2035	\$0.13	\$0.00	\$0.00	\$1.70	\$0.13

⁽¹⁾ These diesel units, with a nameplate capacity less than 25 MW, are not regulated by CAIR or CAMR.

D.5.2.6 Analysis of RCID's Participation in TEC

The evaluation of RCID's participation in TEC was performed by modeling a capacity expansion plan that included the purchase of additional capacity for 2011 through 2017 from RCID's existing agreement with TECO. The annual capacity purchased from TECO, in combination with participation in TEC beginning May 1, 2012, was adjusted to satisfy RCID's forecast annual capacity reserve requirements.

POWROPT was used to determine the set of optimum capacity additions (after the expiration of the TECO agreement) from the conventional technologies considered for individual ownership by RCID, as presented in Section A.6.0. In addition to the capacity purchased from TECO, RCID is projected to require capacity in the summer of 2011 to satisfy forecast capacity requirements. As discussed previously, the only generating alternative considered by RCID in the base case economic analysis, besides TEC, was the LM6000 1x1 combined cycle option. Therefore, POWROPT selected additional LM6000 1x1 combined cycle units as needed to satisfy the forecast capacity requirements in 2011 and after the expiration of the TECO agreement.

D.5.2.6.1 TEC Capital Cost. As described in Sections A.3.0 and A.8.0, the installed capital cost for TEC is \$1,752.4 million in 2012 dollars, inclusive of escalation and interest during construction. It was assumed that RCID would be responsible for a percentage of the capital costs equal to RCID's ownership share of 9.3 percent. RCID's total share of TEC's installed cost is approximately \$163.0 million in 2012 dollars, which includes the costs for engineering, procurement, and construction (EPC); allowance for funds used during construction (AFUDC); land; community contribution; initial coal inventory; and owner's costs for TEC. Table D.5-2 presents a summary of RCID's share of the capital costs for TEC.

D.5.2.6.2 Transmission Considerations. As described in Section A.3.0, RCID will be utilizing the transmission system of PEF for delivery from the Perry Substation to RCID's transmission system. RCID will be required to pay transmission tariff charges to PEF. The transmission tariff assumed for RCID's use of the PEF transmission system is \$1,193.00 per MW-month. It was assumed that RCID would purchase firm transmission for 71.2 MW, which will ensure that enough firm transmission is available for RCID to receive its full entitlement of capacity and energy from TEC in both the winter and summer seasons. The annual transmission tariff that RCID will pay to PEF is \$1,019,142. This cost is included as an additional cost to RCID starting on May 1, 2012, and does not escalate with inflation.

Description	Entire Unit (\$1,000s)	RCID's Share ⁽¹⁾ (\$1,000s)
EPC Cost	\$1,420,892	\$132,143
AFUDC	\$135,413	\$12,594
Owner's Cost	\$116,994	\$10,880
Initial Coal Inventory	\$39,010	\$3,628
Community Contribution	\$20,000	\$1,860
Land Cost	\$20,100	\$1,869
Total	\$1,752,409	\$162,974

⁽¹⁾Reflects RCID's 9.3 percent ownership share of TEC.

The line losses for the PEF transmission system are assumed to be 2.10 percent. These losses were considered when modeling RCID's participation in TEC; the resulting net output and net plant heat rates for RCID are summarized in Table D.5-3.

Without Transmission Losses		Including Transmission Losses ⁽¹⁾	
Output (MW)	Net Plant Heat Rate (Btu/kWh)	Output (MW)	Net Plant Heat Rate (Btu/kWh)
71.2	9,238	69.7	9,436
69.5	9,238	68.1	9,436
55.1	9,428	54.0	9,630
36.5	9,933	35.8	10,146
25.3	10,535	24.8	10,760

⁽¹⁾Assumes losses of approximately 2.10 percent.

D.5.2.6.3 Operations and Maintenance Costs. Section A.3.0 presented the fixed and non-fuel variable O&M costs for TEC. It was assumed that RCID would be responsible for a share of the O&M costs for TEC equal to RCID's ownership share of 9.3 percent. Total fixed O&M costs for TEC include an adder for ongoing capital

expenditures of \$2.97 per kW-year in 2012 dollars, which escalates 2.0 percent higher than the general inflation rate. Excluding the adder for ongoing capital expenditures, the total annual cost for TEC's fixed O&M is \$17.7 million in 2005 dollars. RCID's share of the fixed O&M cost for TEC is \$1.6 million or about \$23.62 per kW-year (net after considering transmission losses) in 2005 dollars. Section A.3.0 presented the nonfuel variable O&M cost for TEC before transmission losses as \$1.36 per MWh. With transmission losses considered, RCID's net non-fuel variable O&M cost for TEC is \$1.39 per MWh in 2005 dollars.

D.5.2.6.4 TEC Scheduled Maintenance and Forced Outages. As presented in Section A.3.0, TEC is expected to have an average of 16 scheduled maintenance days per year. Scheduled maintenance is assumed to begin October 1 of every year after 2012. The scheduled maintenance period is consistent for all of the economic evaluations presented in this Application. TEC is assumed to have an equivalent forced outage rate of 5.23 percent.

D.5.2.6.5 Community Contribution. For the purposes of this analysis, the TEC Participants are assumed to pay a community contribution of \$2.5 million per year, in addition to an initial contribution of \$20.0 million (included in the capital cost) described previously in this section. Similar to the other fixed costs for TEC, it was assumed that RCID would be responsible for a percentage of the annual community contribution proportionate to its ownership share of TEC. RCID's share of the annual community contribution is approximately \$232,500 in 2012 dollars. The community contribution is included as an additional annual cost to RCID, escalated at the general inflation rate of 2.5 percent per year after May 1, 2012.

D.5.2.7 Analysis of Alternative Expansion Plans to Participation in TEC

Black & Veatch utilized POWROPT to determine the least-cost capacity expansion plan not including RCID's participation in TEC. Similar to the analysis described in Subsection D.5.2.7, it has been assumed that RCID would increase the capacity purchased under its existing agreement with TECO by up to 75 MW between 2011 and 2017. Given this assumption, RCID is still forecasted to require additional capacity beginning in the summer of 2011 and continuing thereafter. The 2011 capacity requirement, and all subsequent needs for additional capacity after the expiration of the TECO agreement, will be satisfied by the addition of brownfield LM6000 1x1 combined cycle units.

D.5.3 Cumulative Present Worth Cost Analysis

The previous sections described the assumptions and methodology that were used in POWROPT to select least-cost capacity expansion plans for a scenario that included RCID's participation in TEC and another scenario in which it was assumed that TEC would not be constructed. Once these least-cost capacity expansion plans were identified, POWRPRO was used to determine the total annual system costs and to develop a comparison of CPWCs associated with each expansion plan.

D.5.3.1 Analysis of the Capacity Expansion Plan with TEC

The least-cost capacity expansion plan, assuming that RCID participates in TEC, includes the extension of the TECO agreement through 2017, a brownfield LM6000 1x1 combined cycle unit in 2011, followed by TEC in 2012, and the addition of two brownfield LM6000 1x1 combined cycle units in 2018.

D.5.3.2 Analysis of Alternative Capacity Expansion Plan

The least-cost capacity expansion plan without RCID's participation in TEC includes the extension of the TECO agreement through 2017, a brownfield LM6000 1x1 combined cycle unit in 2011, a brownfield LM6000 1x1 combined cycle unit in 2014, and two brownfield LM6000 1x1 combined cycle units in 2018.

D.5.3.3 Comparison of Cumulative Present Worth Costs

As shown in Table D.5-4, the CPWC of the least-cost capacity expansion plan that includes RCID's participation in TEC is \$1,771.2 million. Table D.5-5 indicates that the CPWC of the least-cost capacity expansion plan without TEC is \$2,042.1 million. A comparison of the CPWCs of the two plans demonstrates that the expansion plan with RCID's participation in TEC is the least-cost plan by \$270.9 million over the 2006 through 2035 planning period.

Table D.5-4 Expansion Plan Economic Summary - With Taylor Energy Center in 2012

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast	Base Case	CPW Discount Rate	5.0%	Interest During Construction:	5.00%		
Load Forecast	Base Case	Final Capital Escalation Rate.	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2008	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2008 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	162,974	11,622
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,823	\$261	\$0	\$49,084	\$0	\$0	\$0	\$0	\$0	\$0	\$49,084	\$96,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$46,169	\$323	\$0	\$46,512	\$0	\$0	\$0	\$0	\$0	\$0	\$46,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,179	\$295,321
2012	\$47,793	\$16,856	\$6,928	\$71,377	\$14,652	\$233	\$679	\$142	\$0	\$15,705	\$87,082	\$360,304
2013	\$51,643	\$6,865	\$7,778	\$66,286	\$18,560	\$238	\$1,019	\$221	\$0	\$20,039	\$86,325	\$423,074
2014	\$47,877	\$20,443	\$11,491	\$79,811	\$18,560	\$244	\$1,019	\$231	\$0	\$20,055	\$99,865	\$490,667
2015	\$46,502	\$26,945	\$11,702	\$85,149	\$18,560	\$250	\$1,019	\$241	\$0	\$20,071	\$105,221	\$556,493
2016	\$46,103	\$28,775	\$11,915	\$86,793	\$18,560	\$257	\$1,019	\$252	\$0	\$20,086	\$106,881	\$625,337
2017	\$49,153	\$30,647	\$12,116	\$91,916	\$18,560	\$263	\$1,019	\$263	\$0	\$20,106	\$112,023	\$690,834
2018	\$71,165	\$3,941	\$12,841	\$87,747	\$29,313	\$270	\$1,019	\$275	\$0	\$30,877	\$118,625	\$756,689
2019	\$73,029	\$4,106	\$15,763	\$92,898	\$34,580	\$276	\$1,019	\$268	\$0	\$36,163	\$129,061	\$825,332
2020	\$76,924	\$4,234	\$15,979	\$97,138	\$34,580	\$283	\$1,019	\$301	\$0	\$36,183	\$133,321	\$892,666
2021	\$80,453	\$4,367	\$18,201	\$101,020	\$34,580	\$290	\$1,019	\$314	\$0	\$36,204	\$137,224	\$958,676
2022	\$83,711	\$4,503	\$16,428	\$104,642	\$34,580	\$296	\$1,019	\$328	\$0	\$36,225	\$140,867	\$1,023,208
2023	\$87,983	\$4,644	\$16,661	\$109,288	\$34,580	\$305	\$1,019	\$343	\$0	\$36,247	\$145,535	\$1,096,705
2024	\$93,679	\$4,789	\$18,899	\$115,367	\$34,580	\$313	\$1,019	\$359	\$0	\$36,270	\$151,637	\$1,149,713
2025	\$98,417	\$4,938	\$17,144	\$120,499	\$34,580	\$321	\$1,019	\$375	\$0	\$36,294	\$156,793	\$1,211,761
2026	\$102,555	\$5,061	\$17,395	\$125,011	\$34,580	\$329	\$1,019	\$392	\$0	\$36,319	\$161,330	\$1,272,565
2027	\$106,352	\$5,186	\$17,652	\$129,192	\$34,580	\$337	\$1,019	\$409	\$0	\$36,345	\$166,537	\$1,331,963
2028	\$111,213	\$5,318	\$17,915	\$134,445	\$34,580	\$345	\$1,019	\$428	\$0	\$36,372	\$170,817	\$1,390,377
2029	\$116,031	\$5,451	\$18,185	\$139,666	\$34,580	\$354	\$1,019	\$447	\$0	\$36,400	\$176,066	\$1,447,699
2030	\$121,050	\$5,587	\$18,462	\$145,099	\$34,580	\$363	\$1,019	\$467	\$0	\$36,429	\$181,527	\$1,503,985
2031	\$126,298	\$5,726	\$18,745	\$150,770	\$34,580	\$372	\$1,019	\$488	\$0	\$36,459	\$187,228	\$1,559,274
2032	\$131,796	\$5,870	\$19,036	\$156,701	\$34,580	\$381	\$1,019	\$510	\$0	\$36,490	\$193,191	\$1,613,607
2033	\$137,552	\$6,016	\$19,334	\$162,902	\$34,580	\$391	\$1,019	\$533	\$0	\$36,522	\$199,425	\$1,667,022
2034	\$143,580	\$6,167	\$19,639	\$169,366	\$34,580	\$400	\$1,019	\$557	\$0	\$36,556	\$205,942	\$1,719,557
2035	\$149,882	\$6,321	\$19,952	\$176,155	\$34,580	\$410	\$1,019	\$582	\$0	\$36,591	\$212,746	\$1,771,243

Table D.5-5 Expansion Plan Economic Summary - Without Taylor Energy Center

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast	Base Case	CPW Discount Rate	5.0%	Interest During Construction	5.00%		
Load Forecast	Base Case	Final Capital Escalation Rate	2.5%	Fixed Charge Rate CT (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC (25 year)	7.92%		
				Fixed Charge Rate Coal (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day-Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
GE LM6000 1X1 CC	73,300	18	05/01/14	91,679	7,256
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost			Total Production Cost (\$1,000)	Capital Cost and Other Project Costs					Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)	
	Fuel and Energy Cost (\$1,000)	O&M			Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)			Total Capital Cost (\$1,000)
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$96,415
2008	\$48,946	\$283	\$0	\$49,229	\$0	\$0	\$0	\$0	\$0	\$0	\$49,229	\$141,253
2009	\$48,169	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,179	\$295,321
2012	\$45,382	\$34,305	\$12,396	\$92,083	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$98,821	\$369,063
2013	\$47,412	\$38,438	\$12,554	\$96,402	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$103,140	\$442,363
2014	\$53,222	\$35,596	\$13,972	\$102,789	\$11,609	\$0	\$0	\$0	\$0	\$11,609	\$114,396	\$519,792
2015	\$57,502	\$35,000	\$15,570	\$108,072	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$122,067	\$598,477
2016	\$60,030	\$37,221	\$15,776	\$113,029	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$127,024	\$676,459
2017	\$62,774	\$39,492	\$15,989	\$118,236	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$132,230	\$753,771
2018	\$65,457	\$4,884	\$14,796	\$115,140	\$24,747	\$0	\$0	\$0	\$0	\$24,747	\$139,887	\$831,665
2019	\$96,362	\$5,110	\$17,915	\$119,327	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$149,341	\$910,864
2020	\$101,075	\$5,284	\$18,126	\$124,485	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$154,479	\$988,887
2021	\$109,268	\$5,423	\$18,341	\$130,052	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$160,096	\$1,065,881
2022	\$111,660	\$5,584	\$18,563	\$135,806	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$165,820	\$1,141,645
2023	\$117,349	\$5,754	\$18,790	\$141,892	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$171,908	\$1,216,648
2024	\$123,513	\$5,926	\$19,022	\$148,461	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$178,475	\$1,291,007
2025	\$129,751	\$6,104	\$19,260	\$155,115	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$185,130	\$1,364,269
2026	\$135,584	\$6,256	\$19,505	\$161,325	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$191,339	\$1,436,383
2027	\$141,794	\$6,413	\$19,755	\$167,962	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$197,976	\$1,507,445
2028	\$148,249	\$6,573	\$20,012	\$174,834	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$204,846	\$1,577,472
2029	\$154,941	\$6,737	\$20,275	\$181,953	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$211,967	\$1,646,483
2030	\$162,095	\$6,906	\$20,544	\$189,545	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$219,559	\$1,714,561
2031	\$169,575	\$7,079	\$20,821	\$197,474	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$227,488	\$1,781,739
2032	\$177,396	\$7,255	\$21,104	\$205,755	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$235,770	\$1,848,047
2033	\$185,588	\$7,437	\$21,394	\$214,417	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$244,431	\$1,913,517
2034	\$194,152	\$7,623	\$21,692	\$223,466	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$253,480	\$1,978,176
2035	\$203,107	\$7,813	\$21,997	\$232,916	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$262,932	\$2,042,057



D.6.0 RCID's Sensitivity Analyses

Several sensitivity analyses were performed to supplement RCID's base case economic analysis and to demonstrate the robustness of the capacity expansion plans, including RCID's participation in TEC. These analyses measured the impact of varying the key assumptions used in the base case economic analysis, as well as the effects of considerations not included in the base case.

As described in Section D.5.0, the base case economic analysis compared the CPWC of the optimal capacity expansion plan, including RCID's participation in TEC, to the optimal capacity expansion plan without participation in TEC. For the base case analysis that included participation in TEC, the proposed TEC was treated as a committed unit starting May 1, 2012, while in the base case analysis without TEC, no candidate units were committed. POWROPT, Black & Veatch's optimal generation and capacity expansion model, was used to select the least-cost expansion plan to meet RCID's capacity needs. Once the optimal capacity expansion plan was developed for each case, POWRPRO (Black & Veatch's production costing model) was used to determine each plan's production costs, which were used to develop an overall CPWC for each plan.

The general methodology used in the sensitivity analyses is similar to the methodology used in the base case analysis. POWROPT was used to determine the optimal capacity expansion plan for all cases considered under the various assumptions described in this section. POWRPRO was then utilized to calculate production costs of each plan, to compare each plan's CPWC and to determine the least-cost expansion plan. The remainder of this section presents the methodology and results of the sensitivity analyses.

D.6.1 Input Parameter Sensitivities

The sensitivities described in this section reflect changes to the base case input assumptions including fuel prices, load forecast, capital costs, emissions allowance prices, and potential regulations related to carbon dioxide (CO₂) emissions.

It should be noted that the characteristics of RCID's existing system, in combination with the supply-side alternatives from which additional capacity can be selected in this Application, result in no variation in capacity additions between the base case capacity expansion plans and the sensitivity scenarios presented in this section. That is, all capacity expansion plans include the extension of the TECO agreement through 2017. All capacity expansion plans that include participation in TEC in 2012 also include installation of a brownfield LM6000 1x1 combined cycle unit in 2011 and two additional brownfield LM6000 1x1 combined cycle units in 2018. All capacity expansion plans that

do not include participation in TEC consist of the installation of a brownfield LM6000 1x1 combined cycle unit in 2011, an additional brownfield LM6000 1x1 combined cycle unit in 2014, and two additional brownfield LM6000 1x1 combined cycle units in 2018 (the only exception is the high load growth scenario, which requires installation of a brownfield LM6000 1x1 combined cycle unit in 2012 instead of 2014). However, considering the sensitivity scenarios presented herein nonetheless illustrates the relative economics between participating in TEC and considering alternative capacity expansion plans under a variety of sensitivity scenarios.

D.6.1.1 High Fuel Price Forecast

The high fuel price sensitivity analysis is based on Hill & Associates' high fuel price forecasts and the corresponding emissions allowance price forecasts. The high fuel price forecasts are presented in Section A.4.0, while the emissions allowance price forecasts corresponding to the high fuel price forecast are presented in Section A.5.0.

As in the base case analysis described in Section D.5.0, the costs of emissions allowances were added to the fuel prices for both the existing and candidate units in the high fuel price sensitivity. Table D.6-1 presents the emissions cost adders for RCID's existing units, as well as for TEC and the LM6000 1x1 combined cycle unit under the high fuel price sensitivity.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,923.6 million and \$2,222.1 million, respectively. A comparison of these CPWCs shows that the expansion plan with TEC is the least-cost plan by \$298.5 million over the evaluation period.

D.6.1.2 Low Fuel Price Forecast

The low fuel price sensitivity analysis is based on Hill & Associates' low fuel price forecasts and the corresponding emissions allowance price forecasts. The low fuel price forecasts are presented in Section A.4.0, while the emissions allowance price forecasts corresponding to the low fuel price forecast are presented in Section A.5.0.

As in the base case analysis described in Section D.5.0, the costs of emissions allowances were added to the fuel prices for both the existing and candidate units in the low fuel price sensitivity. Table D.6-2 presents the emissions cost adders for RCID's existing units, as well as for TEC and the LM6000 1x1 combined cycle unit under the low fuel price sensitivity.

Table D.6-1
Combined SO₂, NO_x, and Hg Emissions Cost Adders – High Fuel Forecast
(Nominal \$/MBtu)

Calendar Year	CEP Existing LM6000 CC	ECEP Existing Diesel Unit 1 ⁽¹⁾	ECEP Existing Diesel Unit 2 ⁽¹⁾	Joint Candidate TEC	Candidate LM6000 Combined Cycle
2009	\$0.01	\$0.00	\$0.00	\$0.08	\$0.01
2010	\$0.01	\$0.00	\$0.00	\$0.16	\$0.01
2011	\$0.01	\$0.00	\$0.00	\$0.16	\$0.01
2012	\$0.01	\$0.00	\$0.00	\$0.17	\$0.01
2013	\$0.01	\$0.00	\$0.00	\$0.18	\$0.01
2014	\$0.02	\$0.00	\$0.00	\$0.20	\$0.02
2015	\$0.03	\$0.00	\$0.00	\$0.33	\$0.03
2016	\$0.02	\$0.00	\$0.00	\$0.31	\$0.02
2017	\$0.03	\$0.00	\$0.00	\$0.32	\$0.03
2018	\$0.03	\$0.00	\$0.00	\$0.40	\$0.03
2019	\$0.03	\$0.00	\$0.00	\$0.42	\$0.03
2020	\$0.04	\$0.00	\$0.00	\$0.52	\$0.04
2021	\$0.05	\$0.00	\$0.00	\$0.59	\$0.05
2022	\$0.06	\$0.00	\$0.00	\$0.66	\$0.06
2023	\$0.05	\$0.00	\$0.00	\$0.65	\$0.05
2024	\$0.07	\$0.00	\$0.00	\$0.80	\$0.07
2025	\$0.07	\$0.00	\$0.00	\$0.92	\$0.07
2026	\$0.08	\$0.00	\$0.00	\$1.00	\$0.08
2027	\$0.09	\$0.00	\$0.00	\$1.09	\$0.09
2028	\$0.09	\$0.00	\$0.00	\$1.18	\$0.09
2029	\$0.10	\$0.00	\$0.00	\$1.28	\$0.10
2030	\$0.11	\$0.00	\$0.00	\$1.39	\$0.11
2031	\$0.12	\$0.00	\$0.00	\$1.50	\$0.12
2032	\$0.13	\$0.00	\$0.00	\$1.62	\$0.13
2033	\$0.14	\$0.00	\$0.00	\$1.75	\$0.14
2034	\$0.15	\$0.00	\$0.00	\$1.89	\$0.15
2035	\$0.16	\$0.00	\$0.00	\$2.05	\$0.16

⁽¹⁾ These diesel units, with a nameplate capacity less than 25 MW, are not regulated by CAIR or CAMR.

Table D.6-2
Combined SO₂, NO_x, and Hg Emissions Cost Adders – Low Fuel Forecast
(Nominal \$/MBtu)

Calendar Year	CEP Existing LM6000 CC	ECEP Existing Diesel Unit 1 ⁽¹⁾	ECEP Existing Diesel Unit 2 ⁽¹⁾	Joint Candidate TEC	Candidate LM6000 Combined Cycle
2009	\$0.01	\$0.00	\$0.00	\$0.08	\$0.01
2010	\$0.01	\$0.00	\$0.00	\$0.14	\$0.01
2011	\$0.01	\$0.00	\$0.00	\$0.15	\$0.01
2012	\$0.01	\$0.00	\$0.00	\$0.16	\$0.01
2013	\$0.02	\$0.00	\$0.00	\$0.17	\$0.02
2014	\$0.01	\$0.00	\$0.00	\$0.17	\$0.01
2015	\$0.02	\$0.00	\$0.00	\$0.26	\$0.02
2016	\$0.02	\$0.00	\$0.00	\$0.19	\$0.02
2017	\$0.02	\$0.00	\$0.00	\$0.21	\$0.02
2018	\$0.02	\$0.00	\$0.00	\$0.27	\$0.02
2019	\$0.03	\$0.00	\$0.00	\$0.30	\$0.03
2020	\$0.03	\$0.00	\$0.00	\$0.30	\$0.03
2021	\$0.03	\$0.00	\$0.00	\$0.33	\$0.03
2022	\$0.03	\$0.00	\$0.00	\$0.34	\$0.03
2023	\$0.03	\$0.00	\$0.00	\$0.40	\$0.03
2024	\$0.04	\$0.00	\$0.00	\$0.43	\$0.04
2025	\$0.04	\$0.00	\$0.00	\$0.51	\$0.04
2026	\$0.04	\$0.00	\$0.00	\$0.53	\$0.04
2027	\$0.04	\$0.00	\$0.00	\$0.56	\$0.04
2028	\$0.04	\$0.00	\$0.00	\$0.60	\$0.04
2029	\$0.05	\$0.00	\$0.00	\$0.63	\$0.05
2030	\$0.05	\$0.00	\$0.00	\$0.67	\$0.05
2031	\$0.05	\$0.00	\$0.00	\$0.72	\$0.05
2032	\$0.06	\$0.00	\$0.00	\$0.76	\$0.06
2033	\$0.06	\$0.00	\$0.00	\$0.81	\$0.06
2034	\$0.01	\$0.00	\$0.00	\$0.86	\$0.01
2035	\$0.01	\$0.00	\$0.00	\$0.91	\$0.01

⁽¹⁾ These diesel units, with a nameplate capacity less than 25 MW, are not regulated by CAIR or CAMR.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,584.4 million and \$1,774.2 million, respectively. A comparison of these CPWCs shows that the expansion plan with TEC is the least-cost plan by \$189.8 million over the evaluation period.

D.6.1.3 High Load and Energy Growth

Load and energy growth sensitivities are important analyses that help to demonstrate the robustness of future capacity additions, since load growth is a fundamental variable in determining an optimal capacity expansion plan. The high load and energy growth sensitivity demonstrates the effects of planning to meet capacity and energy requirements in a case where both load and energy grow at a rate that is higher than the expected rate used in the base case economic evaluation presented in Section D.5.0. This scenario requires the addition of more generation to meet reserve margin requirements and, therefore, results in increased CPWCs compared to the base case capacity expansion plan. The high load and energy growth scenario is based upon the high load and energy growth forecast presented in Section D.2.0. Table D.6-3 presents RCID's projected reliability levels under the high load and energy growth scenario for the summer season.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,854.0 and \$2,111.9 million, respectively. A comparison of the CPWCs shows that the case with TEC is the least-cost plan by \$257.9 million over the evaluation period.

D.6.1.4 Low Load and Energy Growth

The low load and energy growth sensitivity demonstrates the effects of planning to meet capacity and energy requirements in a case where both load and energy grow at a rate that is lower than the expected rate used in the base case economic evaluation. This scenario requires the addition of less generation to meet reserve margin requirements and, therefore, results in decreased CPWCs over the planning period compared to the base case capacity expansion plan. The low load and energy growth scenario is based upon the low load and energy growth forecast presented in Section D.2.0. Table D.6-4 presents RCID's projected reliability levels under the low load and energy growth scenario for the summer season.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,713.1 and \$1,985.1 million, respectively. A comparison of the CPWCs shows that the case with TEC is the least-cost plan by \$272.0 million over the evaluation period.

Table D.6-3
Projected Reliability Levels for High Load and Energy Growth - Summer

Year	Net Generating Capacity (MW)	Partial Requirements Purchases (MW) ^(1,2)	Non-Partial Requirements Purchases (MW) ⁽³⁾	Net Firm Planned Capacity Retirements (MW)	Net Generating Capacity Additions/Reductions (MW)	Net System Capacity (MW)	System Peak Demand (MW)	Reserve Margin ⁽⁴⁾ (%)	Excess/(Deficit) to Maintain 15 Percent Reserve Margin (MW)
2006	60	114	35	0	0	209	195	18%	2
2007	60	122	35	0	0	217	196	28%	10
2008	60	122	35	0	0	217	197	27%	9
2009	60	123	35	0	0	218	200	23%	6
2010	60	124	35	0	0	219	201	23%	6
2011	60	0	35	0	0	95	202	-53%	(137)
2012	60	0	35	0	0	95	204	-53%	(140)
2013	60	0	35	0	0	95	205	-54%	(141)
2014	60	0	0	0	0	60	207	-71%	(178)
2015	60	0	0	0	0	60	208	-71%	(179)
2016	60	0	0	0	0	60	210	-71%	(182)
2017	60	0	0	0	0	60	211	-72%	(183)
2018	60	0	0	0	0	60	213	-72%	(185)
2019	60	0	0	0	0	60	214	-72%	(186)
2020	60	0	0	0	0	60	216	-72%	(188)
2021	60	0	0	0	0	60	217	-72%	(190)
2022	60	0	0	0	0	60	219	-73%	(192)
2023	60	0	0	0	0	60	220	-73%	(193)
2024	60	0	0	0	0	60	222	-73%	(195)
2025	60	0	0	0	0	60	223	-73%	(196)

⁽¹⁾Assumes that 20 MW purchase from TECO will expire on December 31, 2006. Additional capacity of up to 75MW (not shown in this table) can be added through 2017 with a 1 year minimum notice.

⁽²⁾Assumes that purchase from PEF will expire on December 31, 2010.

⁽³⁾Assumes that 35 MW purchase from OCL will expire on December 31, 2013.

⁽⁴⁾Reserve margin calculated as (Net System Capacity - System Peak Demand) / (System Peak Demand - PR Purchases).

Table D.6-4
Projected Reliability Levels for Low Load and Energy Growth - Summer

Year	Net Generating Capacity (MW)	Partial Requirements Purchases (MW) ^(1,2)	Non-Partial Requirements Purchases (MW) ⁽³⁾	Net Firm Planned Capacity Retirements (MW)	Net Generating Capacity Additions/Reductions (MW)	Net System Capacity (MW)	System Peak Demand (MW)	Reserve Margin ⁽⁴⁾ (%)	Excess/(Deficit) to Maintain 15 Percent Reserve Margin (MW)
2006	60	114	35	0	0	209	190	25%	8
2007	60	122	35	0	0	217	191	38%	16
2008	60	122	35	0	0	217	192	36%	15
2009	60	123	35	0	0	218	195	32%	12
2010	60	124	35	0	0	219	196	32%	12
2011	60	0	35	0	0	95	196	-52%	(130)
2012	60	0	35	0	0	95	197	-52%	(132)
2013	60	0	35	0	0	95	197	-52%	(132)
2014	60	0	0	0	0	60	198	-70%	(168)
2015	60	0	0	0	0	60	198	-70%	(168)
2016	60	0	0	0	0	60	199	-70%	(169)
2017	60	0	0	0	0	60	199	-70%	(169)
2018	60	0	0	0	0	60	200	-70%	(170)
2019	60	0	0	0	0	60	200	-70%	(170)
2020	60	0	0	0	0	60	201	-70%	(171)
2021	60	0	0	0	0	60	201	-70%	(171)
2022	60	0	0	0	0	60	202	-70%	(172)
2023	60	0	0	0	0	60	202	-70%	(172)
2024	60	0	0	0	0	60	203	-70%	(173)
2025	60	0	0	0	0	60	203	-70%	(173)

⁽¹⁾Assumes that 20 MW purchase from TECO will expire on December 31, 2006. Additional capacity of up to 75MW (not shown in this table) can be added through 2017 with a 1 year minimum notice.

⁽²⁾Assumes that purchase from PEF will expire on December 31, 2010.

⁽³⁾Assumes that 35 MW purchase from OCL will expire on December 31, 2013.

⁽⁴⁾Reserve margin calculated as (Net System Capacity - System Peak Demand) / (System Peak Demand - PR Purchases).

D.6.1.5 High Capital Costs

In the high capital cost sensitivity, the capital costs for the candidate units and the proposed TEC are increased by 20 percent. Considering an increase in capital costs helps capture uncertainty about the future costs of material, labor, and equipment. Increasing capital costs can change the emphasis on the timing of capital intensive units and may result in the selection of units with relatively lower capital costs but higher operating and production costs earlier than units with relatively higher capital costs but lower operating and production costs.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,832.8 million and \$2,091.9 million, respectively. A comparison of these CPWCs shows that the expansion plan with TEC is the least-cost plan by \$259.1 million over the evaluation period.

D.6.1.6 Low Capital Costs

In the low capital cost sensitivity, the capital costs for the candidate units and the proposed TEC are decreased by 20 percent. Considering a decrease in capital costs helps capture uncertainty about the future costs of material, labor, and equipment. Decreasing capital costs can change the emphasis on the timing of capital intensive units and may result in the selection of units with relatively higher capital costs but lower operating and production costs earlier than units with relatively lower capital costs but higher operating and production costs.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,709.7 million and \$1,992.2 million, respectively. A comparison of these CPWCs shows that the expansion plan with TEC is the least-cost plan by \$282.5 million over the evaluation period.

D.6.1.7 High Emissions Allowance Prices

The base economic analysis presented in Section D.5.0 utilizes the base fuel and corresponding emissions allowance price forecasts provided by Hill & Associates. Historically, prices for emissions allowances have been volatile, and this sensitivity demonstrates the effects of higher allowance prices than the forecasts provided by Hill & Associates.

In the high emissions allowance price sensitivity case, the base case allowance price forecasts provided by Hill & Associates were increased by 25 percent on an annual basis, while the fuel price forecasts were left unchanged from those provided by Hill & Associates in the base case. Increasing the allowance prices results in a higher fuel cost adder for the fuels being burned in existing and candidate generating units. The increase

in allowance prices results in a greater economic incentive to operate units with lower emissions rates for electric generation, and also results in higher CPWCs relative to the base case economic analysis. Table D.6-5 presents the emissions allowance prices used in the high emissions allowance price sensitivity analysis. Table D.6-6 presents the emissions cost adders included for RCID's existing and candidate units for the high emission allowance price sensitivity.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,780.4 million and \$2,043.4 million, respectively. A comparison of these CPWCs shows that the expansion plan with TEC is the least-cost plan by approximately \$263.0 million over the evaluation period.

D.6.1.8 Low Emissions Allowance Prices

In the low emissions allowance price sensitivity case, the base case allowance price forecasts provided by Hill & Associates were decreased by 25 percent on an annual basis, while the fuel price forecasts were left unchanged from those provided by Hill & Associates in the base case. Decreasing the allowance prices results in a lower fuel cost adder for the fuels being burned in existing and candidate generating units. The decrease in allowance prices reduces the economic incentive to operate units with lower emissions rates for electric generation, and also results in lower CPWCs relative to the base case economic analysis. Table D.6-5 presents the emissions allowance prices used in the low emissions allowance price sensitivity analysis. Table D.6-7 presents the emissions cost adders included for RCID's existing and candidate units for the low emissions allowance price sensitivity.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,762.0 million and \$2,040.7 million, respectively. A comparison of these CPWCs shows that the expansion plan with TEC is the least-cost plan by \$278.7 million over the evaluation period.

D.6.1.9 Carbon Dioxide Regulation Sensitivity

This sensitivity, which is presented for information purposes only, considers the potential economic impact associated with a regulatory environment in which emissions of CO₂ would be subject to a cap-and-trade program, similar to that contemplated under CAIR and CAMR. To date, the United States has not mandated any reductions in CO₂ emissions through nationwide environmental regulations. However, in the last few years, legislation has been proposed suggesting various approaches to regulating CO₂ emissions in the United States. Section A.4.0 presented a description of Hill & Associates'

Table D.6-5
High and Low Emissions Allowance Prices
(Nominal Dollars)

Calendar Year	High Sensitivity			Low Sensitivity		
	Sulfur Dioxide (SO ₂) (\$/ton)	Nitrogen Oxide (NO _x) (\$/ton)	Hg (\$/lb)	SO ₂ (\$/ton)	NO _x (\$/ton)	Hg (\$/lb)
2009	-	\$2,864	-	-	\$1,718	-
2010	\$480	\$3,994	\$21,103	\$288	\$2,397	\$12,662
2011	\$490	\$4,189	\$21,491	\$294	\$2,513	\$12,894
2012	\$566	\$4,358	\$17,393	\$340	\$2,615	\$10,436
2013	\$581	\$4,463	\$22,743	\$348	\$2,678	\$13,646
2014	\$754	\$4,834	\$13,549	\$452	\$2,900	\$8,129
2015	\$1,075	\$7,721	\$26,165	\$645	\$4,632	\$15,699
2016	\$1,247	\$8,346	\$17,456	\$748	\$5,008	\$10,473
2017	\$1,398	\$7,163	\$16,616	\$839	\$4,298	\$9,970
2018	\$1,465	\$7,413	\$33,133	\$879	\$4,448	\$19,880
2019	\$1,493	\$9,725	\$32,251	\$896	\$5,835	\$19,351
2020	\$1,629	\$11,726	\$33,057	\$978	\$7,036	\$19,834
2021	\$1,778	\$11,146	\$36,152	\$1,067	\$6,688	\$21,691
2022	\$1,913	\$10,650	\$38,114	\$1,148	\$6,390	\$22,869
2023	\$2,076	\$13,676	\$69,280	\$1,246	\$8,206	\$41,568
2024	\$2,379	\$20,578	\$71,286	\$1,427	\$12,347	\$42,771
2025	\$2,437	\$22,318	\$113,955	\$1,462	\$13,391	\$68,373
2026	\$2,479	\$24,131	\$125,244	\$1,487	\$14,479	\$75,146
2027	\$2,621	\$26,022	\$137,025	\$1,573	\$15,613	\$82,215
2028	\$2,769	\$27,991	\$149,318	\$1,661	\$16,795	\$89,591
2029	\$2,923	\$30,043	\$162,139	\$1,754	\$18,026	\$97,284
2030	\$3,082	\$32,180	\$175,509	\$1,849	\$19,308	\$105,305
2031	\$3,250	\$34,469	\$189,980	\$1,950	\$20,681	\$113,988
2032	\$3,428	\$36,921	\$205,645	\$2,057	\$22,153	\$123,387
2033	\$3,615	\$39,547	\$222,602	\$2,169	\$23,728	\$133,561
2034	\$3,812	\$42,360	\$240,956	\$2,287	\$25,416	\$144,574
2035	\$4,021	\$45,373	\$260,824	\$2,412	\$27,224	\$156,495

Table D.6-6 Combined SO ₂ , NO _x , and Hg Emissions Cost Adders – High Emissions Allowance (Nominal \$/MBtu)					
Calendar Year	CEP Existing LM6000 CC	ECEP Existing Diesel Unit 1 ⁽¹⁾	ECEP Existing Diesel Unit 2 ⁽¹⁾	Joint Candidate TEC	Candidate LM6000 Combined Cycle
2009	\$0.01	\$0.00	\$0.00	\$0.10	\$0.01
2010	\$0.01	\$0.00	\$0.00	\$0.19	\$0.01
2011	\$0.02	\$0.00	\$0.00	\$0.20	\$0.02
2012	\$0.02	\$0.00	\$0.00	\$0.20	\$0.02
2013	\$0.02	\$0.00	\$0.00	\$0.21	\$0.02
2014	\$0.02	\$0.00	\$0.00	\$0.22	\$0.02
2015	\$0.03	\$0.00	\$0.00	\$0.36	\$0.03
2016	\$0.03	\$0.00	\$0.00	\$0.37	\$0.03
2017	\$0.03	\$0.00	\$0.00	\$0.34	\$0.03
2018	\$0.03	\$0.00	\$0.00	\$0.37	\$0.03
2019	\$0.04	\$0.00	\$0.00	\$0.45	\$0.04
2020	\$0.04	\$0.00	\$0.00	\$0.53	\$0.04
2021	\$0.04	\$0.00	\$0.00	\$0.52	\$0.04
2022	\$0.04	\$0.00	\$0.00	\$0.51	\$0.04
2023	\$0.05	\$0.00	\$0.00	\$0.67	\$0.05
2024	\$0.07	\$0.00	\$0.00	\$0.93	\$0.07
2025	\$0.08	\$0.00	\$0.00	\$1.05	\$0.08
2026	\$0.09	\$0.00	\$0.00	\$1.13	\$0.09
2027	\$0.09	\$0.00	\$0.00	\$1.22	\$0.09
2028	\$0.10	\$0.00	\$0.00	\$1.31	\$0.10
2029	\$0.11	\$0.00	\$0.00	\$1.41	\$0.11
2030	\$0.12	\$0.00	\$0.00	\$1.51	\$0.12
2031	\$0.12	\$0.00	\$0.00	\$1.62	\$0.12
2032	\$0.13	\$0.00	\$0.00	\$1.73	\$0.13
2033	\$0.14	\$0.00	\$0.00	\$1.85	\$0.14
2034	\$0.15	\$0.00	\$0.00	\$1.99	\$0.15
2035	\$0.16	\$0.00	\$0.00	\$2.13	\$0.16

⁽¹⁾ These diesel units, with a nameplate capacity less than 25 MW, are not regulated by CAIR or CAMR.

Table D.6-7 Combined SO ₂ , NO _x , and Hg Emissions Cost Adders – Low Emissions Allowance (Nominal \$/MBtu)					
Calendar Year	CEP Existing LM6000 CC	ECEP Existing Diesel Unit 1 ⁽¹⁾	ECEP Existing Diesel Unit 2 ⁽¹⁾	Joint Candidate TEC	Candidate LM6000 Combined Cycle
2009	\$0.01	\$0.00	\$0.00	\$0.06	\$0.01
2010	\$0.01	\$0.00	\$0.00	\$0.11	\$0.01
2011	\$0.01	\$0.00	\$0.00	\$0.12	\$0.01
2012	\$0.01	\$0.00	\$0.00	\$0.12	\$0.01
2013	\$0.01	\$0.00	\$0.00	\$0.13	\$0.01
2014	\$0.01	\$0.00	\$0.00	\$0.13	\$0.01
2015	\$0.02	\$0.00	\$0.00	\$0.21	\$0.02
2016	\$0.02	\$0.00	\$0.00	\$0.22	\$0.02
2017	\$0.02	\$0.00	\$0.00	\$0.20	\$0.02
2018	\$0.02	\$0.00	\$0.00	\$0.22	\$0.02
2019	\$0.02	\$0.00	\$0.00	\$0.27	\$0.02
2020	\$0.03	\$0.00	\$0.00	\$0.32	\$0.03
2021	\$0.02	\$0.00	\$0.00	\$0.31	\$0.02
2022	\$0.02	\$0.00	\$0.00	\$0.31	\$0.02
2023	\$0.03	\$0.00	\$0.00	\$0.40	\$0.03
2024	\$0.04	\$0.00	\$0.00	\$0.56	\$0.04
2025	\$0.05	\$0.00	\$0.00	\$0.63	\$0.05
2026	\$0.05	\$0.00	\$0.00	\$0.68	\$0.05
2027	\$0.06	\$0.00	\$0.00	\$0.73	\$0.06
2028	\$0.06	\$0.00	\$0.00	\$0.79	\$0.06
2029	\$0.07	\$0.00	\$0.00	\$0.85	\$0.07
2030	\$0.07	\$0.00	\$0.00	\$0.91	\$0.07
2031	\$0.07	\$0.00	\$0.00	\$0.97	\$0.07
2032	\$0.08	\$0.00	\$0.00	\$1.04	\$0.08
2033	\$0.09	\$0.00	\$0.00	\$1.12	\$0.09
2034	\$0.09	\$0.00	\$0.00	\$1.19	\$0.09
2035	\$0.10	\$0.00	\$0.00	\$1.28	\$0.10

⁽¹⁾ These diesel units, with a nameplate capacity less than 25 MW, are not regulated by CAIR or CAMR.

assumptions utilized in developing the fuel price forecast and corresponding emissions allowance price forecasts for a scenario in which CO₂ emissions are regulated and a cap-and-trade market evolves for CO₂ allowances. As described in Section A.4.0 and discussed further in Section A.5.0, the assumptions supporting Hill & Associates' regulated-CO₂ sensitivity case for fuel and emissions allowance price forecasts are based on the utility industry complying with the proposed McCain-Lieberman *Climate Stewardship Act of 2005* (S. 342, introduced to the 109th Congress).

Similar to the methodology described throughout this Application for consideration of the SO₂, NO_x, and Hg emissions allowance price forecasts, adders for the regulated-CO₂ emissions allowance price forecasts were developed for each existing and candidate unit being considered. Table D.6-8 presents the CO₂ cost adders for RCID's existing and candidate units for the CO₂ regulation sensitivity. Table D.6-9 presents the combined adders for CO₂, SO₂, NO_x, and Hg for RCID's existing and candidate units for the CO₂ regulation sensitivity. Tables D.6-8 and D.6-9 were developed utilizing the emissions allowance prices developed by Hill & Associates for the CO₂ regulation sensitivity, which are included in Section A.5.0.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,825.3 and \$2,067.0 million, respectively. A comparison of the CPWCs shows that the case with TEC is the least-cost plan by \$241.7 million over the evaluation period.

D.6.1.10 Summary of the Sensitivity Cases for Input Parameters

Table D.6-10 summarizes the results of the sensitivity analyses described in this section. Appendix D.1 presents the CPWC summary sheets for all the cases presented in Table D.6-10. The optimal capacity expansion plan with participation in TEC in 2012 was the least-cost plan in each of the scenarios. Overall, these results demonstrate the robustness and flexibility of the expansion plan with TEC to overcome variations and deviations from the base case assumptions.

D.6.2 External Parameter Sensitivities

The sensitivities described in this section reflect changes to the base case external parameter assumptions, including the opportunity to participate in joint development capacity additions other than TEC, consideration of different types of generating technologies to meet capacity needs, and consideration of an alternative coal source for TEC. For each of the sensitivities described in this section, the base case input parameters (fuel prices, emissions allowance prices, load forecast, and capital cost estimates) have not been altered.

Table D.6-8
CO₂ Emissions Cost Adders – Regulated-CO₂ Sensitivity Case
(Nominal \$/MBtu)

Calendar Year	CEP Existing LM6000 CC	ECEP Existing Diesel Unit 1 ⁽¹⁾	ECEP Existing Diesel Unit 2 ⁽¹⁾	Joint Candidate TEC	Candidate LM6000 Combined Cycle
2009	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2010	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2011	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2012	\$0.29	\$0.00	\$0.00	\$0.53	\$0.29
2013	\$0.59	\$0.00	\$0.00	\$1.09	\$0.59
2014	\$0.78	\$0.00	\$0.00	\$1.43	\$0.78
2015	\$0.74	\$0.00	\$0.00	\$1.35	\$0.74
2016	\$0.77	\$0.00	\$0.00	\$1.42	\$0.77
2017	\$0.69	\$0.00	\$0.00	\$1.26	\$0.69
2018	\$0.19	\$0.00	\$0.00	\$0.35	\$0.19
2019	\$0.28	\$0.00	\$0.00	\$0.52	\$0.28
2020	\$0.21	\$0.00	\$0.00	\$0.39	\$0.21
2021	\$0.25	\$0.00	\$0.00	\$0.47	\$0.25
2022	\$0.55	\$0.00	\$0.00	\$1.00	\$0.55
2023	\$0.71	\$0.00	\$0.00	\$1.30	\$0.71
2024	\$0.56	\$0.00	\$0.00	\$1.04	\$0.56
2025	\$0.65	\$0.00	\$0.00	\$1.20	\$0.65
2026	\$0.70	\$0.00	\$0.00	\$1.28	\$0.70
2027	\$0.77	\$0.00	\$0.00	\$1.42	\$0.77
2028	\$0.85	\$0.00	\$0.00	\$1.56	\$0.85
2029	\$0.93	\$0.00	\$0.00	\$1.71	\$0.93
2030	\$1.01	\$0.00	\$0.00	\$1.86	\$1.01
2031	\$1.10	\$0.00	\$0.00	\$2.03	\$1.10
2032	\$1.20	\$0.00	\$0.00	\$2.21	\$1.20
2033	\$1.31	\$0.00	\$0.00	\$2.41	\$1.31
2034	\$1.43	\$0.00	\$0.00	\$2.63	\$1.43
2035	\$1.56	\$0.00	\$0.00	\$2.87	\$1.56

⁽¹⁾ These diesel units, with a nameplate capacity less than 25 MW, are not regulated by CAIR or CAMR. Therefore, it was assumed that they would not be regulated under the CO₂ regulation program either.

Table D.6-9
Combined CO₂, SO₂, NO_x, and Hg Emissions Cost Adders – Regulated-CO₂ Sensitivity Case
(Nominal \$/MBtu)

Calendar Year	CEP Existing LM6000 CC	ECEP Existing Diesel Unit 1 ⁽¹⁾	ECEP Existing Diesel Unit 2 ⁽¹⁾	Joint Candidate TEC	Candidate LM6000 Combined Cycle
2009	\$0.01	\$0.00	\$0.00	\$0.06	\$0.01
2010	\$0.01	\$0.00	\$0.00	\$0.12	\$0.01
2011	\$0.01	\$0.00	\$0.00	\$0.12	\$0.01
2012	\$0.30	\$0.00	\$0.00	\$0.63	\$0.30
2013	\$0.60	\$0.00	\$0.00	\$1.20	\$0.60
2014	\$0.79	\$0.00	\$0.00	\$1.53	\$0.79
2015	\$0.75	\$0.00	\$0.00	\$1.55	\$0.75
2016	\$0.79	\$0.00	\$0.00	\$1.62	\$0.79
2017	\$0.70	\$0.00	\$0.00	\$1.48	\$0.70
2018	\$0.21	\$0.00	\$0.00	\$0.56	\$0.21
2019	\$0.30	\$0.00	\$0.00	\$0.73	\$0.30
2020	\$0.23	\$0.00	\$0.00	\$0.63	\$0.23
2021	\$0.27	\$0.00	\$0.00	\$0.69	\$0.27
2022	\$0.56	\$0.00	\$0.00	\$1.24	\$0.56
2023	\$0.73	\$0.00	\$0.00	\$1.57	\$0.73
2024	\$0.60	\$0.00	\$0.00	\$1.47	\$0.60
2025	\$0.69	\$0.00	\$0.00	\$1.69	\$0.69
2026	\$0.74	\$0.00	\$0.00	\$1.81	\$0.74
2027	\$0.82	\$0.00	\$0.00	\$1.99	\$0.82
2028	\$0.90	\$0.00	\$0.00	\$2.18	\$0.90
2029	\$0.98	\$0.00	\$0.00	\$2.37	\$0.98
2030	\$1.07	\$0.00	\$0.00	\$2.57	\$1.07
2031	\$1.16	\$0.00	\$0.00	\$2.79	\$1.16
2032	\$1.27	\$0.00	\$0.00	\$3.03	\$1.27
2033	\$1.38	\$0.00	\$0.00	\$3.29	\$1.38
2034	\$1.50	\$0.00	\$0.00	\$3.57	\$1.50
2035	\$1.64	\$0.00	\$0.00	\$3.87	\$1.64

⁽¹⁾ These diesel units, with a nameplate capacity less than 25 MW, are not regulated by CAIR or CAMR. Therefore, it was assumed that they would not be regulated under the CO₂ regulation program either.

Table D.6-10 Summary of Sensitivity Analyses (Varying Base Case Input Parameters)			
Sensitivity Case	Expansion Plan CPWC Cost (\$ million)		
	With TEC	Without TEC	Differential CPWC Savings with TEC
Base Case	\$1,771.2	\$2,042.1	\$270.9
High Fuel Prices	\$1,923.6	\$2,222.1	\$298.5
Low Fuel Prices	\$1,584.4	\$1,774.2	\$189.8
High Load and Energy Growth	\$1,854.0	\$2,111.9	\$257.9
Low Load and Energy Growth	\$1,713.1	\$1,985.1	\$272.0
High Capital Cost	\$1,832.8	\$2,091.9	\$259.1
Low Capital Cost	\$1,709.7	\$1,992.2	\$282.5
High Emissions Allowances Costs	\$1,780.4	\$2,043.4	\$263.0
Low Emissions Allowances Costs	\$1,762.0	\$2,040.7	\$278.7
Regulated CO ₂	\$1,825.3	\$2,067.0	\$241.7

Similar to the base case economic analysis described in Section D.5.0, it has been assumed that RCID will extend its existing agreement with TECO through 2017 for all the sensitivities presented in this section.

D.6.2.1 3x1 CC Joint Development Project

To demonstrate that participation in TEC in May 2012 is part of the least-cost capacity expansion plan for RCID, sensitivities were developed assuming that RCID had the option to participate in other jointly owned projects with different generating technologies. Since participation in another jointly owned generation project would provide RCID with similar economies of scale to participation in TEC, this sensitivity allows a more comparable evaluation of the economics of different generating technologies than the base case analysis.

In this sensitivity, it was assumed that RCID would participate in a jointly owned 3x1 7FA combined cycle unit with a commercial operation date of May 1, 2012, in lieu of participation in TEC. In this analysis, RCID would retain the same expected ownership share percentage in the 3x1 7FA combined cycle unit as in the proposed TEC, which provides RCID with a similarly sized amount of capacity compared to RCID's share of the proposed TEC. Section A.6.0 presented cost, performance, and availability estimates for the jointly owned 3x1 7FA combined cycle option.

The jointly owned 3x1 combined cycle unit is assumed to be located at the TEC site to make the alternative as similar as possible to TEC. All relevant costs associated with the development of a generating alternative at the TEC site were considered and included for the 3x1 combined cycle alternative, including the community contribution assumed for TEC, and the transmission tariffs and losses described in Section D.5.0.

Table D.6-11 presents the output and performance of RCID's share of the jointly owned 3x1 combined cycle alternative, including transmission losses. Using the methodology described in Section D.5.0, the total annual firm transmission cost to RCID for its share of the 3x1 combined cycle alternative is \$1,207,984 per year. This cost is included starting May 1, 2012, and is not escalated with inflation.

Without Transmission Losses		Including Transmission Losses ⁽¹⁾	
Output (MW)	Net Plant Heat Rate (Btu/kWh)	Output (MW)	Net Plant Heat Rate (Btu/kWh)
84.38	7,412	82.61	7,571
68.61	7,006	67.17	7,156
53.96	7,282	52.82	7,438
39.84	7,877	39.00	8,046
14.88	10,826	14.57	11,058

⁽¹⁾Assumes losses of 2.1 percent.

RCID's share of the fixed O&M cost for the 3x1 combined cycle alternative is \$0.4 million or about \$5.13 per kW-year (net after considering transmission losses) in 2006 dollars. An adder for firm natural gas transportation of \$2.89 per kW-month was included to provide RCID's system with an additional 10,423 MBtu/day of firm natural gas transportation. Section A.6.0 presented the nonfuel variable O&M cost for the 3x1 combined cycle before transmission losses as \$4.29 per MWh. With transmission losses considered, RCID's net nonfuel variable O&M cost is \$4.39 per MWh in 2006 dollars.

The optimal capacity expansion plan involving participation in the 3x1 combined cycle option consists of a brownfield LM6000 1x1 combined cycle unit in 2011, a brownfield LM6000 1x1 combined cycle unit in 2018, and a brownfield LM6000 1x1 combined cycle unit in 2022, with a CPWC of \$1,914.4 million. A comparison of the CPWCs for this case and the base case capacity expansion plan that includes participation

in TEC (presented in Section D.5.0) shows that this plan is \$143.2 million higher in CPWC than the expansion plan that includes participation in TEC.

D.6.2.2 Three-Train 1x1 IGCC Joint Development Project

In this sensitivity, it was assumed that RCID would participate in a jointly owned three-train 1x1 Integrated Gasification Combined Cycle (IGCC) unit with a commercial operation date of May 1, 2012, in lieu of participation in TEC. Although it is unlikely that the Participants would construct an IGCC unit prior to 2018 for the reasons described in Sections A.6.0 and D.5.0, it is important to compare the emerging IGCC technology with the supercritical pulverized coal technology proposed for TEC in an economic analysis, to demonstrate that participation in TEC is part of the least-cost expansion plan for RCID.

In this analysis, RCID would retain the same expected ownership share percentage in the three-train 1x1 IGCC unit as in the proposed TEC, which would provide RCID with a similarly sized amount of capacity compared to RCID's share of the proposed TEC. Section A.6.0 presented cost, performance, and availability estimates for the jointly owned three-train 1x1 IGCC.

The jointly owned three-train 1x1 IGCC unit is assumed to be located at the TEC site to make the alternative as similar as possible to TEC. All relevant costs associated with the development of a generating alternative at the TEC site were considered and included for the three-train 1x1 IGCC alternative, including the community contribution assumed for TEC, and the transmission tariffs and losses described in Section D.5.0.

Table D.6-12 presents the output and performance of RCID's share of the jointly owned three-train 1x1 IGCC alternative, including transmission losses. Using the methodology described in Section D.5.0, the total annual firm transmission cost to RCID for its share of the three-train 1x1 IGCC alternative is \$1,158,308 per year. This cost is included as of May 1, 2012, and is not escalated with inflation.

RCID's share of the fixed O&M cost for the three-train 1x1 IGCC alternative is \$3.1 million or about \$39.23 per kW-year (net after considering transmission losses) in 2006 dollars. Section A.6.0 presented the nonfuel variable O&M cost for the three-train 1x1 IGCC before transmission losses as \$5.86 per MWh. With transmission losses considered, RCID's net nonfuel variable O&M cost is \$5.99 per MWh in 2006 dollars.

Table D.6-12 RCID's Share of a Jointly Owned Three-Train 1x1 IGCC Unit Output and Performance Considering Transmission Losses (Average Ambient Conditions - 100 Percent Petcoke)			
Without Transmission Losses		Including Transmission Losses ⁽¹⁾	
Output (MW)	Net Plant Heat Rate (Btu/kWh)	Output (MW)	Net Plant Heat Rate (Btu/kWh)
80.4	10,018	78.7	10,233
62.4	10,576	61.1	10,803
43.7	11,601	42.8	11,850

⁽¹⁾Assumes losses of 2.1 percent.

The optimal capacity expansion plan involving participation in the three-train 1x1 IGCC in 2012 consists of a brownfield LM6000 1x1 combined cycle unit in 2011, a brownfield LM6000 1x1 combined cycle unit in 2018, and a brownfield LM6000 1x1 combined cycle unit in 2019, with a CPWC of \$1,814.8 million. A comparison of the CPWCs for this case and the base case capacity expansion plan that includes participation in TEC (presented in Section D.5.0) shows that this plan is \$43.6 million higher in CPWC than the expansion plan that includes participation in TEC.

D.6.2.3 Second Jointly Owned Pulverized Coal Unit

Currently, there are no coal fired generation projects identified that RCID could participate in before TEC. Furthermore, RCID has no firm plans for participation in a large, jointly developed pulverized coal unit in the near term. As such, no additional pulverized coal units were considered as supply-side alternatives after construction of TEC in the base case analysis. This sensitivity considers the possibility of joint participation in a second pulverized coal unit located at either the TEC site or another unidentified site in Florida.

The costs and performance of a second supercritical pulverized coal unit are assumed to be identical to those presented for TEC in Section A.3.0, to reflect indicative estimates for a large coal unit. Section D.5.0 presents RCID's share of the capital and O&M costs for TEC, which are assumed to be the same as those for the second pulverized coal option. Since the TEC Participants would not likely engage in the construction of another pulverized coal unit with a construction schedule that overlaps the construction of TEC, the second pulverized coal unit was not assumed to be available until 2016, to allow for a 4 year construction schedule for the second potential unit.

In this sensitivity case, the optimal capacity expansion plan for the case with TEC in 2012 consists of a brownfield LM6000 1x1 combined cycle unit in 2011, and participation in a supercritical pulverized coal unit in 2018. The CPWC for this expansion plan is \$1,539.9 million, which represents a decrease in CPWC of \$231.3 million over the evaluation period, compared to the base case TEC CPWC.

D.6.2.4 Direct-Fired Biomass Supply-Side Alternative

This sensitivity includes the 30 MW direct-fired biomass (stoker-fired) alternative presented in Section A.6.0 in the cases with and without TEC as a committed unit in 2011, since this is the first year that RCID would need capacity under the base case assumptions.

Cost and performance estimates for the direct-fired biomass alternative are presented in Section A.6.0. The unit was modeled as a “must run” unit, without consideration of emissions allowance costs, to allow for a conservative economic analysis and because biomass emissions are highly dependent on the type of biomass utilized in power generation.

In this sensitivity case, the optimal capacity expansion plan for the case with TEC in 2012 consists of a brownfield LM6000 1x1 combined cycle unit in 2011, and two brownfield LM6000 1x1 combined cycle units in 2018. The optimal capacity expansion plan without participation in TEC consists of a brownfield LM6000 1x1 combined cycle unit in 2011, a second brownfield LM6000 1x1 combined cycle unit in 2014, a third brownfield LM6000 1x1 combined cycle unit in 2018, and a fourth brownfield LM6000 1x1 combined cycle unit in 2024.

The CPWCs for the expansion plan with TEC and the plan without participation in TEC are \$1,727.5 and \$1,982.2 million, respectively. A comparison of the CPWCs shows that the case with TEC is the least-cost plan by \$254.7 million over the evaluation period.

D.6.2.5 Powder River Basin Coal for TEC

The base case economic analysis and all other sensitivity analyses performed assume that TEC will burn a blend of Latin American coal and petcoke. However, as described in Section A.3.0, TEC will be designed to be capable of burning blends of PRB coal and petcoke, as well as blends of Central Appalachian coal and petcoke. This sensitivity assumes that TEC will burn a blend of PRB coal and petcoke and is based on the corresponding operating cost and performance estimates provided by Sargent & Lundy, which were presented in Section A.3.0.

Hill & Associates' forecast of Latin American coal prices is lower than the forecasts of PRB coal prices, and the corresponding operating costs of TEC are expected to be lower when burning a blend of Latin American coal and petcoke than when burning a blend of PRB coal and petcoke. However, this sensitivity is intended to demonstrate that the additional flexibility of TEC resulting from its capability to burn multiple types of coal allows TEC to be a cost-effective alternative, if the preferred (Latin American) coal source is unavailable for any reason.

The optimal capacity expansion plan involving operation of TEC on a blend of PRB coal and petcoke consists of a brownfield LM6000 1x1 combined cycle unit in 2011, and two brownfield LM6000 1x1 combined cycle units in 2018, with a CPWC of \$1,780.6 million. A comparison of the CPWCs for this case and the base case capacity expansion plan that includes participation in TEC (presented in Section D.5.0) shows that the plan with TEC's operation on a blend of PRB coal and petcoke is \$9.4 million higher in CPWC than the plan with TEC's operation on a blend of Latin American coal and petcoke.

The CPWCs for the expansion plan with TEC utilizing PRB coal and the plan without participation in TEC are \$1,780.6 and \$2,042.1 million, respectively. A comparison of the CPWCs shows that the optimal capacity expansion plan with TEC utilizing PRB coal, instead of Latin American coal, is \$261.5 million less in CPWC than RCID's optimal capacity expansion plan that does not include TEC.

D.6.2.6 Summary of the Sensitivity Cases for External Parameters

Appendix D.1 presents the CPWC summary sheets for all the cases presented in Table D.6-13. The optimal capacity expansion plan with TEC in 2012 was the least-cost plan in each of the scenarios, except for the second jointly owned pulverized coal unit and biomass addition sensitivities. Overall, these results demonstrate the robustness and flexibility of the expansion plan with TEC to overcome external variations and deviations from the base case assumptions.

D.6.3 Analysis of RFP Responses

As described in Section A.7.0, Southern Power Company (Southern) responded to the Participants' RFP and provided bids for a pulverized coal unit and a 2x1 combined cycle unit. Southern's proposed costs and estimated performance for the units are confidential. Although both of Southern's bids were determined by R.W. Beck to not be least-cost to TEC on a levelized cost basis, each bid has been evaluated for RCID's system as a sensitivity to further assess the cost-effectiveness of RCID's participation in TEC. This section briefly describes the bids and the resulting optimal capacity expansion plans under each scenario.

Table D.6-13 Summary of Sensitivity Analyses (Varying External Parameters)			
Sensitivity Case	Expansion Plan CPWC Cost (\$ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
3x1 Combined Cycle Joint Development	\$1,914.4	\$1,771.2	\$143.2
Three-Train 1x1 IGCC Joint Development	\$1,814.8	\$1,771.2	\$43.6
Second Jointly Owned Pulverized Coal Unit	\$1,539.9	\$1,771.2	(\$231.3)
Biomass Supply-Side Addition with TEC	\$1,727.5	\$1,771.2	(\$43.7)
Biomass Supply-Side Addition without TEC	\$1,982.2	\$1,771.2	\$211.0
PRB Coal for TEC	\$1,780.6	\$1,771.2	\$9.4

Similar to the base case economic analysis described in Section D.5.0, it has been assumed that RCID would increase the amount of capacity purchased under its existing TECO agreement through 2017 for all of the analyses of each of Southern's bids.

D.6.3.1 Southern's Pulverized Coal Unit Bid

Southern's pulverized coal unit bid was considered a committed unit for RCID, and all costs and performance for the unit were made to be consistent with Southern's bid. The optimal expansion plan for RCID's system with Southern's pulverized coal bid, which was considered a committed unit in 2012, consisted of a brownfield LM6000 1x1 combined cycle unit in 2011, and two brownfield LM6000 1x1 combined cycle units in 2018, with a CPWC of \$1,872.4 million. A comparison of CPWCs shows that the base case expansion plan with RCID's participation in TEC is \$101.2 million lower in CPWC than the expansion plan with Southern's pulverized coal bid over the evaluation period.

D.6.3.2 Southern's 2x1 Combined Cycle Bid

Southern's 2x1 combined cycle unit bid was considered a committed unit for RCID, and all costs and performance for the unit were made to be consistent with Southern's bid. The optimal expansion plan for RCID's system with Southern's 2x1 combined cycle bid, which was considered a committed unit in 2012, consisted of a brownfield LM6000 1x1 combined cycle unit in 2011, and two brownfield LM6000 1x1 combined cycle units in 2018, with a CPWC of \$1,973.8 million. A comparison of CPWCs shows that the base case expansion plan with RCID's participation in TEC is

\$202.6 million lower in CPWC than the expansion plan with Southern's combined cycle bid over the evaluation period.

D.6.3.3 Summary of the Sensitivity Cases for RCID's Share of the RFP Responses

As shown in Table D.6-14, RCID's optimal capacity expansion plan with TEC in 2012 was the least-cost plan compared to RCID's share of both of Southern's bids.

Table D.6-14 Summary of RCID's Share of Southern's Bids			
Sensitivity Case	Expansion Plan CPWC Cost (\$ million)		
	Sensitivity Scenario	Base Case TEC in 2012	Differential CPWC Savings of Base Case
Southern's Pulverized Coal Unit	\$1,872.4	\$1,771.2	\$101.2
Southern's 2x1 Combined Cycle Unit	\$1,973.8	\$1,771.2	\$202.6



D.7.0 RCID's Demand-Side Management

According to Section 403.519 of the Florida Statutes, in its determination of need, the FPSC must take into consideration conservation measures that could mitigate or delay the need for the proposed plant. RCID's customer base consists primarily of the Walt Disney World Resort Complex (WDW), resort-area hotels, and other commercial customers. RCID secures firm capacity based on potential demand reductions associated with the Demand-Side Management (DSM) programs of its customers and its own DSM programs.

Throughout its history, RCID has demonstrated a strong commitment to serve the conservation needs of its customer base. RCID has assisted and participated in numerous conservation and efficiency programs to meet customer needs. The vast majority of DSM and conservation activities within the RCID service territory have been implemented for and/or by the WDW. RCID has an ongoing commitment to evaluate new conservation opportunities.

The load forecast that supports RCID's participation in TEC reflects the significant conservation measures already implemented by RCID and its customers. RCID and its customers will continue with their existing DSM programs. Also, as new facilities are built, by the utility or its customers, consideration will be given to the application of existing energy conservation programs to those new facilities, and any appropriate new DSM options will be evaluated for the new facilities.

The DSM and conservation programs currently assisted with or provided by RCID, in conjunction with its customers, include the following:

- Customer implemented DSM and conservation programs.
- Energy Efficient Lighting Solutions – Green Lights Program.
- Thermal Storage Facility/Program.

D.7.1 Customer Implemented DSM

The cornerstone of the WDW Energy Management Program is its strong relationship with the US Environmental Protection Agency (EPA) through the EPA Energy Star Buildings program, which has five main components:

- Building tune-up.
- Energy efficient lighting (Green Lights).
- Load reductions.
- Fan system upgrades.
- Heating and cooling system upgrades.

The relationship between WDW and the Energy Star Buildings program was established in 1996, when the EPA Green Lights Program was implemented across 17 million square feet of customer facilities. The program was completed in 1998 and has resulted in annual electrical savings of 46 million kWh. Additionally, in 1998, WDW began implementing numerous other cost-effective energy-saving projects. Those projects included the following:

- Optimizing compressed air system controls.
- Upgrading hot water boiler controls.
- Retrofitting variable speed drives in air, pumping, and chilled water systems.
- Retrofitting demand-controlled ventilation in convention center spaces.
- Upgrading and integrating energy management systems with centralized network-based servers.

In aggregate, since 1996, the Energy Star Buildings program has resulted in cost-effective investments and metered annual reductions of approximately 100 million kWh of electricity.

D.7.1.1 Building Tune-Up

The building tune-up or re-commissioning step in the Energy Star Buildings program has been very cost-effective for RCID's customers. The building tune-up process concentrates on the optimization of energy management systems that typically result in the following:

- Reduced utility consumption by optimizing air conditioning and lighting time schedules and set points.
- Improved energy management system performance by improving energy management system programming and documentation.
- Corrective actions identified by monitoring heating, ventilation, and air conditioning (HVAC) system operations.
- Measured utility savings using a Utility Reporting System.

D.7.1.2 Energy Information System (EIS)

Utility Reporting System

The EIS is a suite of programs and computers that take data from the customer's energy management system and other data collection sources and convert it into actionable information for use by operators and managers. The EIS measures energy at the facility level and tracks resulting energy conservation efforts over time. Continuous feedback on utility performance pinpoints problems in the energy management system

that require attention. Such feedback also drives incentive programs, which ensure that people are actively seeking to reduce consumption and expenses without creating new problems.

Utility Report Cards

The Utility Report Card program is based on the EIS methods and techniques developed by RCID's customers. This program is a Web-based system that tracks, reports, and graphs utility data on a monthly basis; generates reports automatically; then emails the reports to numerous facilities to allow managers to take appropriate corrective action, if necessary.

Customer Education

RCID's Chief Energy Management Engineer conducts monthly Energy Star meetings that are open to all customers. During the Energy Star meetings, guest speakers share best available technologies. In addition, the participants share best energy conservation practices in an open forum. The Chief Engineer also conducts educational seminars throughout the District.

RCID provides educational materials that are also available through the RCID Web site. The educational materials include the Energy Star Tool Bag, which provides a guide to help customers and their employees look for energy-saving opportunities. The following are some examples of what is included in the Tool Bag:

Overall Building

- Review HVAC processes:
 - Turn off units during unoccupied hours.
 - Adjust temperature and humidity set points to minimize unnecessary heating and cooling.
- Turn off interior and exterior lighting when not required.
- Perform walk-throughs - Look for energy waste, such as the following:
 - Any exterior lighting on during the day.
 - Noting of "too cold" or "too hot" areas.
 - Noting of any areas that are "too humid."
 - Open doors that should be closed during hot or cold weather.
 - All non-essential lighting that should be turned off/dimmed down.
 - Any PCs that are left on.
 - Any decorative fountains that are on.

- Whether the building facade or other decorative lighting can be turned off.
- Review utility metering reports and look for energy waste.

In the Office

- Turn lights off when employees leave the office or conference room.
- Program the PC monitor, printer, and copier to “go to sleep” during extended periods of non-activity.
- Turn computers off completely when employees leave to go home.

In the Kitchen

- Minimize kitchen equipment preheat times.
- Turn cooking equipment down or off during slow periods of the day.
- Turn off kitchen hoods after closing.
- Turn off or reduce lighting levels in dining areas and kitchen after closing.
- Keep refrigerator/freezer doors closed. Install plastic strip doors on refrigerator/cooler doors.

In Convention Areas

- Turn off lighting and HVAC equipment during unoccupied hours.

In Guest Rooms

When housekeeping personnel leave unoccupied rooms, the following should be accomplished:

- Set back guest room thermostats to “low cool.”
- Close drapes in guest rooms.
- Keep sliding doors closed.
- Turn off lights in guest rooms.

D.7.2 Green Lights Program

RCID has benefited from an extensive lighting retrofit program called Green Lights, which began in 1997. The program was sponsored by the US EPA and, to date, has saved RCID in excess of 46,000,000 kWh. The program essentially replaces existing less-efficient bulbs and lamps with more efficient lighting, with fixtures requiring less energy usage.

D.7.3 Thermal Storage Facility

RCID operates a fleet of chiller plants that provides chilled water for air conditioning to the Magic Kingdom, Contemporary Resort Hotel, Polynesian Resort Hotel, Grand Floridian Resort Hotel, and RCID's electric generation facilities.

In 1998, a thermal storage facility was constructed consisting of a 5 million gallon stratified chilled water tank. The thermal storage facility permits the production and storage of chilled water at night (when power costs are low) and displaces chillers during on-peak hours (when energy costs are high). The use of the stored chilled water on the following day allows fewer chillers to operate during peak power periods, lowers energy costs, and shifts capacity from on-peak to off-peak periods. The net result of this peak shifting allows RCID to reduce peak requirements by up to 3 MW. The facility also provides 2,000 tons of chilled water to RCID's electric generation facilities for cooling of the gas turbine's 1 million pounds per hour of inlet air, from ambient conditions of 95° F to inlet conditions of 50° F. Inlet cooling increases gas turbine output by approximately 23 percent and improves heat rate by approximately 6.5 percent.



D.8.0 RCID's Strategic Considerations

In addition to cost-effectively meeting RCID's capacity needs, there were several strategic considerations and advantages associated with the TEC project, which led RCID to consider participation in the TEC project as its next baseload generating unit. These strategic considerations include both economic and non-economic attributes and are discussed in the remainder of this section.

D.8.1 RCID Fuel Diversity

TEC will provide an increase in fuel diversity for RCID's system and Florida as a whole. The project will have the ability to source solid fuels from both domestic and international coal producing regions, including the PRB, Central Appalachia, and Latin America, as well as petcoke from the Gulf Coast region and the Caribbean. Historically, coals from these regions and petcoke have experienced significantly less fluctuation in price and generally have less volatile prices than oil and natural gas on an annual basis. As a result, TEC will not only provide additional solid fuel capacity for RCID and Florida, but it will also provide further fuel diversification through the capability to source coal and petcoke from numerous different regions via different transportation modes and routes. This additional choice in fuel for RCID's generating fleet will provide more flexibility to respond to fuel price fluctuations that exist within all fuel markets due to extenuating events that occur from time to time.

Additionally, the low cost baseload energy from TEC will help RCID and Florida reduce their dependence on volatile, higher cost energy from natural gas and oil. Figures D.8-1 and D.8-2 show RCID's projected capacity resources by fuel type in 2006 and 2013, respectively. Figures D.8-3 and D.8-4 show RCID's projected energy resources by fuel type in 2006 and 2013, respectively.

D.8.2 Reliability of RCID Fuel Supply

The addition of solid-fueled generation increases the reliability of RCID's fuel supply. The plant design will allow for up to at least 90 days of coal and petcoke inventory, minimizing the short-term supply disruptions that occurred with natural gas as a result of hurricanes affecting the Gulf Coast supply region. Furthermore, onsite fuel storage minimizes the short-term disruptions of fuel transportation systems.

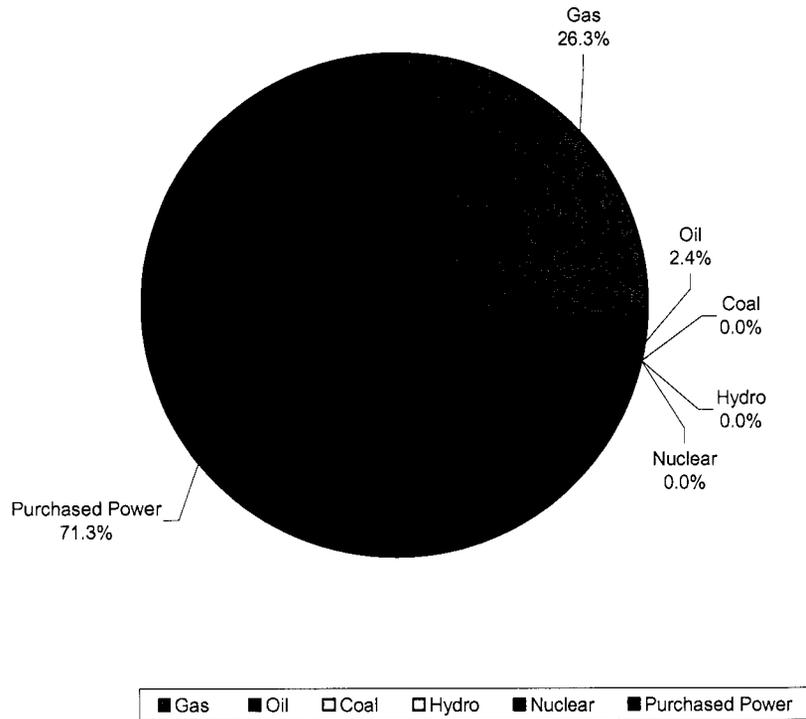


Figure D.8-1
RCID's 2006 Capacity Resources by Fuel Type

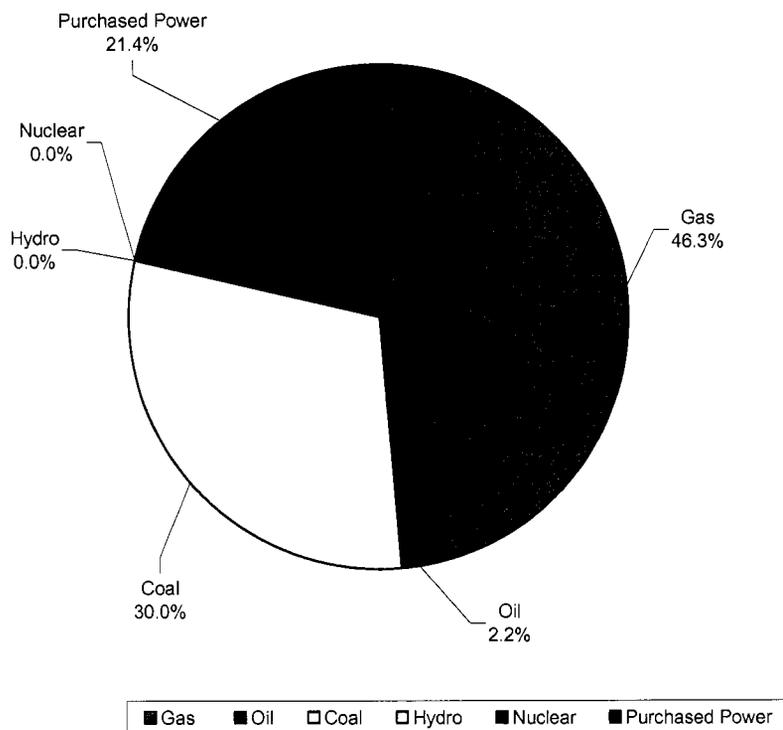


Figure D.8-2
RCID's 2013 Capacity Resources by Fuel Type

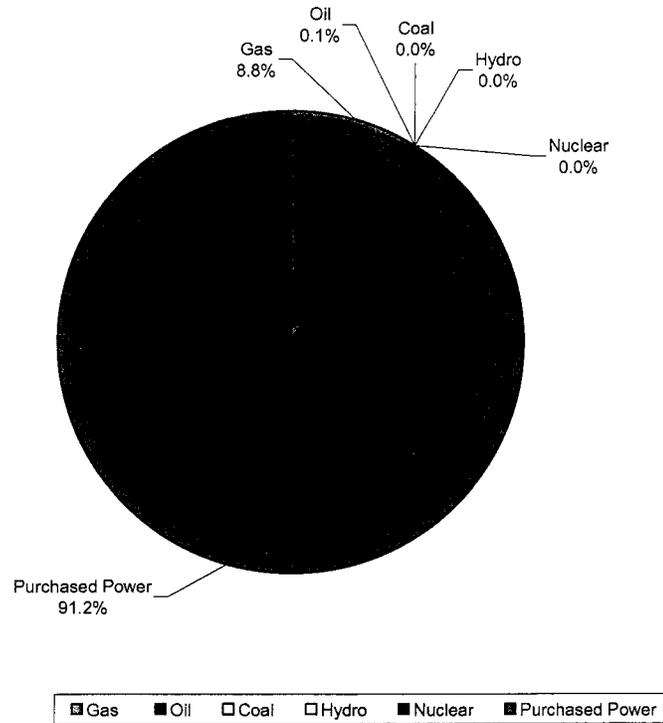


Figure D.8-3
RCID's 2006 Energy Resources by Fuel Type

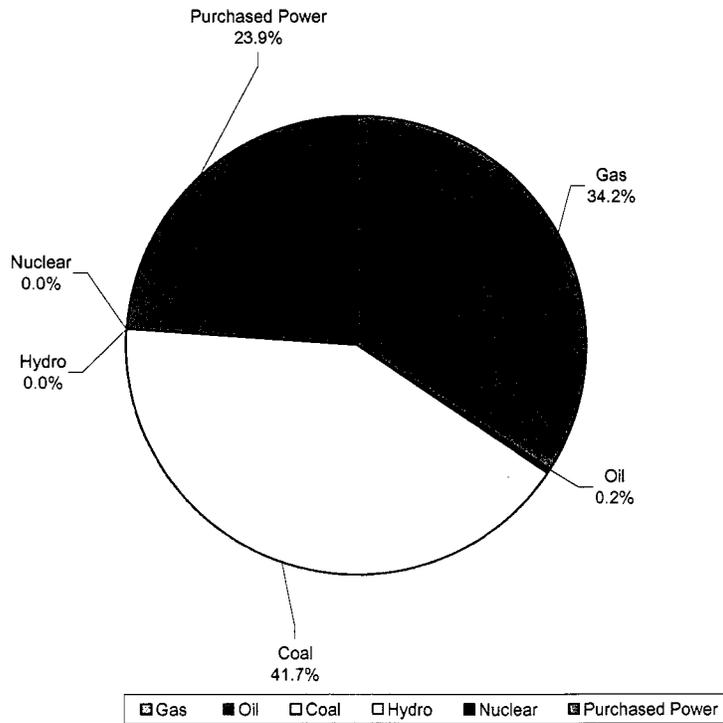


Figure D.8-4
RCID's 2013 Energy Resources by Fuel Type

D.8.3 Stability of RCID Electric Rates

TEC will help to satisfy the need for low cost, baseload energy within RCID's service territory and the State of Florida as a whole. Additional low cost, baseload energy from TEC will help stabilize electric rates for its customers. Electric rate stability will be beneficial for long-term planning.

D.8.4 Long Service Life

Although economic evaluations have been conducted through 2035 for this Application, TEC will be designed for, and is expected to have, a service life significantly greater than the 23 years of operation captured by the analysis period. The benefits of TEC's expected actual service life of 35 to 50 or more years have not been captured in the economic analysis, but are expected to be realized by RCID and the other Participants. Therefore, the total cost savings and benefits of TEC are understated in the economic analysis.

D.8.5 Supercritical Clean Coal Technology

By using supercritical pulverized coal boiler technology (which operates at a higher steam pressure than subcritical pulverized coal boilers) with Best Available Control Technology (BACT) pollution control systems, TEC will be among the most efficient and cleanest coal plants within the State of Florida. Supercritical clean coal technology is proven, has been in commercial service for decades, and provides at least a 2 percent lower heat rate in comparison to subcritical pulverized coal technology. This improvement in heat rate means that more energy can be generated with the same fuel input. The lower heat rate also translates into lower emissions from fuel combustion, because less fuel is needed for the same quantity of kilowatt-hours of energy output.

In addition, TEC will include BACT pollution control equipment to further reduce emissions per unit of fuel input. Combustion and post-combustion pollution controls will include low NO_x burners, selective catalytic reduction (SCR), wet flue gas desulfurization (FGD), wet electrostatic precipitator (WESP), baghouse, and a zero liquid discharge. As a result, TEC will have very low emissions rates.

D.8.6 Demonstrated Technology

Supercritical pulverized coal technology is a demonstrated technology that has been in commercial use for decades and has proven to be a reliable, baseload technology. Selection of a demonstrated technology is important to minimize risk to RCID's customers. The use of supercritical pulverized coal, as a demonstrated technology, allows the Participants to achieve economies of scale inherent in larger generating units.

Moreover, demonstrated technology is generally more favored by financing institutions and bond investors.

D.8.7 Environmental Considerations

As described in Section A.5.0, CAIR and CAMR will require much of the United States, including the State of Florida, to make significant reductions in the emissions of NO_x, SO₂, and Hg. With high natural gas prices, coal fired facilities will likely be the most economical type of generation to meet capacity requirements for utilities throughout the CAIR region. Generally, conventional coal fired generation produces higher emissions of NO_x, SO₂, and Hg than natural gas or fuel oil generation. As a result of the planned pollution control measures to be implemented on TEC, as listed above and described in more detail in Section A.3.0, the proposed TEC project is designed to have lower emissions of NO_x, SO₂, and Hg than other coal fired power plants currently in operation.

D.8.8 Geographic Diversity

For RCID, the other Participants, and the State of Florida as a whole, TEC will provide geographic diversity, because it will be constructed on a greenfield site. The greenfield site provides RCID with baseload generation without increasing the concentration of its generation resources at one location. This diversity should increase reliability and availability of generating resources, particularly if a hurricane or other extreme condition causes forced outages in a localized area.

D.8.9 Reduction in Future Power Purchases

Currently, RCID purchases approximately 80 percent of its capacity requirements through agreements with TECO, PEF, and OCL. Participation in TEC will provide RCID with additional low cost, baseload generating capability and will reduce its dependence on potentially higher cost capacity and energy from power purchases in the volatile electric energy market in the future.

D.10.0 RCID's Financial Analysis

RCID has several funding sources available that may be used to finance the development and construction of the TEC. Given its 9.3 percent ownership stake in the project, RCID will be responsible for financing an estimated \$163.0 million of the total cost. These total costs include interest during construction, the owner's costs, land acquisition, initial coal inventory, and a community contribution.

During preliminary design, engineering, and permitting, RCID may draw on its working capital within the utilities fund for financing. As the initial development concludes and construction commences, RCID will need to initiate a revenue bond issuance for long-term project funding. For large projects such as a coal fired power plant, RCID could expect to issue either fixed or floating rate revenue bonds, with terms of up to 30 years.

RCID's utility enterprise has credit ratings of A- from Fitch and Standard & Poor's and an A3 from Moody's Investors Service. RCID purchases bond insurance on its long-term bonds to increase its ratings. RCID should expect that it will have no difficulties in obtaining bond financing for the TEC construction. Currently, RCID has \$402.1 million in outstanding revenue long-term bonds, which includes energy, water, and wastewater debt.

The detailed financing for TEC is expected to result in debt service requirements that are less than the assumed debt service presented in the economic parameters in Section A.4.0.



Appendix D.1 – RCID's CPWC Summary Sheets

Table D.1-1 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - High Fuel Prices

Case Description		Economic Parameters			Financial Parameters	
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%	
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%	
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%	
				Fixed Charge Rate Coal: (30 year)	7.25%	

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	163,061	11,828
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost			Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$53,188	\$285	\$0	\$53,473	\$0	\$0	\$0	\$0	\$0	\$0	\$53,473	\$53,473
2007	\$49,124	\$247	\$0	\$49,370	\$0	\$0	\$0	\$0	\$0	\$0	\$49,370	\$100,492
2008	\$48,087	\$265	\$0	\$48,362	\$0	\$0	\$0	\$0	\$0	\$0	\$48,362	\$144,358
2009	\$49,262	\$304	\$0	\$49,566	\$0	\$0	\$0	\$0	\$0	\$0	\$49,566	\$187,174
2010	\$50,172	\$333	\$0	\$50,506	\$0	\$0	\$0	\$0	\$0	\$0	\$50,506	\$228,726
2011	\$46,403	\$33,377	\$10,892	\$90,672	\$4,523	\$0	\$0	\$0	\$4,523	\$95,195	\$303,313	\$371,338
2012	\$51,712	\$16,810	\$6,928	\$75,450	\$14,656	\$233	\$679	\$142	\$15,710	\$91,160	\$371,338	\$437,214
2013	\$56,055	\$8,816	\$7,778	\$72,649	\$18,567	\$238	\$1,019	\$221	\$20,045	\$92,694	\$371,338	\$508,536
2014	\$53,287	\$20,536	\$11,491	\$85,314	\$18,567	\$244	\$1,019	\$231	\$20,061	\$105,375	\$508,536	\$580,003
2015	\$51,988	\$27,102	\$11,702	\$90,792	\$18,567	\$250	\$1,019	\$241	\$20,077	\$110,869	\$580,003	\$650,591
2016	\$54,022	\$28,948	\$11,915	\$94,885	\$18,567	\$257	\$1,019	\$252	\$20,095	\$114,980	\$650,591	\$720,160
2017	\$55,919	\$30,839	\$12,116	\$98,874	\$18,567	\$263	\$1,019	\$263	\$20,112	\$118,986	\$720,160	\$792,724
2018	\$82,848	\$3,941	\$12,841	\$99,431	\$29,319	\$270	\$1,019	\$275	\$30,884	\$130,314	\$792,724	\$867,481
2019	\$84,928	\$4,106	\$15,763	\$104,797	\$34,586	\$276	\$1,019	\$288	\$36,169	\$146,090	\$867,481	\$941,266
2020	\$89,687	\$4,234	\$15,979	\$109,901	\$34,586	\$283	\$1,019	\$301	\$36,189	\$146,090	\$941,266	\$1,014,033
2021	\$94,499	\$4,367	\$16,201	\$115,067	\$34,586	\$290	\$1,019	\$314	\$36,210	\$151,277	\$1,014,033	\$1,085,541
2022	\$98,931	\$4,503	\$16,428	\$119,862	\$34,586	\$298	\$1,019	\$328	\$36,231	\$156,093	\$1,085,541	\$1,155,721
2023	\$103,296	\$4,644	\$16,661	\$124,601	\$34,586	\$305	\$1,019	\$343	\$36,253	\$160,854	\$1,155,721	\$1,225,357
2024	\$109,621	\$4,789	\$16,899	\$131,309	\$34,586	\$313	\$1,019	\$359	\$36,276	\$167,586	\$1,225,357	\$1,294,151
2025	\$115,458	\$4,938	\$17,144	\$137,540	\$34,586	\$321	\$1,019	\$375	\$36,300	\$173,840	\$1,294,151	\$1,361,700
2026	\$120,447	\$5,061	\$17,395	\$142,903	\$34,586	\$329	\$1,019	\$392	\$36,325	\$179,228	\$1,361,700	\$1,427,950
2027	\$125,379	\$5,188	\$17,652	\$148,219	\$34,586	\$337	\$1,019	\$409	\$36,351	\$184,570	\$1,427,950	\$1,493,227
2028	\$131,342	\$5,318	\$17,915	\$154,574	\$34,586	\$345	\$1,019	\$428	\$36,378	\$190,952	\$1,493,227	\$1,557,478
2029	\$137,306	\$5,451	\$18,185	\$160,942	\$34,586	\$354	\$1,019	\$447	\$36,406	\$197,348	\$1,557,478	\$1,620,739
2030	\$143,541	\$5,587	\$18,462	\$167,590	\$34,586	\$363	\$1,019	\$467	\$36,435	\$204,025	\$1,620,739	\$1,683,053
2031	\$150,078	\$5,726	\$18,745	\$174,549	\$34,586	\$372	\$1,019	\$488	\$36,465	\$211,014	\$1,683,053	\$1,744,455
2032	\$156,926	\$5,870	\$19,036	\$181,832	\$34,586	\$381	\$1,019	\$510	\$36,496	\$218,328	\$1,744,455	\$1,804,984
2033	\$164,104	\$6,016	\$19,334	\$189,455	\$34,586	\$391	\$1,019	\$533	\$36,529	\$225,983	\$1,804,984	\$1,864,675
2034	\$171,627	\$6,167	\$19,639	\$197,433	\$34,586	\$400	\$1,019	\$557	\$36,562	\$233,995	\$1,864,675	\$1,923,563
2035	\$179,520	\$6,321	\$19,952	\$205,793	\$34,586	\$410	\$1,019	\$582	\$36,597	\$242,391	\$1,923,563	

Table D.1-2 Expansion Plan Economic Summary - Without Taylor Energy Center - High Fuel Prices

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
GE LM6000 1X1 CC	73,300	18	05/01/14	91,679	7,256
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost			Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$53,188	\$265	\$0	\$53,473	\$0	\$0	\$0	\$0	\$0	\$0	\$53,473	\$53,473
2007	\$49,124	\$247	\$0	\$49,370	\$0	\$0	\$0	\$0	\$0	\$0	\$49,370	\$100,492
2008	\$48,097	\$265	\$0	\$48,362	\$0	\$0	\$0	\$0	\$0	\$0	\$48,362	\$144,358
2009	\$49,262	\$304	\$0	\$49,565	\$0	\$0	\$0	\$0	\$0	\$0	\$49,565	\$187,174
2010	\$50,172	\$333	\$0	\$50,506	\$0	\$0	\$0	\$0	\$0	\$0	\$50,506	\$228,726
2011	\$46,403	\$33,377	\$10,892	\$90,672	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$95,195	\$303,313
2012	\$49,837	\$34,532	\$12,396	\$96,765	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$103,504	\$380,549
2013	\$52,780	\$36,521	\$12,554	\$101,854	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$108,593	\$457,724
2014	\$60,599	\$36,004	\$13,972	\$110,575	\$11,609	\$0	\$0	\$0	\$0	\$11,609	\$122,184	\$540,423
2015	\$66,171	\$35,093	\$15,570	\$116,833	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$130,828	\$624,756
2016	\$69,064	\$37,316	\$15,778	\$122,159	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$136,153	\$708,342
2017	\$72,097	\$39,683	\$15,969	\$127,749	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$141,744	\$791,217
2018	\$110,299	\$4,884	\$14,798	\$129,981	\$24,747	\$0	\$0	\$0	\$0	\$24,747	\$154,729	\$877,376
2019	\$111,195	\$5,110	\$17,915	\$134,220	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$164,234	\$964,473
2020	\$116,760	\$5,264	\$18,126	\$140,150	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$170,164	\$1,050,417
2021	\$122,886	\$5,423	\$18,341	\$146,650	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$176,664	\$1,135,396
2022	\$129,189	\$5,584	\$18,563	\$153,336	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$183,350	\$1,219,390
2023	\$135,618	\$5,754	\$18,790	\$160,162	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$190,176	\$1,302,363
2024	\$142,677	\$5,926	\$19,022	\$167,625	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$197,039	\$1,384,487
2025	\$149,903	\$6,104	\$19,260	\$175,268	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$205,282	\$1,465,723
2026	\$156,661	\$6,256	\$19,505	\$182,422	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$212,436	\$1,545,788
2027	\$163,894	\$6,413	\$19,755	\$190,062	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$220,076	\$1,624,783
2028	\$171,396	\$6,573	\$20,012	\$197,981	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$227,995	\$1,702,723
2029	\$179,158	\$6,737	\$20,275	\$206,170	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$236,184	\$1,779,618
2030	\$187,461	\$6,906	\$20,544	\$214,911	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$244,925	\$1,855,562
2031	\$196,146	\$7,079	\$20,821	\$224,045	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$254,059	\$1,930,586
2032	\$205,237	\$7,255	\$21,104	\$233,597	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$263,611	\$2,004,724
2033	\$214,756	\$7,437	\$21,394	\$243,587	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$273,601	\$2,078,008
2034	\$224,714	\$7,623	\$21,692	\$254,029	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$284,043	\$2,150,465
2035	\$235,134	\$7,813	\$21,997	\$264,944	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$294,958	\$2,222,124

Table D.1-3 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - Low Fuel Prices

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	162,400	11,781
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)			
		Variable (\$1,000)	Fixed (\$1,000)										
2006	\$49,125	\$342	\$0	\$49,468	\$0	\$0	\$0	\$0	\$0	\$0	\$49,468	\$49,468	
2007	\$46,216	\$298	\$0	\$46,515	\$0	\$0	\$0	\$0	\$0	\$0	\$46,515	\$93,767	
2008	\$45,183	\$316	\$0	\$45,499	\$0	\$0	\$0	\$0	\$0	\$0	\$45,499	\$135,037	
2009	\$46,514	\$362	\$0	\$46,876	\$0	\$0	\$0	\$0	\$0	\$0	\$46,876	\$175,529	
2010	\$47,634	\$515	\$0	\$48,149	\$0	\$0	\$0	\$0	\$0	\$0	\$48,149	\$215,142	
2011	\$36,330	\$32,991	\$10,892	\$80,212	\$4,523	\$0	\$0	\$0	\$4,523	\$4,523	\$84,735	\$281,534	
2012	\$40,432	\$16,715	\$6,928	\$64,074	\$14,624	\$233	\$679	\$142	\$15,678	\$15,678	\$79,752	\$341,046	
2013	\$44,411	\$8,956	\$7,778	\$61,145	\$18,519	\$238	\$1,019	\$221	\$19,997	\$19,997	\$81,142	\$398,712	
2014	\$39,534	\$20,333	\$11,491	\$71,358	\$18,519	\$244	\$1,019	\$231	\$20,013	\$20,013	\$91,371	\$460,556	
2015	\$38,657	\$26,830	\$11,702	\$77,188	\$18,519	\$250	\$1,019	\$241	\$20,030	\$20,030	\$97,218	\$523,223	
2016	\$39,783	\$28,656	\$11,915	\$80,354	\$18,519	\$257	\$1,019	\$252	\$20,047	\$20,047	\$100,401	\$584,861	
2017	\$41,139	\$30,524	\$12,116	\$83,779	\$18,519	\$263	\$1,019	\$263	\$20,064	\$20,064	\$103,843	\$645,576	
2018	\$57,788	\$3,941	\$12,641	\$74,371	\$29,272	\$270	\$1,019	\$275	\$30,836	\$30,836	\$105,207	\$704,159	
2019	\$59,127	\$4,106	\$15,763	\$78,996	\$34,538	\$276	\$1,019	\$288	\$36,121	\$36,121	\$115,117	\$765,208	
2020	\$62,005	\$4,234	\$15,979	\$82,219	\$34,538	\$283	\$1,019	\$301	\$36,141	\$36,141	\$118,360	\$824,988	
2021	\$64,971	\$4,367	\$16,201	\$85,539	\$34,538	\$290	\$1,019	\$314	\$36,162	\$36,162	\$121,701	\$883,528	
2022	\$67,574	\$4,503	\$16,428	\$88,505	\$34,538	\$298	\$1,019	\$328	\$36,183	\$36,183	\$124,689	\$940,649	
2023	\$70,617	\$4,644	\$16,661	\$91,922	\$34,538	\$305	\$1,019	\$343	\$36,206	\$36,206	\$128,128	\$996,551	
2024	\$74,416	\$4,789	\$16,899	\$96,104	\$34,538	\$313	\$1,019	\$359	\$36,229	\$36,229	\$132,333	\$1,051,538	
2025	\$78,106	\$4,938	\$17,144	\$100,188	\$34,538	\$321	\$1,019	\$375	\$36,253	\$36,253	\$136,440	\$1,105,532	
2026	\$81,173	\$5,061	\$17,395	\$103,629	\$34,538	\$329	\$1,019	\$392	\$36,277	\$36,277	\$139,906	\$1,158,261	
2027	\$83,890	\$5,188	\$17,652	\$106,729	\$34,538	\$337	\$1,019	\$409	\$36,303	\$36,303	\$143,033	\$1,209,602	
2028	\$87,636	\$5,318	\$17,915	\$110,869	\$34,538	\$345	\$1,019	\$428	\$36,330	\$36,330	\$147,199	\$1,259,922	
2029	\$91,305	\$5,451	\$18,185	\$114,941	\$34,538	\$354	\$1,019	\$447	\$36,358	\$36,358	\$151,299	\$1,309,180	
2030	\$95,095	\$5,587	\$18,462	\$119,143	\$34,538	\$363	\$1,019	\$467	\$36,387	\$36,387	\$155,530	\$1,357,405	
2031	\$99,059	\$5,726	\$18,745	\$123,531	\$34,538	\$372	\$1,019	\$488	\$36,417	\$36,417	\$159,948	\$1,404,638	
2032	\$103,208	\$5,870	\$19,036	\$128,114	\$34,538	\$381	\$1,019	\$510	\$36,448	\$36,448	\$164,562	\$1,450,919	
2033	\$107,535	\$6,016	\$19,334	\$132,885	\$34,538	\$391	\$1,019	\$533	\$36,481	\$36,481	\$169,366	\$1,496,284	
2034	\$112,063	\$6,167	\$19,639	\$137,869	\$34,538	\$400	\$1,019	\$557	\$36,514	\$36,514	\$174,383	\$1,540,768	
2035	\$116,794	\$6,321	\$19,952	\$143,068	\$34,538	\$410	\$1,019	\$582	\$36,549	\$36,549	\$179,617	\$1,584,405	

Table D.1-4 Expansion Plan Economic Summary - Without Taylor Energy Center - Low Fuel Prices

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
GE LM6000 1X1 CC	73,300	18	05/01/14	91,679	7,256
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$49,125	\$342	\$0	\$49,468	\$0	\$0	\$0	\$0	\$0	\$0	\$49,468	\$49,468
2007	\$46,216	\$298	\$0	\$46,515	\$0	\$0	\$0	\$0	\$0	\$0	\$46,515	\$93,767
2008	\$45,183	\$316	\$0	\$45,499	\$0	\$0	\$0	\$0	\$0	\$0	\$45,499	\$135,037
2009	\$46,514	\$362	\$0	\$46,876	\$0	\$0	\$0	\$0	\$0	\$0	\$46,876	\$175,529
2010	\$47,634	\$515	\$0	\$48,149	\$0	\$0	\$0	\$0	\$0	\$0	\$48,149	\$215,142
2011	\$36,330	\$32,991	\$10,892	\$80,212	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$84,735	\$281,534
2012	\$37,904	\$34,362	\$12,396	\$84,662	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$91,400	\$349,738
2013	\$39,584	\$36,501	\$12,554	\$88,639	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$95,377	\$417,521
2014	\$41,798	\$35,301	\$13,972	\$91,071	\$11,609	\$0	\$0	\$0	\$0	\$11,609	\$102,680	\$487,019
2015	\$44,915	\$34,865	\$15,570	\$95,349	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$109,344	\$557,503
2016	\$46,822	\$37,077	\$15,778	\$99,678	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$113,673	\$627,288
2017	\$48,977	\$39,357	\$15,969	\$104,303	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$118,298	\$696,454
2018	\$73,548	\$4,884	\$14,798	\$93,231	\$24,747	\$0	\$0	\$0	\$0	\$24,747	\$117,978	\$762,149
2019	\$74,142	\$5,110	\$17,915	\$97,168	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$127,182	\$829,596
2020	\$77,801	\$5,264	\$18,126	\$101,191	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$131,205	\$895,864
2021	\$81,850	\$5,423	\$18,341	\$105,614	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$135,628	\$961,103
2022	\$86,022	\$5,584	\$18,563	\$110,168	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$140,182	\$1,025,322
2023	\$90,378	\$5,754	\$18,790	\$114,921	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$144,935	\$1,088,557
2024	\$94,989	\$5,926	\$19,022	\$119,937	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$149,951	\$1,150,865
2025	\$99,803	\$6,104	\$19,260	\$125,167	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$155,181	\$1,212,275
2026	\$104,263	\$6,256	\$19,505	\$130,024	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$160,038	\$1,272,592
2027	\$109,051	\$6,413	\$19,755	\$135,219	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$165,233	\$1,331,901
2028	\$114,019	\$6,573	\$20,012	\$140,604	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$170,618	\$1,390,227
2029	\$119,168	\$6,737	\$20,275	\$146,180	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$176,194	\$1,447,590
2030	\$124,666	\$6,906	\$20,544	\$152,116	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$182,130	\$1,504,063
2031	\$130,422	\$7,079	\$20,821	\$158,321	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$188,335	\$1,559,679
2032	\$136,450	\$7,255	\$21,104	\$164,809	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$194,823	\$1,614,471
2033	\$142,747	\$7,437	\$21,394	\$171,578	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$201,592	\$1,668,468
2034	\$149,338	\$7,623	\$21,692	\$178,652	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$208,666	\$1,721,697
2035	\$156,231	\$7,813	\$21,987	\$186,042	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$216,056	\$1,774,187

Table D.1-5 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - High Load and Energy Growth

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	162,974	11,822
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$52,817	\$328	\$0	\$53,145	\$0	\$0	\$0	\$0	\$0	\$0	\$53,145	\$53,145
2007	\$49,757	\$272	\$0	\$50,030	\$0	\$0	\$0	\$0	\$0	\$0	\$50,030	\$100,792
2008	\$48,031	\$308	\$0	\$48,339	\$0	\$0	\$0	\$0	\$0	\$0	\$48,339	\$144,638
2009	\$49,395	\$359	\$0	\$49,754	\$0	\$0	\$0	\$0	\$0	\$0	\$49,754	\$187,617
2010	\$50,345	\$395	\$0	\$50,740	\$0	\$0	\$0	\$0	\$0	\$0	\$50,740	\$229,361
2011	\$44,210	\$34,453	\$11,231	\$89,894	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$94,417	\$303,340
2012	\$50,978	\$18,436	\$7,380	\$76,795	\$14,652	\$233	\$679	\$142	\$0	\$15,705	\$92,501	\$372,365
2013	\$55,828	\$10,964	\$8,230	\$75,022	\$18,560	\$238	\$1,019	\$221	\$0	\$20,039	\$95,060	\$439,923
2014	\$51,846	\$22,878	\$12,056	\$86,580	\$18,560	\$244	\$1,019	\$231	\$0	\$20,055	\$106,635	\$512,098
2015	\$50,775	\$29,664	\$12,267	\$92,706	\$18,560	\$250	\$1,019	\$241	\$0	\$20,071	\$112,777	\$584,795
2016	\$52,580	\$31,982	\$12,593	\$97,155	\$18,560	\$257	\$1,019	\$252	\$0	\$20,088	\$117,244	\$656,772
2017	\$53,959	\$34,193	\$12,792	\$100,945	\$18,560	\$263	\$1,019	\$263	\$0	\$20,106	\$121,051	\$727,548
2018	\$75,087	\$4,117	\$12,641	\$91,845	\$29,313	\$270	\$1,019	\$275	\$0	\$30,877	\$122,722	\$795,885
2019	\$76,721	\$4,310	\$15,763	\$96,794	\$34,580	\$276	\$1,019	\$288	\$0	\$36,163	\$132,957	\$866,395
2020	\$80,959	\$4,452	\$15,979	\$101,390	\$34,580	\$283	\$1,019	\$301	\$0	\$36,183	\$137,573	\$935,878
2021	\$84,940	\$4,602	\$16,201	\$105,744	\$34,580	\$290	\$1,019	\$314	\$0	\$36,204	\$141,947	\$1,004,158
2022	\$88,651	\$4,758	\$16,428	\$109,837	\$34,580	\$298	\$1,019	\$328	\$0	\$36,225	\$146,062	\$1,071,070
2023	\$93,442	\$4,918	\$16,661	\$115,021	\$34,580	\$305	\$1,019	\$343	\$0	\$36,247	\$151,269	\$1,137,068
2024	\$99,751	\$5,083	\$16,899	\$121,734	\$34,580	\$313	\$1,019	\$359	\$0	\$36,270	\$158,004	\$1,202,722
2025	\$105,099	\$5,254	\$17,144	\$127,497	\$34,580	\$321	\$1,019	\$375	\$0	\$36,294	\$163,791	\$1,267,540
2026	\$109,537	\$5,385	\$17,395	\$132,317	\$34,580	\$329	\$1,019	\$392	\$0	\$36,319	\$168,636	\$1,331,097
2027	\$113,654	\$5,520	\$17,652	\$136,826	\$34,580	\$337	\$1,019	\$409	\$0	\$36,345	\$173,170	\$1,393,255
2028	\$118,847	\$5,658	\$17,915	\$142,420	\$34,580	\$345	\$1,019	\$428	\$0	\$36,372	\$178,792	\$1,454,375
2029	\$124,010	\$5,799	\$18,185	\$147,995	\$34,580	\$354	\$1,019	\$447	\$0	\$36,400	\$184,394	\$1,514,409
2030	\$129,398	\$5,945	\$18,462	\$153,804	\$34,580	\$363	\$1,019	\$467	\$0	\$36,429	\$190,233	\$1,573,394
2031	\$135,032	\$6,093	\$18,745	\$159,870	\$34,580	\$372	\$1,019	\$488	\$0	\$36,459	\$196,328	\$1,631,370
2032	\$140,931	\$6,245	\$19,036	\$166,213	\$34,580	\$381	\$1,019	\$510	\$0	\$36,490	\$202,702	\$1,688,378
2033	\$147,109	\$6,401	\$19,334	\$172,844	\$34,580	\$391	\$1,019	\$533	\$0	\$36,522	\$209,367	\$1,744,457
2034	\$153,578	\$6,561	\$19,639	\$179,779	\$34,580	\$400	\$1,019	\$557	\$0	\$36,556	\$216,335	\$1,799,642
2035	\$160,341	\$6,726	\$19,952	\$187,019	\$34,580	\$410	\$1,019	\$582	\$0	\$36,591	\$223,611	\$1,853,968

Table D.1-6 Expansion Plan Economic Summary - Without Taylor Energy Center - High Load and Energy Growth

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
GE LM6000 1X1 CC	73,300	18	05/01/12	87,265	6,907
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$52,817	\$328	\$0	\$53,145	\$0	\$0	\$0	\$0	\$0	\$0	\$53,145	\$53,145
2007	\$49,757	\$272	\$0	\$50,030	\$0	\$0	\$0	\$0	\$0	\$0	\$50,030	\$100,792
2008	\$48,031	\$308	\$0	\$48,339	\$0	\$0	\$0	\$0	\$0	\$0	\$48,339	\$144,638
2009	\$49,395	\$359	\$0	\$49,754	\$0	\$0	\$0	\$0	\$0	\$0	\$49,754	\$187,617
2010	\$50,345	\$395	\$0	\$50,740	\$0	\$0	\$0	\$0	\$0	\$0	\$50,740	\$229,361
2011	\$44,210	\$34,453	\$11,231	\$89,894	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$94,417	\$303,340
2012	\$55,766	\$23,475	\$10,657	\$89,897	\$11,362	\$0	\$0	\$0	\$0	\$11,362	\$101,259	\$378,901
2013	\$62,617	\$18,698	\$12,221	\$93,535	\$13,645	\$0	\$0	\$0	\$0	\$13,645	\$107,181	\$455,072
2014	\$59,140	\$30,769	\$15,929	\$105,838	\$13,645	\$0	\$0	\$0	\$0	\$13,645	\$119,483	\$535,943
2015	\$58,016	\$37,595	\$16,135	\$111,746	\$13,645	\$0	\$0	\$0	\$0	\$13,645	\$125,392	\$616,772
2016	\$60,539	\$40,310	\$16,456	\$117,306	\$13,645	\$0	\$0	\$0	\$0	\$13,645	\$130,951	\$697,165
2017	\$63,318	\$42,928	\$16,646	\$122,892	\$13,645	\$0	\$0	\$0	\$0	\$13,645	\$136,537	\$776,995
2018	\$100,063	\$5,051	\$14,798	\$119,913	\$24,398	\$0	\$0	\$0	\$0	\$24,398	\$144,311	\$857,353
2019	\$100,259	\$5,315	\$17,915	\$123,489	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$153,154	\$938,574
2020	\$105,379	\$5,483	\$18,126	\$128,988	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$158,652	\$1,018,704
2021	\$111,082	\$5,659	\$18,341	\$135,083	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$164,748	\$1,097,950
2022	\$116,882	\$5,841	\$18,563	\$141,287	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$170,951	\$1,176,265
2023	\$123,197	\$6,029	\$18,790	\$148,015	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$177,680	\$1,253,786
2024	\$129,983	\$6,222	\$19,022	\$155,227	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$184,892	\$1,330,613
2025	\$136,840	\$6,421	\$19,260	\$162,521	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$192,186	\$1,406,667
2026	\$142,970	\$6,582	\$19,505	\$169,057	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$198,722	\$1,481,563
2027	\$149,542	\$6,746	\$19,755	\$176,044	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$205,709	\$1,555,401
2028	\$156,349	\$6,915	\$20,012	\$183,276	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$212,941	\$1,628,195
2029	\$163,406	\$7,088	\$20,275	\$190,769	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$220,434	\$1,699,962
2030	\$170,951	\$7,265	\$20,544	\$198,760	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$228,425	\$1,770,789
2031	\$178,841	\$7,447	\$20,821	\$207,108	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$236,773	\$1,840,708
2032	\$187,085	\$7,633	\$21,104	\$215,822	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$245,487	\$1,909,749
2033	\$195,724	\$7,824	\$21,394	\$224,942	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$254,607	\$1,977,945
2034	\$204,752	\$8,019	\$21,692	\$234,463	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$264,128	\$2,045,323
2035	\$214,198	\$8,220	\$21,997	\$244,415	\$29,665	\$0	\$0	\$0	\$0	\$29,665	\$274,079	\$2,111,909

Table D.1-7 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - Low Load and Energy Growth

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	162,974	11,822
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/20	106,324	8,416

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$50,823	\$288	\$0	\$51,111	\$0	\$0	\$0	\$0	\$0	\$0	\$51,111	\$51,111
2007	\$48,008	\$240	\$0	\$48,247	\$0	\$0	\$0	\$0	\$0	\$0	\$48,247	\$97,061
2008	\$46,323	\$267	\$0	\$46,590	\$0	\$0	\$0	\$0	\$0	\$0	\$46,590	\$139,319
2009	\$47,801	\$312	\$0	\$48,113	\$0	\$0	\$0	\$0	\$0	\$0	\$48,113	\$180,881
2010	\$48,828	\$342	\$0	\$49,170	\$0	\$0	\$0	\$0	\$0	\$0	\$49,170	\$221,334
2011	\$43,258	\$31,802	\$10,553	\$85,613	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$90,136	\$291,958
2012	\$48,101	\$15,331	\$6,589	\$70,021	\$14,652	\$233	\$679	\$142	\$0	\$15,705	\$85,726	\$355,928
2013	\$52,030	\$7,149	\$7,326	\$66,505	\$18,560	\$238	\$1,019	\$221	\$0	\$20,039	\$86,544	\$417,433
2014	\$48,215	\$18,469	\$11,039	\$77,723	\$18,560	\$244	\$1,019	\$231	\$0	\$20,055	\$97,777	\$483,612
2015	\$46,787	\$24,530	\$11,137	\$82,454	\$18,560	\$250	\$1,019	\$241	\$0	\$20,071	\$102,525	\$549,701
2016	\$48,352	\$26,062	\$11,350	\$85,764	\$18,560	\$257	\$1,019	\$252	\$0	\$20,088	\$105,852	\$614,685
2017	\$49,448	\$27,418	\$11,440	\$88,306	\$18,560	\$263	\$1,019	\$263	\$0	\$20,106	\$108,412	\$678,071
2018	\$69,394	\$3,805	\$9,669	\$82,868	\$23,937	\$270	\$1,019	\$275	\$0	\$25,501	\$108,369	\$738,415
2019	\$71,712	\$3,941	\$11,285	\$86,937	\$26,570	\$276	\$1,019	\$288	\$0	\$28,153	\$115,091	\$799,450
2020	\$74,153	\$4,072	\$14,490	\$92,715	\$32,203	\$283	\$1,019	\$301	\$0	\$33,807	\$126,521	\$863,352
2021	\$77,100	\$4,189	\$16,201	\$97,489	\$34,986	\$290	\$1,019	\$314	\$0	\$36,609	\$134,099	\$927,856
2022	\$79,908	\$4,306	\$16,428	\$100,642	\$34,986	\$298	\$1,019	\$328	\$0	\$36,631	\$137,273	\$990,742
2023	\$83,764	\$4,430	\$16,661	\$104,854	\$34,986	\$305	\$1,019	\$343	\$0	\$36,653	\$141,507	\$1,052,481
2024	\$88,958	\$4,553	\$16,899	\$110,411	\$34,986	\$313	\$1,019	\$359	\$0	\$36,676	\$147,087	\$1,113,599
2025	\$93,159	\$4,680	\$17,144	\$114,983	\$34,986	\$321	\$1,019	\$375	\$0	\$36,700	\$151,683	\$1,173,625
2026	\$97,062	\$4,797	\$17,395	\$119,254	\$34,986	\$329	\$1,019	\$392	\$0	\$36,725	\$155,979	\$1,232,412
2027	\$100,607	\$4,917	\$17,652	\$123,176	\$34,986	\$337	\$1,019	\$409	\$0	\$36,751	\$159,926	\$1,289,816
2028	\$105,206	\$5,040	\$17,915	\$128,161	\$34,986	\$345	\$1,019	\$428	\$0	\$36,778	\$164,938	\$1,346,200
2029	\$109,753	\$5,166	\$18,185	\$133,104	\$34,986	\$354	\$1,019	\$447	\$0	\$36,805	\$169,909	\$1,401,518
2030	\$114,484	\$5,295	\$18,462	\$138,240	\$34,986	\$363	\$1,019	\$467	\$0	\$36,834	\$175,075	\$1,455,803
2031	\$119,429	\$5,427	\$18,745	\$143,601	\$34,986	\$372	\$1,019	\$488	\$0	\$36,864	\$180,466	\$1,509,095
2032	\$124,610	\$5,563	\$19,036	\$149,209	\$34,986	\$381	\$1,019	\$510	\$0	\$36,896	\$186,104	\$1,561,435
2033	\$130,035	\$5,702	\$19,334	\$155,071	\$34,986	\$391	\$1,019	\$533	\$0	\$36,928	\$191,999	\$1,612,862
2034	\$135,717	\$5,845	\$19,639	\$161,201	\$34,986	\$400	\$1,019	\$557	\$0	\$36,962	\$198,163	\$1,663,412
2035	\$141,656	\$5,991	\$19,952	\$167,600	\$34,986	\$410	\$1,019	\$582	\$0	\$36,997	\$204,597	\$1,713,118

Table D.1-8 Expansion Plan Economic Summary - Without Taylor Energy Center - Low Load and Energy Growth

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
GE LM6000 1X1 CC	73,300	18	05/01/14	91,679	7,256
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$50,823	\$288	\$0	\$51,111	\$0	\$0	\$0	\$0	\$0	\$0	\$51,111	\$51,111
2007	\$48,008	\$240	\$0	\$48,247	\$0	\$0	\$0	\$0	\$0	\$0	\$48,247	\$97,061
2008	\$46,323	\$267	\$0	\$46,590	\$0	\$0	\$0	\$0	\$0	\$0	\$46,590	\$139,319
2009	\$47,801	\$312	\$0	\$48,113	\$0	\$0	\$0	\$0	\$0	\$0	\$48,113	\$180,881
2010	\$48,828	\$342	\$0	\$49,170	\$0	\$0	\$0	\$0	\$0	\$0	\$49,170	\$221,334
2011	\$43,256	\$31,802	\$10,553	\$85,613	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$90,136	\$291,958
2012	\$44,612	\$32,910	\$12,057	\$89,579	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$96,317	\$363,831
2013	\$46,015	\$34,654	\$12,101	\$92,771	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$99,509	\$434,550
2014	\$51,982	\$33,641	\$13,519	\$99,143	\$11,609	\$0	\$0	\$0	\$0	\$11,609	\$110,752	\$509,511
2015	\$56,023	\$32,678	\$15,005	\$103,705	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$117,700	\$565,381
2016	\$58,543	\$34,613	\$15,213	\$108,369	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$122,364	\$660,502
2017	\$61,072	\$36,329	\$15,293	\$112,694	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$126,688	\$734,574
2018	\$92,208	\$4,774	\$14,798	\$111,780	\$24,747	\$0	\$0	\$0	\$0	\$24,747	\$136,528	\$810,598
2019	\$93,672	\$4,968	\$17,915	\$116,555	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$146,569	\$888,327
2020	\$97,991	\$5,104	\$18,126	\$121,221	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$151,235	\$964,711
2021	\$102,771	\$5,244	\$18,341	\$126,356	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$156,370	\$1,039,928
2022	\$107,574	\$5,387	\$18,563	\$131,524	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$161,538	\$1,113,930
2023	\$112,909	\$5,538	\$18,790	\$137,237	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$167,251	\$1,186,901
2024	\$118,507	\$5,689	\$19,022	\$143,219	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$173,233	\$1,258,883
2025	\$124,166	\$5,845	\$19,260	\$149,271	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$179,285	\$1,329,832
2026	\$129,729	\$5,991	\$19,505	\$155,224	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$185,238	\$1,399,647
2027	\$135,689	\$6,141	\$19,755	\$161,585	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$191,599	\$1,468,420
2028	\$141,865	\$6,294	\$20,012	\$168,171	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$198,185	\$1,536,169
2029	\$148,270	\$6,452	\$20,275	\$174,996	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$205,010	\$1,602,915
2030	\$155,116	\$6,613	\$20,544	\$182,273	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$212,287	\$1,668,738
2031	\$162,273	\$6,778	\$20,821	\$189,872	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$219,886	\$1,733,671
2032	\$169,754	\$6,948	\$21,104	\$197,806	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$227,820	\$1,797,743
2033	\$177,591	\$7,121	\$21,394	\$206,107	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$236,121	\$1,860,988
2034	\$185,784	\$7,299	\$21,692	\$214,775	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$244,789	\$1,923,432
2035	\$194,353	\$7,482	\$21,997	\$223,832	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$253,846	\$1,985,103

Table D.1-9 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - High Capital Costs

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	87,960	18	05/01/11	102,160	8,086
TEC		NA	05/01/12	195,569	14,187
GE LM6000 1X1 CC	87,960	18	05/01/18	121,436	9,612
GE LM6000 1X1 CC	87,960	18	05/01/18	121,436	9,612

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$5,428	\$0	\$0	\$0	\$0	\$5,428	\$92,084	\$296,030
2012	\$47,793	\$16,656	\$6,928	\$71,377	\$17,582	\$233	\$679	\$142	\$0	\$18,636	\$90,013	\$363,199
2013	\$51,643	\$8,865	\$7,778	\$68,286	\$22,272	\$238	\$1,019	\$221	\$0	\$23,751	\$92,037	\$428,608
2014	\$47,877	\$20,443	\$11,491	\$79,811	\$22,272	\$244	\$1,019	\$231	\$0	\$23,767	\$103,577	\$498,713
2015	\$46,502	\$26,945	\$11,702	\$85,149	\$22,272	\$250	\$1,019	\$241	\$0	\$23,783	\$108,933	\$568,932
2016	\$48,103	\$28,775	\$11,915	\$88,793	\$22,272	\$257	\$1,019	\$252	\$0	\$23,800	\$112,593	\$638,055
2017	\$49,153	\$30,647	\$12,116	\$91,916	\$22,272	\$263	\$1,019	\$263	\$0	\$23,818	\$115,735	\$705,722
2018	\$71,165	\$3,941	\$12,641	\$87,747	\$35,176	\$270	\$1,019	\$275	\$0	\$36,740	\$124,487	\$775,042
2019	\$73,029	\$4,106	\$15,763	\$92,898	\$41,496	\$276	\$1,019	\$288	\$0	\$43,079	\$135,977	\$847,153
2020	\$76,924	\$4,234	\$15,979	\$97,138	\$41,496	\$283	\$1,019	\$301	\$0	\$43,099	\$140,237	\$917,982
2021	\$80,453	\$4,367	\$16,201	\$101,020	\$41,496	\$290	\$1,019	\$314	\$0	\$43,119	\$144,140	\$987,316
2022	\$83,711	\$4,503	\$16,428	\$104,642	\$41,496	\$298	\$1,019	\$328	\$0	\$43,141	\$147,783	\$1,055,017
2023	\$87,983	\$4,644	\$16,661	\$109,288	\$41,496	\$305	\$1,019	\$343	\$0	\$43,163	\$152,451	\$1,121,531
2024	\$93,679	\$4,789	\$16,899	\$115,367	\$41,496	\$313	\$1,019	\$359	\$0	\$43,186	\$158,553	\$1,187,413
2025	\$98,417	\$4,938	\$17,144	\$120,499	\$41,496	\$321	\$1,019	\$375	\$0	\$43,210	\$163,709	\$1,252,198
2026	\$102,555	\$5,061	\$17,395	\$125,011	\$41,496	\$329	\$1,019	\$392	\$0	\$43,235	\$168,246	\$1,315,608
2027	\$106,352	\$5,188	\$17,652	\$129,192	\$41,496	\$337	\$1,019	\$409	\$0	\$43,261	\$172,453	\$1,377,509
2028	\$111,213	\$5,318	\$17,915	\$134,445	\$41,496	\$345	\$1,019	\$428	\$0	\$43,288	\$177,733	\$1,438,267
2029	\$116,031	\$5,451	\$18,185	\$139,666	\$41,496	\$354	\$1,019	\$447	\$0	\$43,316	\$182,982	\$1,497,840
2030	\$121,050	\$5,587	\$18,462	\$145,099	\$41,496	\$363	\$1,019	\$467	\$0	\$43,344	\$188,443	\$1,556,270
2031	\$126,298	\$5,726	\$18,745	\$150,770	\$41,496	\$372	\$1,019	\$488	\$0	\$43,375	\$194,144	\$1,613,602
2032	\$131,796	\$5,870	\$19,036	\$156,701	\$41,496	\$381	\$1,019	\$510	\$0	\$43,406	\$200,107	\$1,669,880
2033	\$137,552	\$6,016	\$19,334	\$162,902	\$41,496	\$391	\$1,019	\$533	\$0	\$43,438	\$206,341	\$1,725,148
2034	\$143,580	\$6,167	\$19,639	\$169,386	\$41,496	\$400	\$1,019	\$557	\$0	\$43,472	\$212,858	\$1,779,447
2035	\$149,882	\$6,321	\$19,952	\$176,155	\$41,496	\$410	\$1,019	\$582	\$0	\$43,507	\$219,662	\$1,832,813

Table D.1-10 Expansion Plan Economic Summary - Without Taylor Energy Center - High Capital Costs

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	87,960	18	05/01/11	102,160	8,086
GE LM6000 1X1 CC	87,960	18	05/01/14	110,015	8,708
GE LM6000 1X1 CC	87,960	18	05/01/18	121,436	9,612
GE LM6000 1X1 CC	87,960	18	05/01/18	121,436	9,612

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$5,428	\$0	\$0	\$0	\$0	\$5,428	\$92,084	\$296,030
2012	\$45,382	\$34,305	\$12,396	\$92,083	\$8,086	\$0	\$0	\$0	\$0	\$8,086	\$100,168	\$370,777
2013	\$47,412	\$36,436	\$12,554	\$96,402	\$8,086	\$0	\$0	\$0	\$0	\$8,086	\$104,488	\$445,035
2014	\$53,222	\$35,596	\$13,972	\$102,789	\$13,931	\$0	\$0	\$0	\$0	\$13,931	\$116,720	\$524,036
2015	\$57,502	\$35,000	\$15,570	\$108,072	\$16,794	\$0	\$0	\$0	\$0	\$16,794	\$124,866	\$604,525
2016	\$60,030	\$37,221	\$15,778	\$113,029	\$16,794	\$0	\$0	\$0	\$0	\$16,794	\$129,823	\$684,225
2017	\$62,774	\$39,492	\$15,969	\$118,236	\$16,794	\$0	\$0	\$0	\$0	\$16,794	\$135,029	\$763,174
2018	\$95,457	\$4,884	\$14,798	\$115,140	\$29,697	\$0	\$0	\$0	\$0	\$29,697	\$144,837	\$843,824
2019	\$96,302	\$5,110	\$17,915	\$119,327	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$155,344	\$926,206
2020	\$101,075	\$5,264	\$18,126	\$124,465	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$160,482	\$1,007,261
2021	\$106,288	\$5,423	\$18,341	\$130,052	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$166,069	\$1,087,143
2022	\$111,660	\$5,584	\$18,563	\$135,806	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$171,823	\$1,165,857
2023	\$117,349	\$5,754	\$18,790	\$141,892	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$177,909	\$1,243,478
2024	\$123,513	\$5,926	\$18,461	\$148,461	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$184,478	\$1,320,132
2025	\$129,751	\$6,104	\$19,260	\$155,115	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$191,132	\$1,395,770
2026	\$135,564	\$6,256	\$19,505	\$161,325	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$197,342	\$1,470,146
2027	\$141,794	\$6,413	\$19,755	\$167,962	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$203,979	\$1,543,362
2028	\$148,249	\$6,573	\$20,012	\$174,834	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$210,851	\$1,615,442
2029	\$154,941	\$6,737	\$20,275	\$181,953	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$217,969	\$1,686,406
2030	\$162,095	\$6,906	\$20,544	\$189,545	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$225,562	\$1,756,346
2031	\$169,575	\$7,079	\$20,821	\$197,474	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$233,491	\$1,825,296
2032	\$177,396	\$7,255	\$21,104	\$205,756	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$241,773	\$1,893,293
2033	\$185,586	\$7,437	\$21,394	\$214,417	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$250,434	\$1,960,371
2034	\$194,152	\$7,623	\$21,692	\$223,466	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$259,483	\$2,026,563
2035	\$203,107	\$7,813	\$21,997	\$232,918	\$36,017	\$0	\$0	\$0	\$0	\$36,017	\$268,935	\$2,091,900

Table D.1-11 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - Low Capital Costs

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	58,640	18	05/01/11	68,106	5,391
TEC	NA	NA	05/01/12	130,379	9,458
GE LM6000 1X1 CC	58,640	18	05/01/18	80,957	6,408
GE LM6000 1X1 CC	58,640	18	05/01/18	80,957	6,408

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$3,618	\$0	\$0	\$0	\$0	\$3,618	\$90,275	\$294,613
2012	\$47,793	\$16,656	\$6,928	\$71,377	\$11,722	\$233	\$679	\$142	\$0	\$12,775	\$84,152	\$357,408
2013	\$51,643	\$8,865	\$7,778	\$68,286	\$14,848	\$238	\$1,019	\$221	\$0	\$16,327	\$84,613	\$417,541
2014	\$47,877	\$20,443	\$11,491	\$79,811	\$14,848	\$244	\$1,019	\$231	\$0	\$16,343	\$96,153	\$482,621
2015	\$46,502	\$26,945	\$11,702	\$85,149	\$14,848	\$250	\$1,019	\$241	\$0	\$16,359	\$101,509	\$548,054
2016	\$48,103	\$28,775	\$11,915	\$88,793	\$14,848	\$257	\$1,019	\$252	\$0	\$16,376	\$105,169	\$612,619
2017	\$49,153	\$30,647	\$12,116	\$91,916	\$14,848	\$263	\$1,019	\$263	\$0	\$16,394	\$108,310	\$675,946
2018	\$71,165	\$3,941	\$12,641	\$87,747	\$23,451	\$270	\$1,019	\$275	\$0	\$25,015	\$112,762	\$738,736
2019	\$73,029	\$4,106	\$15,763	\$92,898	\$27,664	\$276	\$1,019	\$288	\$0	\$29,247	\$122,145	\$803,512
2020	\$76,924	\$4,234	\$15,979	\$97,138	\$27,664	\$283	\$1,019	\$301	\$0	\$29,267	\$126,405	\$867,355
2021	\$80,453	\$4,367	\$16,201	\$101,020	\$27,664	\$290	\$1,019	\$314	\$0	\$29,288	\$130,308	\$930,035
2022	\$83,711	\$4,503	\$16,428	\$104,642	\$27,664	\$298	\$1,019	\$328	\$0	\$29,309	\$133,951	\$991,400
2023	\$87,983	\$4,644	\$16,661	\$109,288	\$27,664	\$305	\$1,019	\$343	\$0	\$29,331	\$138,619	\$1,051,879
2024	\$93,679	\$4,789	\$16,899	\$115,367	\$27,664	\$313	\$1,019	\$359	\$0	\$29,354	\$144,721	\$1,112,014
2025	\$98,417	\$4,938	\$17,144	\$120,499	\$27,664	\$321	\$1,019	\$375	\$0	\$29,378	\$149,877	\$1,171,325
2026	\$102,555	\$5,061	\$17,395	\$125,011	\$27,664	\$329	\$1,019	\$392	\$0	\$29,403	\$154,414	\$1,229,522
2027	\$106,352	\$5,188	\$17,652	\$129,192	\$27,664	\$337	\$1,019	\$409	\$0	\$29,429	\$158,621	\$1,286,458
2028	\$111,213	\$5,318	\$17,915	\$134,445	\$27,664	\$345	\$1,019	\$428	\$0	\$29,456	\$163,901	\$1,342,487
2029	\$116,031	\$5,451	\$18,185	\$139,666	\$27,664	\$354	\$1,019	\$447	\$0	\$29,484	\$169,150	\$1,397,558
2030	\$121,050	\$5,587	\$18,462	\$145,099	\$27,664	\$363	\$1,019	\$467	\$0	\$29,513	\$174,611	\$1,451,699
2031	\$126,298	\$5,726	\$18,745	\$150,770	\$27,664	\$372	\$1,019	\$488	\$0	\$29,543	\$180,312	\$1,504,946
2032	\$131,796	\$5,870	\$19,036	\$156,701	\$27,664	\$381	\$1,019	\$510	\$0	\$29,574	\$186,275	\$1,557,334
2033	\$137,552	\$6,016	\$19,334	\$162,902	\$27,664	\$391	\$1,019	\$533	\$0	\$29,606	\$192,509	\$1,608,897
2034	\$143,580	\$6,167	\$19,639	\$169,386	\$27,664	\$400	\$1,019	\$557	\$0	\$29,640	\$199,026	\$1,659,667
2035	\$149,882	\$6,321	\$19,952	\$176,155	\$27,664	\$410	\$1,019	\$582	\$0	\$29,675	\$205,831	\$1,709,673

Table D.1-12 Expansion Plan Economic Summary - Without Taylor Energy Center - Low Capital Costs

Case Description		Economic Parameters				Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%			
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%			
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%			
				Fixed Charge Rate Coal: (30 year)	7.25%			

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	58,640	18	05/01/11	68,106	5,391
GE LM6000 1X1 CC	58,640	18	05/01/14	73,343	5,805
GE LM6000 1X1 CC	58,640	18	05/01/18	80,957	6,408
GE LM6000 1X1 CC	58,640	18	05/01/18	80,957	6,408

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$3,618	\$0	\$0	\$0	\$0	\$3,618	\$90,275	\$294,613
2012	\$45,382	\$34,305	\$12,396	\$92,083	\$5,391	\$0	\$0	\$0	\$0	\$5,391	\$97,473	\$367,348
2013	\$47,412	\$36,436	\$12,554	\$96,402	\$5,391	\$0	\$0	\$0	\$0	\$5,391	\$101,792	\$439,690
2014	\$53,222	\$35,596	\$13,972	\$102,789	\$9,287	\$0	\$0	\$0	\$0	\$9,287	\$112,076	\$515,548
2015	\$57,502	\$35,000	\$15,570	\$108,072	\$11,196	\$0	\$0	\$0	\$0	\$11,196	\$119,268	\$592,429
2016	\$60,030	\$37,221	\$15,778	\$113,029	\$11,196	\$0	\$0	\$0	\$0	\$11,196	\$124,225	\$668,693
2017	\$62,774	\$39,492	\$15,969	\$118,236	\$11,196	\$0	\$0	\$0	\$0	\$11,196	\$129,432	\$744,368
2018	\$95,457	\$4,884	\$14,798	\$115,140	\$19,798	\$0	\$0	\$0	\$0	\$19,798	\$134,938	\$819,507
2019	\$96,302	\$5,110	\$17,915	\$119,327	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$143,338	\$895,522
2020	\$101,075	\$5,264	\$18,126	\$124,465	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$148,476	\$970,513
2021	\$106,288	\$5,423	\$18,341	\$130,052	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$154,063	\$1,044,620
2022	\$111,860	\$5,584	\$18,563	\$135,806	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$159,818	\$1,117,834
2023	\$117,349	\$5,754	\$18,790	\$141,892	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$165,903	\$1,190,217
2024	\$123,513	\$5,926	\$19,022	\$148,461	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$172,472	\$1,261,883
2025	\$129,751	\$6,104	\$19,260	\$155,115	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$179,127	\$1,332,769
2026	\$135,564	\$6,256	\$19,505	\$161,325	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$185,337	\$1,402,621
2027	\$141,794	\$6,413	\$19,755	\$167,962	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$191,973	\$1,471,528
2028	\$148,249	\$6,573	\$20,012	\$174,834	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$198,845	\$1,539,503
2029	\$154,941	\$6,737	\$20,275	\$181,953	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$205,964	\$1,606,559
2030	\$162,095	\$6,906	\$20,544	\$189,545	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$213,556	\$1,672,776
2031	\$169,575	\$7,079	\$20,821	\$197,474	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$221,485	\$1,738,181
2032	\$177,396	\$7,255	\$21,104	\$205,756	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$229,767	\$1,802,801
2033	\$185,586	\$7,437	\$21,394	\$214,417	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$238,428	\$1,866,664
2034	\$194,152	\$7,623	\$21,692	\$223,468	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$247,478	\$1,929,794
2035	\$203,107	\$7,813	\$21,997	\$232,918	\$24,011	\$0	\$0	\$0	\$0	\$24,011	\$256,929	\$1,992,214

Table D.1-13 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - High Allowance Prices

Case Description		Economic Parameters			Financial Parameters	
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%	
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%	
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%	
				Fixed Charge Rate Coal: (30 year)	7.25%	

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	162,974	11,822
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost			Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M Variable (\$1,000)	O&M Fixed (\$1,000)	Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,191	\$323	\$0	\$48,514	\$0	\$0	\$0	\$0	\$0	\$0	\$48,514	\$183,161
2010	\$49,146	\$353	\$0	\$49,499	\$0	\$0	\$0	\$0	\$0	\$0	\$49,499	\$223,884
2011	\$42,761	\$33,016	\$10,892	\$86,669	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,192	\$295,335
2012	\$47,954	\$16,656	\$6,928	\$71,538	\$14,652	\$233	\$679	\$142	\$0	\$15,705	\$87,243	\$360,437
2013	\$51,876	\$8,866	\$7,778	\$68,520	\$18,560	\$238	\$1,019	\$221	\$0	\$20,039	\$88,559	\$423,374
2014	\$48,115	\$20,443	\$11,491	\$80,049	\$18,560	\$244	\$1,019	\$231	\$0	\$20,055	\$100,104	\$491,128
2015	\$46,882	\$26,947	\$11,702	\$85,530	\$18,560	\$250	\$1,019	\$241	\$0	\$20,071	\$105,601	\$559,200
2016	\$48,500	\$28,776	\$11,915	\$89,191	\$18,560	\$257	\$1,019	\$252	\$0	\$20,088	\$109,279	\$626,288
2017	\$49,508	\$30,649	\$12,116	\$92,273	\$18,560	\$263	\$1,019	\$263	\$0	\$20,106	\$112,379	\$691,993
2018	\$71,594	\$3,941	\$12,641	\$88,177	\$29,313	\$270	\$1,019	\$275	\$0	\$30,877	\$119,054	\$758,287
2019	\$73,544	\$4,106	\$15,763	\$93,413	\$34,580	\$276	\$1,019	\$288	\$0	\$36,163	\$129,576	\$827,004
2020	\$77,534	\$4,234	\$15,979	\$97,747	\$34,580	\$283	\$1,019	\$301	\$0	\$36,183	\$133,930	\$894,648
2021	\$81,054	\$4,367	\$16,201	\$101,622	\$34,580	\$290	\$1,019	\$314	\$0	\$36,204	\$137,825	\$960,944
2022	\$84,296	\$4,503	\$16,428	\$105,227	\$34,580	\$298	\$1,019	\$328	\$0	\$36,225	\$141,452	\$1,025,745
2023	\$88,750	\$4,644	\$16,661	\$110,054	\$34,580	\$305	\$1,019	\$343	\$0	\$36,247	\$146,301	\$1,089,576
2024	\$94,750	\$4,789	\$16,899	\$116,438	\$34,580	\$313	\$1,019	\$359	\$0	\$36,270	\$152,708	\$1,153,029
2025	\$99,622	\$4,938	\$17,144	\$121,704	\$34,580	\$321	\$1,019	\$375	\$0	\$36,294	\$157,998	\$1,215,554
2026	\$103,855	\$5,061	\$17,395	\$126,311	\$34,580	\$329	\$1,019	\$392	\$0	\$36,319	\$162,630	\$1,276,848
2027	\$107,753	\$5,188	\$17,652	\$130,592	\$34,580	\$337	\$1,019	\$409	\$0	\$36,345	\$166,937	\$1,336,768
2028	\$112,730	\$5,318	\$17,915	\$135,963	\$34,580	\$345	\$1,019	\$428	\$0	\$36,372	\$172,334	\$1,395,681
2029	\$117,853	\$5,451	\$18,185	\$141,288	\$34,580	\$354	\$1,019	\$447	\$0	\$36,400	\$177,688	\$1,453,531
2030	\$122,784	\$5,587	\$18,462	\$146,832	\$34,580	\$363	\$1,019	\$467	\$0	\$36,429	\$183,261	\$1,510,354
2031	\$128,148	\$5,726	\$18,745	\$152,620	\$34,580	\$372	\$1,019	\$488	\$0	\$36,459	\$189,078	\$1,566,189
2032	\$133,774	\$5,870	\$19,036	\$158,680	\$34,580	\$381	\$1,019	\$510	\$0	\$36,490	\$195,170	\$1,621,079
2033	\$139,661	\$6,016	\$19,334	\$165,012	\$34,580	\$391	\$1,019	\$533	\$0	\$36,522	\$201,534	\$1,675,060
2034	\$145,835	\$6,167	\$19,639	\$171,641	\$34,580	\$400	\$1,019	\$557	\$0	\$36,556	\$208,197	\$1,728,169
2035	\$152,306	\$6,321	\$19,952	\$178,579	\$34,580	\$410	\$1,019	\$582	\$0	\$36,591	\$215,171	\$1,780,444

Table D.1-14 Expansion Plan Economic Summary - Without Taylor Energy Center - High Allowance Prices

Case Description		Economic Parameters			Financial Parameters	
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%	
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%	
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%	
				Fixed Charge Rate Coal: (30 year)	7.25%	

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
GE LM6000 1X1 CC	73,300	18	05/01/14	91,679	7,256
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,191	\$323	\$0	\$48,514	\$0	\$0	\$0	\$0	\$0	\$0	\$48,514	\$183,161
2010	\$49,146	\$353	\$0	\$49,499	\$0	\$0	\$0	\$0	\$0	\$0	\$49,499	\$223,884
2011	\$42,761	\$33,016	\$10,892	\$86,669	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,192	\$295,335
2012	\$45,400	\$34,305	\$12,396	\$92,102	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$98,840	\$369,091
2013	\$47,426	\$36,437	\$12,554	\$96,416	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$103,155	\$442,401
2014	\$53,242	\$35,597	\$13,972	\$102,810	\$11,609	\$0	\$0	\$0	\$0	\$11,609	\$114,419	\$519,845
2015	\$57,546	\$35,001	\$15,570	\$108,117	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$122,111	\$598,559
2016	\$60,074	\$37,221	\$15,778	\$113,074	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$127,068	\$676,568
2017	\$62,812	\$39,493	\$15,969	\$118,274	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$132,268	\$753,902
2018	\$95,522	\$4,884	\$14,798	\$115,204	\$24,747	\$0	\$0	\$0	\$0	\$24,747	\$139,952	\$831,832
2019	\$96,379	\$5,110	\$17,915	\$119,404	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$149,418	\$911,072
2020	\$101,174	\$5,264	\$18,126	\$124,564	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$154,578	\$989,144
2021	\$106,376	\$5,423	\$18,341	\$130,140	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$160,154	\$1,066,181
2022	\$111,737	\$5,584	\$18,563	\$135,883	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$165,897	\$1,142,180
2023	\$117,461	\$5,754	\$18,790	\$142,004	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$172,018	\$1,217,231
2024	\$123,680	\$5,926	\$19,022	\$148,628	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$178,643	\$1,291,461
2025	\$129,932	\$6,104	\$19,260	\$155,296	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$185,310	\$1,364,794
2026	\$135,768	\$6,256	\$19,505	\$161,529	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$191,543	\$1,436,985
2027	\$142,009	\$6,413	\$19,755	\$168,177	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$198,191	\$1,508,124
2028	\$148,486	\$6,573	\$20,012	\$175,070	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$205,084	\$1,578,232
2029	\$155,188	\$6,737	\$20,275	\$182,200	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$212,215	\$1,647,323
2030	\$162,353	\$6,906	\$20,544	\$189,803	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$219,817	\$1,715,481
2031	\$169,855	\$7,079	\$20,821	\$197,755	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$227,769	\$1,782,742
2032	\$177,701	\$7,255	\$21,104	\$206,061	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$236,075	\$1,849,136
2033	\$185,901	\$7,437	\$21,394	\$214,732	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$244,747	\$1,914,691
2034	\$194,489	\$7,623	\$21,692	\$223,803	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$253,817	\$1,979,438
2035	\$203,477	\$7,813	\$21,997	\$233,287	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$263,301	\$2,043,406

Table D.1-15 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - Low Allowance Prices

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	162,974	11,822
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)			
		Variable (\$1,000)	Fixed (\$1,000)										
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868	
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415	
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253	
2009	\$48,187	\$323	\$0	\$48,510	\$0	\$0	\$0	\$0	\$0	\$0	\$48,510	\$183,158	
2010	\$49,140	\$353	\$0	\$49,493	\$0	\$0	\$0	\$0	\$0	\$0	\$49,493	\$223,876	
2011	\$42,733	\$33,015	\$10,892	\$86,640	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,163	\$295,304	
2012	\$47,637	\$16,656	\$6,928	\$71,221	\$14,652	\$233	\$679	\$142	\$0	\$15,705	\$86,926	\$360,170	
2013	\$51,408	\$8,865	\$7,778	\$68,051	\$18,560	\$238	\$1,019	\$221	\$0	\$20,039	\$88,089	\$422,773	
2014	\$47,636	\$20,442	\$11,491	\$79,568	\$18,560	\$244	\$1,019	\$231	\$0	\$20,055	\$99,623	\$490,202	
2015	\$46,127	\$26,944	\$11,702	\$84,773	\$18,560	\$250	\$1,019	\$241	\$0	\$20,071	\$104,844	\$557,786	
2016	\$47,712	\$28,773	\$11,915	\$88,400	\$18,560	\$257	\$1,019	\$252	\$0	\$20,088	\$108,489	\$624,388	
2017	\$48,789	\$30,646	\$12,116	\$91,551	\$18,560	\$263	\$1,019	\$263	\$0	\$20,106	\$111,657	\$689,672	
2018	\$70,746	\$3,941	\$12,641	\$87,329	\$29,313	\$270	\$1,019	\$275	\$0	\$30,877	\$118,206	\$755,494	
2019	\$72,508	\$4,106	\$15,763	\$92,377	\$34,580	\$276	\$1,019	\$288	\$0	\$36,163	\$128,540	\$823,661	
2020	\$76,318	\$4,234	\$15,979	\$96,531	\$34,580	\$283	\$1,019	\$301	\$0	\$36,183	\$132,714	\$890,691	
2021	\$79,859	\$4,367	\$16,201	\$100,427	\$34,580	\$290	\$1,019	\$314	\$0	\$36,204	\$136,630	\$956,413	
2022	\$83,125	\$4,503	\$16,428	\$104,057	\$34,580	\$298	\$1,019	\$328	\$0	\$36,225	\$140,282	\$1,020,677	
2023	\$87,217	\$4,644	\$16,661	\$108,521	\$34,580	\$305	\$1,019	\$343	\$0	\$36,247	\$144,769	\$1,083,839	
2024	\$92,614	\$4,789	\$16,899	\$114,302	\$34,580	\$313	\$1,019	\$359	\$0	\$36,270	\$150,572	\$1,146,405	
2025	\$97,205	\$4,938	\$17,144	\$119,287	\$34,580	\$321	\$1,019	\$375	\$0	\$36,294	\$155,581	\$1,207,974	
2026	\$101,258	\$5,061	\$17,395	\$123,715	\$34,580	\$329	\$1,019	\$392	\$0	\$36,319	\$160,034	\$1,268,289	
2027	\$104,950	\$5,188	\$17,652	\$127,790	\$34,580	\$337	\$1,019	\$409	\$0	\$36,345	\$164,135	\$1,327,204	
2028	\$109,705	\$5,318	\$17,915	\$132,937	\$34,580	\$345	\$1,019	\$428	\$0	\$36,372	\$169,309	\$1,385,082	
2029	\$114,416	\$5,451	\$18,185	\$138,051	\$34,580	\$354	\$1,019	\$447	\$0	\$36,400	\$174,451	\$1,441,878	
2030	\$119,312	\$5,587	\$18,462	\$143,361	\$34,580	\$363	\$1,019	\$467	\$0	\$36,429	\$179,789	\$1,497,625	
2031	\$124,439	\$5,726	\$18,745	\$148,911	\$34,580	\$372	\$1,019	\$488	\$0	\$36,459	\$185,369	\$1,552,365	
2032	\$129,801	\$5,870	\$19,036	\$154,706	\$34,580	\$381	\$1,019	\$510	\$0	\$36,490	\$191,196	\$1,606,137	
2033	\$135,413	\$6,016	\$19,334	\$160,763	\$34,580	\$391	\$1,019	\$533	\$0	\$36,522	\$197,285	\$1,658,980	
2034	\$141,283	\$6,167	\$19,639	\$167,089	\$34,580	\$400	\$1,019	\$557	\$0	\$36,556	\$203,645	\$1,710,928	
2035	\$147,436	\$6,321	\$19,952	\$173,710	\$34,580	\$410	\$1,019	\$582	\$0	\$36,591	\$210,301	\$1,762,020	

Table D.1-16 Expansion Plan Economic Summary - Without Taylor Energy Center - Low Allowance Prices

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
GE LM6000 1X1 CC	73,300	18	05/01/14	91,679	7,256
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)			
		Variable (\$1,000)	Fixed (\$1,000)										
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868	
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415	
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253	
2009	\$48,187	\$323	\$0	\$48,510	\$0	\$0	\$0	\$0	\$0	\$0	\$48,510	\$183,158	
2010	\$49,140	\$353	\$0	\$49,493	\$0	\$0	\$0	\$0	\$0	\$0	\$49,493	\$223,876	
2011	\$42,733	\$33,015	\$10,892	\$86,640	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,163	\$295,304	
2012	\$45,368	\$34,305	\$12,396	\$92,069	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$98,807	\$369,036	
2013	\$47,392	\$36,436	\$12,554	\$96,382	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$103,120	\$442,321	
2014	\$53,195	\$35,594	\$13,972	\$102,761	\$11,609	\$0	\$0	\$0	\$0	\$11,609	\$114,370	\$519,731	
2015	\$57,458	\$35,000	\$15,570	\$108,028	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$122,023	\$598,388	
2016	\$59,987	\$37,220	\$15,778	\$112,985	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$126,980	\$676,343	
2017	\$62,730	\$39,492	\$15,969	\$118,191	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$132,186	\$753,629	
2018	\$95,403	\$4,884	\$14,798	\$115,086	\$24,747	\$0	\$0	\$0	\$0	\$24,747	\$139,833	\$831,493	
2019	\$96,226	\$5,110	\$17,915	\$119,251	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$149,265	\$910,652	
2020	\$100,987	\$5,264	\$18,126	\$124,377	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$154,391	\$988,630	
2021	\$106,199	\$5,423	\$18,341	\$129,963	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$159,977	\$1,065,582	
2022	\$111,571	\$5,584	\$18,563	\$135,717	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$165,731	\$1,141,505	
2023	\$117,238	\$5,754	\$18,790	\$141,781	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$171,795	\$1,216,459	
2024	\$123,344	\$5,926	\$19,022	\$148,292	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$178,306	\$1,290,549	
2025	\$129,560	\$6,104	\$19,260	\$154,925	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$184,939	\$1,363,735	
2026	\$135,373	\$6,256	\$19,505	\$161,134	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$191,148	\$1,435,777	
2027	\$141,580	\$6,413	\$19,755	\$167,748	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$197,762	\$1,506,762	
2028	\$148,024	\$6,573	\$20,012	\$174,609	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$204,623	\$1,576,713	
2029	\$154,705	\$6,737	\$20,275	\$181,717	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$211,731	\$1,645,646	
2030	\$161,824	\$6,906	\$20,544	\$189,274	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$219,288	\$1,713,640	
2031	\$169,293	\$7,079	\$20,821	\$197,192	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$227,206	\$1,780,735	
2032	\$177,087	\$7,255	\$21,104	\$205,446	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$235,461	\$1,846,956	
2033	\$185,261	\$7,437	\$21,394	\$214,092	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$244,106	\$1,912,339	
2034	\$193,801	\$7,623	\$21,692	\$223,116	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$253,130	\$1,976,911	
2035	\$202,747	\$7,813	\$21,997	\$232,557	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$262,571	\$2,040,702	

Table D.1-17 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - Regulated - CO₂

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	162,826	11,811
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)			
		Variable (\$1,000)	Fixed (\$1,000)										
2006	\$51,202	\$307	\$0	\$51,509	\$0	\$0	\$0	\$0	\$0	\$0	\$51,509	\$51,509	
2007	\$47,706	\$268	\$0	\$47,975	\$0	\$0	\$0	\$0	\$0	\$0	\$47,975	\$97,199	
2008	\$46,675	\$288	\$0	\$46,962	\$0	\$0	\$0	\$0	\$0	\$0	\$46,962	\$139,795	
2009	\$47,925	\$329	\$0	\$48,254	\$0	\$0	\$0	\$0	\$0	\$0	\$48,254	\$181,479	
2010	\$48,880	\$359	\$0	\$49,239	\$0	\$0	\$0	\$0	\$0	\$0	\$49,239	\$221,988	
2011	\$41,736	\$32,970	\$10,892	\$85,597	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$90,120	\$292,599	
2012	\$49,229	\$16,858	\$6,928	\$72,815	\$14,645	\$233	\$679	\$142	\$0	\$15,698	\$88,514	\$358,650	
2013	\$57,379	\$8,861	\$7,778	\$74,017	\$18,550	\$238	\$1,019	\$221	\$0	\$20,028	\$94,045	\$425,486	
2014	\$56,182	\$20,519	\$11,491	\$88,192	\$18,550	\$244	\$1,019	\$231	\$0	\$20,044	\$108,236	\$498,744	
2015	\$53,743	\$27,052	\$11,702	\$92,497	\$18,550	\$250	\$1,019	\$241	\$0	\$20,060	\$112,557	\$571,300	
2016	\$55,558	\$28,886	\$11,915	\$96,359	\$18,550	\$257	\$1,019	\$252	\$0	\$20,078	\$116,437	\$642,782	
2017	\$55,769	\$30,721	\$12,116	\$98,606	\$18,550	\$263	\$1,019	\$263	\$0	\$20,095	\$118,701	\$712,184	
2018	\$70,895	\$3,941	\$12,641	\$87,477	\$29,302	\$270	\$1,019	\$275	\$0	\$30,867	\$118,344	\$778,082	
2019	\$73,706	\$4,106	\$15,763	\$93,575	\$34,569	\$276	\$1,019	\$288	\$0	\$36,152	\$129,727	\$846,879	
2020	\$76,022	\$4,234	\$15,979	\$96,236	\$34,569	\$283	\$1,019	\$301	\$0	\$36,172	\$132,408	\$913,755	
2021	\$80,163	\$4,367	\$16,201	\$100,731	\$34,569	\$290	\$1,019	\$314	\$0	\$36,193	\$136,924	\$979,617	
2022	\$88,173	\$4,503	\$16,428	\$109,104	\$34,569	\$298	\$1,019	\$328	\$0	\$36,214	\$145,318	\$1,046,189	
2023	\$94,319	\$4,644	\$16,661	\$115,624	\$34,569	\$305	\$1,019	\$343	\$0	\$36,236	\$151,860	\$1,112,445	
2024	\$97,075	\$4,789	\$16,899	\$118,763	\$34,569	\$313	\$1,019	\$359	\$0	\$36,259	\$155,023	\$1,176,861	
2025	\$102,402	\$4,938	\$17,144	\$124,484	\$34,569	\$321	\$1,019	\$375	\$0	\$36,283	\$160,767	\$1,240,482	
2026	\$106,432	\$5,061	\$17,395	\$128,888	\$34,569	\$329	\$1,019	\$392	\$0	\$36,308	\$165,196	\$1,302,742	
2027	\$111,160	\$5,188	\$17,652	\$134,000	\$34,569	\$337	\$1,019	\$409	\$0	\$36,334	\$170,334	\$1,363,883	
2028	\$116,977	\$5,318	\$17,915	\$140,210	\$34,569	\$345	\$1,019	\$428	\$0	\$36,361	\$175,571	\$1,424,243	
2029	\$122,786	\$5,451	\$18,185	\$146,421	\$34,569	\$354	\$1,019	\$447	\$0	\$36,389	\$182,810	\$1,483,761	
2030	\$128,849	\$5,587	\$18,462	\$152,897	\$34,569	\$363	\$1,019	\$467	\$0	\$36,418	\$189,315	\$1,542,462	
2031	\$135,247	\$5,726	\$18,745	\$159,718	\$34,569	\$372	\$1,019	\$488	\$0	\$36,448	\$196,166	\$1,600,390	
2032	\$142,004	\$5,870	\$19,036	\$166,910	\$34,569	\$381	\$1,019	\$510	\$0	\$36,479	\$203,389	\$1,657,591	
2033	\$149,150	\$6,016	\$19,334	\$174,501	\$34,569	\$391	\$1,019	\$533	\$0	\$36,512	\$211,012	\$1,714,110	
2034	\$156,694	\$6,167	\$19,639	\$182,500	\$34,569	\$400	\$1,019	\$557	\$0	\$36,545	\$219,046	\$1,769,988	
2035	\$164,690	\$6,321	\$19,952	\$190,963	\$34,569	\$410	\$1,019	\$582	\$0	\$36,580	\$227,543	\$1,825,268	

Table D.1-18 Expansion Plan Economic Summary - Without Taylor Energy Center - Regulated - CO₂

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
GE LM6000 1X1 CC	73,300	18	05/01/14	91,679	7,256
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)			
		Variable (\$1,000)	Fixed (\$1,000)										
2006	\$51,202	\$307	\$0	\$51,509	\$0	\$0	\$0	\$0	\$0	\$0	\$51,509	\$51,509	
2007	\$47,706	\$268	\$0	\$47,975	\$0	\$0	\$0	\$0	\$0	\$0	\$47,975	\$97,199	
2008	\$46,675	\$288	\$0	\$46,962	\$0	\$0	\$0	\$0	\$0	\$0	\$46,962	\$139,795	
2009	\$47,925	\$329	\$0	\$48,254	\$0	\$0	\$0	\$0	\$0	\$0	\$48,254	\$181,479	
2010	\$48,880	\$359	\$0	\$49,239	\$0	\$0	\$0	\$0	\$0	\$0	\$49,239	\$221,988	
2011	\$41,736	\$32,970	\$10,892	\$85,597	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$90,120	\$292,599	
2012	\$45,529	\$34,306	\$12,396	\$92,231	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$98,970	\$366,452	
2013	\$49,030	\$36,493	\$12,554	\$98,077	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$104,815	\$440,942	
2014	\$56,563	\$35,766	\$13,972	\$106,301	\$11,609	\$0	\$0	\$0	\$0	\$11,609	\$117,910	\$520,748	
2015	\$61,061	\$34,989	\$15,570	\$111,620	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$125,615	\$601,721	
2016	\$63,802	\$37,210	\$15,778	\$116,790	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$130,784	\$682,011	
2017	\$65,608	\$39,575	\$15,969	\$121,152	\$13,995	\$0	\$0	\$0	\$0	\$13,995	\$135,147	\$761,029	
2018	\$93,877	\$4,884	\$14,798	\$113,559	\$24,747	\$0	\$0	\$0	\$0	\$24,747	\$138,307	\$838,043	
2019	\$95,602	\$5,110	\$17,915	\$118,628	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$148,642	\$916,871	
2020	\$99,449	\$5,264	\$18,126	\$122,839	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$152,853	\$994,072	
2021	\$104,930	\$5,423	\$18,341	\$128,694	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$158,708	\$1,070,414	
2022	\$113,396	\$5,584	\$18,563	\$137,542	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$167,556	\$1,147,173	
2023	\$120,660	\$5,754	\$18,790	\$145,203	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$175,217	\$1,223,620	
2024	\$125,002	\$5,926	\$19,022	\$149,950	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$179,964	\$1,298,398	
2025	\$132,025	\$6,104	\$19,260	\$157,389	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$187,403	\$1,372,560	
2026	\$138,142	\$6,256	\$19,505	\$163,903	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$193,917	\$1,445,646	
2027	\$144,969	\$6,413	\$19,755	\$171,137	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$201,151	\$1,517,847	
2028	\$152,048	\$6,573	\$20,012	\$178,633	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$208,647	\$1,589,173	
2029	\$159,393	\$6,737	\$20,275	\$186,405	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$216,419	\$1,659,633	
2030	\$167,222	\$6,906	\$20,544	\$194,672	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$224,686	\$1,729,301	
2031	\$175,456	\$7,078	\$20,821	\$203,355	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$233,370	\$1,798,216	
2032	\$184,109	\$7,255	\$21,104	\$212,468	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$242,482	\$1,866,411	
2033	\$193,222	\$7,437	\$21,394	\$222,053	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$252,067	\$1,933,927	
2034	\$202,795	\$7,623	\$21,692	\$232,110	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$262,124	\$2,000,793	
2035	\$212,884	\$7,813	\$21,997	\$242,695	\$30,014	\$0	\$0	\$0	\$0	\$30,014	\$272,709	\$2,067,047	

Table D.1-19 Expansion Plan Economic Summary - With Joint 3x1 CC in 2012

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
GE 3X1 7FA CC	45,468	36	05/01/12	57,271	4,533
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/22	111,702	8,841

Year	Production Cost				Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)			
		Variable (\$1,000)	Fixed (\$1,000)										
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868	
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415	
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253	
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159	
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880	
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,179	\$295,321	
2012	\$58,040	\$15,287	\$4,927	\$78,254	\$9,773	\$233	\$805	\$0	\$0	\$10,810	\$89,064	\$361,783	
2013	\$67,325	\$6,475	\$5,258	\$79,058	\$11,271	\$238	\$1,208	\$0	\$0	\$12,718	\$91,775	\$427,006	
2014	\$64,153	\$17,985	\$8,933	\$91,072	\$11,271	\$244	\$1,208	\$0	\$0	\$12,724	\$103,795	\$497,258	
2015	\$62,433	\$24,311	\$9,106	\$95,850	\$11,271	\$250	\$1,208	\$0	\$0	\$12,730	\$108,580	\$567,250	
2016	\$65,205	\$25,951	\$9,280	\$100,436	\$11,271	\$257	\$1,208	\$0	\$0	\$12,736	\$113,172	\$636,127	
2017	\$68,064	\$27,628	\$9,443	\$105,135	\$11,271	\$263	\$1,208	\$0	\$0	\$12,742	\$117,877	\$705,648	
2018	\$90,254	\$6,257	\$7,970	\$104,480	\$16,648	\$270	\$1,208	\$0	\$0	\$18,125	\$122,605	\$773,919	
2019	\$93,522	\$6,458	\$9,542	\$109,523	\$19,281	\$276	\$1,208	\$0	\$0	\$20,765	\$130,288	\$843,014	
2020	\$98,203	\$6,645	\$9,662	\$114,509	\$19,281	\$283	\$1,208	\$0	\$0	\$20,772	\$135,282	\$911,340	
2021	\$103,318	\$6,839	\$9,785	\$119,942	\$19,281	\$290	\$1,208	\$0	\$0	\$20,779	\$140,721	\$979,029	
2022	\$108,064	\$7,044	\$13,026	\$128,134	\$25,215	\$298	\$1,208	\$0	\$0	\$26,721	\$154,855	\$1,049,970	
2023	\$113,165	\$7,258	\$14,738	\$135,160	\$28,122	\$305	\$1,208	\$0	\$0	\$29,635	\$164,795	\$1,121,870	
2024	\$119,121	\$7,471	\$14,928	\$141,520	\$28,122	\$313	\$1,208	\$0	\$0	\$29,643	\$171,163	\$1,192,992	
2025	\$125,152	\$7,687	\$15,123	\$147,962	\$28,122	\$321	\$1,208	\$0	\$0	\$29,651	\$177,613	\$1,263,279	
2026	\$130,759	\$7,880	\$15,323	\$153,962	\$28,122	\$329	\$1,208	\$0	\$0	\$29,659	\$183,620	\$1,332,484	
2027	\$136,766	\$8,077	\$15,529	\$160,371	\$28,122	\$337	\$1,208	\$0	\$0	\$29,667	\$190,038	\$1,400,696	
2028	\$142,994	\$8,279	\$15,739	\$167,012	\$28,122	\$345	\$1,208	\$0	\$0	\$29,675	\$196,687	\$1,467,934	
2029	\$149,443	\$8,487	\$15,954	\$173,884	\$28,122	\$354	\$1,208	\$0	\$0	\$29,684	\$203,568	\$1,534,210	
2030	\$156,343	\$8,699	\$16,175	\$181,218	\$28,122	\$363	\$1,208	\$0	\$0	\$29,693	\$210,910	\$1,599,606	
2031	\$163,560	\$8,917	\$16,402	\$188,879	\$28,122	\$372	\$1,208	\$0	\$0	\$29,702	\$218,581	\$1,664,154	
2032	\$171,099	\$9,140	\$16,634	\$196,873	\$28,122	\$381	\$1,208	\$0	\$0	\$29,711	\$226,584	\$1,727,879	
2033	\$178,997	\$9,369	\$16,872	\$205,238	\$28,122	\$391	\$1,208	\$0	\$0	\$29,721	\$234,959	\$1,790,812	
2034	\$187,259	\$9,604	\$17,116	\$213,979	\$28,122	\$400	\$1,208	\$0	\$0	\$29,730	\$243,709	\$1,852,981	
2035	\$195,893	\$9,844	\$17,366	\$223,103	\$28,122	\$410	\$1,208	\$0	\$0	\$29,740	\$252,843	\$1,914,408	

Table D.1-20 Expansion Plan Economic Summary - With Joint IGCC in 2012

Case Description Fuel Forecast: Base Case Load Forecast: Base Case		Economic Parameters CPW Discount Rate: 5.0% Final Capital Escalation Rate: 2.5% Base Year for CPW \$: 2006		Financial Parameters Interest During Construction: 5.00% Fixed Charge Rate CT: (20 year): 8.97% Fixed Charge Rate CC: (25 year): 7.92% Fixed Charge Rate Coal: (30 year): 7.25%	
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Unit Addition	Generation Additions				
	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
Three Train 1X1 GE IGCC	182,168	53	05/01/12	226,940	16,462
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/19	103,726	8,210

Year	Production Cost				Capital Cost and Other Project Costs							Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)	Total System Cost (\$1,000)	
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,179	\$295,321
2012	\$44,590	\$17,358	\$7,451	\$69,399	\$17,758	\$233	\$772	\$0	\$0	\$18,763	\$88,162	\$361,109
2013	\$47,632	\$9,661	\$8,874	\$66,167	\$23,200	\$238	\$1,158	\$0	\$0	\$24,597	\$90,764	\$425,614
2014	\$45,414	\$20,815	\$12,516	\$78,745	\$23,200	\$244	\$1,158	\$0	\$0	\$24,603	\$103,348	\$495,563
2015	\$43,640	\$27,098	\$12,769	\$83,507	\$23,200	\$250	\$1,158	\$0	\$0	\$24,609	\$108,117	\$565,256
2016	\$45,451	\$28,852	\$13,026	\$87,329	\$23,200	\$257	\$1,158	\$0	\$0	\$24,615	\$111,945	\$633,981
2017	\$46,956	\$30,660	\$13,274	\$90,890	\$23,200	\$263	\$1,158	\$0	\$0	\$24,622	\$115,512	\$701,518
2018	\$68,651	\$7,390	\$11,550	\$87,591	\$28,577	\$270	\$1,158	\$0	\$0	\$30,005	\$117,596	\$766,999
2019	\$68,454	\$7,685	\$16,218	\$92,357	\$36,721	\$276	\$1,158	\$0	\$0	\$38,156	\$130,512	\$836,213
2020	\$71,689	\$7,911	\$17,955	\$97,554	\$39,420	\$283	\$1,158	\$0	\$0	\$40,862	\$138,416	\$906,122
2021	\$75,272	\$8,135	\$18,226	\$101,633	\$39,420	\$290	\$1,158	\$0	\$0	\$40,869	\$142,502	\$974,668
2022	\$78,541	\$8,366	\$18,503	\$105,410	\$39,420	\$298	\$1,158	\$0	\$0	\$40,876	\$146,286	\$1,041,683
2023	\$82,517	\$8,603	\$18,788	\$109,908	\$39,420	\$305	\$1,158	\$0	\$0	\$40,883	\$150,792	\$1,107,473
2024	\$88,207	\$8,847	\$19,080	\$116,134	\$39,420	\$313	\$1,158	\$0	\$0	\$40,891	\$157,025	\$1,172,721
2025	\$92,987	\$9,098	\$19,379	\$121,464	\$39,420	\$321	\$1,158	\$0	\$0	\$40,899	\$162,363	\$1,236,973
2026	\$96,765	\$9,325	\$19,685	\$125,776	\$39,420	\$329	\$1,158	\$0	\$0	\$40,907	\$166,683	\$1,299,794
2027	\$100,638	\$9,559	\$20,000	\$130,197	\$39,420	\$337	\$1,158	\$0	\$0	\$40,915	\$171,112	\$1,361,213
2028	\$105,215	\$9,797	\$20,322	\$135,334	\$39,420	\$345	\$1,158	\$0	\$0	\$40,924	\$176,257	\$1,421,467
2029	\$110,208	\$10,042	\$20,652	\$140,903	\$39,420	\$354	\$1,158	\$0	\$0	\$40,932	\$181,835	\$1,480,667
2030	\$115,258	\$10,293	\$20,990	\$146,541	\$39,420	\$363	\$1,158	\$0	\$0	\$40,941	\$187,482	\$1,538,799
2031	\$120,543	\$10,551	\$21,337	\$152,431	\$39,420	\$372	\$1,158	\$0	\$0	\$40,950	\$193,381	\$1,595,905
2032	\$126,077	\$10,814	\$21,692	\$158,583	\$39,420	\$381	\$1,158	\$0	\$0	\$40,959	\$199,543	\$1,652,025
2033	\$131,872	\$11,084	\$22,057	\$165,013	\$39,420	\$391	\$1,158	\$0	\$0	\$40,969	\$205,982	\$1,707,197
2034	\$137,932	\$11,361	\$22,430	\$171,723	\$39,420	\$400	\$1,158	\$0	\$0	\$40,979	\$212,702	\$1,761,455
2035	\$144,279	\$11,645	\$22,813	\$178,737	\$39,420	\$410	\$1,158	\$0	\$0	\$40,989	\$219,726	\$1,814,837

Table D.1-21 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - Second PC Unit Available

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	162,974	11,822
JOINT OWNERSHIP PC UNIT	NA	NA	05/01/18	188,470	13,672

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth (\$1,000)	
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)			
		Variable (\$1,000)	Fixed (\$1,000)										
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,179	\$295,321	\$295,321
2012	\$47,793	\$16,656	\$6,828	\$71,377	\$14,652	\$233	\$679	\$142	\$0	\$15,705	\$87,082	\$360,304	\$360,304
2013	\$51,643	\$8,865	\$7,778	\$68,286	\$18,560	\$238	\$1,019	\$221	\$0	\$20,039	\$88,325	\$423,074	\$423,074
2014	\$47,877	\$20,443	\$11,491	\$79,811	\$18,560	\$244	\$1,019	\$231	\$0	\$20,055	\$99,865	\$490,667	\$490,667
2015	\$46,502	\$26,945	\$11,702	\$85,149	\$18,560	\$250	\$1,019	\$241	\$0	\$20,071	\$105,221	\$558,493	\$558,493
2016	\$48,103	\$28,775	\$11,915	\$88,793	\$18,560	\$257	\$1,019	\$252	\$0	\$20,088	\$108,861	\$625,337	\$625,337
2017	\$49,153	\$30,647	\$12,116	\$91,916	\$18,560	\$263	\$1,019	\$263	\$0	\$20,106	\$112,023	\$690,834	\$690,834
2018	\$58,591	\$3,309	\$8,222	\$70,122	\$27,737	\$539	\$1,699	\$440	\$0	\$30,415	\$100,537	\$746,817	\$746,817
2019	\$55,004	\$3,199	\$9,133	\$67,336	\$32,232	\$553	\$2,038	\$544	\$0	\$35,367	\$102,703	\$801,283	\$801,283
2020	\$58,295	\$3,302	\$9,302	\$70,900	\$32,232	\$567	\$2,038	\$568	\$0	\$35,405	\$106,305	\$854,974	\$854,974
2021	\$60,454	\$3,406	\$9,475	\$73,335	\$32,232	\$581	\$2,038	\$594	\$0	\$35,445	\$108,780	\$907,299	\$907,299
2022	\$62,101	\$3,510	\$9,653	\$75,263	\$32,232	\$595	\$2,038	\$621	\$0	\$35,486	\$110,750	\$958,035	\$958,035
2023	\$65,200	\$3,620	\$9,835	\$78,655	\$32,232	\$610	\$2,038	\$649	\$0	\$35,529	\$114,184	\$1,007,853	\$1,007,853
2024	\$70,713	\$3,737	\$10,021	\$84,470	\$32,232	\$625	\$2,038	\$678	\$0	\$35,574	\$120,044	\$1,057,734	\$1,057,734
2025	\$74,340	\$3,856	\$10,213	\$88,409	\$32,232	\$641	\$2,038	\$708	\$0	\$35,620	\$124,028	\$1,106,816	\$1,106,816
2026	\$77,155	\$3,952	\$10,409	\$91,516	\$32,232	\$657	\$2,038	\$740	\$0	\$35,668	\$127,184	\$1,154,750	\$1,154,750
2027	\$78,956	\$4,048	\$10,609	\$93,614	\$32,232	\$673	\$2,038	\$774	\$0	\$35,717	\$129,331	\$1,201,173	\$1,201,173
2028	\$82,583	\$4,149	\$10,815	\$97,548	\$32,232	\$690	\$2,038	\$808	\$0	\$35,769	\$133,317	\$1,246,747	\$1,246,747
2029	\$85,922	\$4,252	\$11,026	\$101,201	\$32,232	\$708	\$2,038	\$845	\$0	\$35,823	\$137,024	\$1,291,358	\$1,291,358
2030	\$89,242	\$4,358	\$11,243	\$104,842	\$32,232	\$725	\$2,038	\$883	\$0	\$35,878	\$140,721	\$1,334,991	\$1,334,991
2031	\$92,717	\$4,466	\$11,465	\$108,647	\$32,232	\$743	\$2,038	\$923	\$0	\$35,936	\$144,583	\$1,377,687	\$1,377,687
2032	\$96,363	\$4,577	\$11,692	\$112,632	\$32,232	\$762	\$2,038	\$964	\$0	\$35,996	\$148,628	\$1,419,487	\$1,419,487
2033	\$100,188	\$4,690	\$11,925	\$116,804	\$32,232	\$781	\$2,038	\$1,007	\$0	\$36,059	\$152,862	\$1,460,431	\$1,460,431
2034	\$104,196	\$4,807	\$12,164	\$121,167	\$32,232	\$801	\$2,038	\$1,053	\$0	\$36,124	\$157,290	\$1,500,555	\$1,500,555
2035	\$108,391	\$4,927	\$12,408	\$125,726	\$32,232	\$821	\$2,038	\$1,100	\$0	\$36,191	\$161,917	\$1,539,892	\$1,539,892

Table D.1-22 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 - Direct-Fired Biomass in 2011

Case Description		Economic Parameters		Financial Parameters	
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate Fixed Charge Rate CT: (20 year)	8.97%
		Base Year for CPW \$	2006	Fixed Charge Rate Fixed Charge Rate CC: (25 year)	7.92%
				Fixed Charge Rate Fixed Charge Rate Coal: (30 year)	7.25%

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
BIOMASS	84,555	0	05/01/11	96,446	6,996
TEC	NA	NA	05/01/12	162,974	11,822
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Biomass Fuel, VOM, & FOM Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)										
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,823	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$45,132	\$22,114	\$7,938	\$75,184	\$9,219	\$0	\$0	\$0	\$7,881	\$0	\$17,100	\$92,284	\$296,187
2012	\$45,787	\$1,985	\$5,458	\$53,230	\$21,648	\$233	\$679	\$142	\$12,034	\$0	\$34,736	\$87,966	\$361,828
2013	\$42,215	\$1,899	\$6,195	\$50,308	\$25,557	\$238	\$1,019	\$221	\$12,335	\$0	\$39,370	\$89,678	\$425,561
2014	\$41,570	\$9,037	\$7,808	\$58,415	\$25,557	\$244	\$1,019	\$231	\$12,643	\$0	\$39,694	\$98,109	\$491,965
2015	\$41,461	\$13,063	\$8,763	\$63,287	\$25,557	\$250	\$1,019	\$241	\$12,960	\$0	\$40,027	\$103,314	\$558,562
2016	\$42,889	\$14,206	\$8,976	\$66,071	\$25,557	\$257	\$1,019	\$252	\$13,283	\$0	\$40,368	\$106,439	\$623,907
2017	\$43,753	\$15,391	\$9,185	\$68,329	\$25,557	\$263	\$1,019	\$263	\$13,616	\$0	\$40,718	\$109,047	\$687,664
2018	\$53,002	\$3,015	\$9,669	\$65,686	\$36,309	\$270	\$1,019	\$275	\$13,956	\$0	\$51,829	\$117,516	\$753,101
2019	\$55,479	\$3,123	\$11,285	\$69,886	\$41,576	\$276	\$1,019	\$288	\$14,305	\$0	\$57,464	\$127,350	\$820,638
2020	\$58,590	\$3,226	\$11,448	\$73,264	\$41,576	\$283	\$1,019	\$301	\$14,662	\$0	\$57,842	\$131,106	\$886,855
2021	\$61,275	\$3,332	\$11,616	\$76,223	\$41,576	\$290	\$1,019	\$314	\$15,029	\$0	\$58,229	\$134,451	\$951,529
2022	\$63,891	\$3,441	\$11,787	\$79,119	\$41,576	\$298	\$1,019	\$328	\$15,405	\$0	\$58,626	\$137,545	\$1,014,540
2023	\$67,023	\$3,553	\$11,963	\$82,540	\$41,576	\$305	\$1,019	\$343	\$15,790	\$0	\$59,033	\$141,573	\$1,076,307
2024	\$71,755	\$3,671	\$12,144	\$87,570	\$41,576	\$313	\$1,019	\$359	\$16,185	\$0	\$59,451	\$147,021	\$1,137,398
2025	\$75,498	\$3,790	\$12,329	\$91,617	\$41,576	\$321	\$1,019	\$375	\$16,589	\$0	\$59,880	\$151,497	\$1,197,350
2026	\$78,612	\$3,885	\$12,519	\$95,015	\$41,576	\$329	\$1,019	\$392	\$17,004	\$0	\$60,319	\$155,335	\$1,255,894
2027	\$81,316	\$3,982	\$12,713	\$98,010	\$41,576	\$337	\$1,019	\$409	\$17,429	\$0	\$60,770	\$158,780	\$1,312,887
2028	\$85,036	\$4,081	\$12,912	\$102,030	\$41,576	\$345	\$1,019	\$428	\$17,865	\$0	\$61,233	\$163,262	\$1,368,698
2029	\$88,674	\$4,183	\$13,116	\$105,973	\$41,576	\$354	\$1,019	\$447	\$18,311	\$0	\$61,707	\$167,680	\$1,423,290
2030	\$92,432	\$4,287	\$13,326	\$110,045	\$41,576	\$363	\$1,019	\$467	\$18,769	\$0	\$62,194	\$172,239	\$1,476,696
2031	\$96,363	\$4,394	\$13,540	\$114,297	\$41,576	\$372	\$1,019	\$488	\$19,238	\$0	\$62,693	\$176,990	\$1,528,961
2032	\$100,481	\$4,504	\$13,760	\$118,745	\$41,576	\$381	\$1,019	\$510	\$19,719	\$0	\$63,205	\$181,950	\$1,580,133
2033	\$104,795	\$4,616	\$13,985	\$123,397	\$41,576	\$391	\$1,019	\$533	\$20,212	\$0	\$63,731	\$187,128	\$1,630,255
2034	\$109,317	\$4,732	\$14,216	\$128,261	\$41,576	\$400	\$1,019	\$557	\$20,718	\$0	\$64,270	\$192,531	\$1,679,369
2035	\$114,037	\$4,850	\$14,453	\$133,340	\$41,576	\$410	\$1,019	\$582	\$21,236	\$0	\$64,823	\$198,163	\$1,727,512

Table D.1-23 Expansion Plan Economic Summary - Without Taylor Energy Center - Direct-Fired Biomass in 2011

Case Description		Economic Parameters			Financial Parameters		
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%		
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%		
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%		
				Fixed Charge Rate Coal: (30 year)	7.25%		

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
BIOMASS	84,555	0	05/01/11	96,446	6,996
GE LM6000 1X1 CC	73,300	18	05/01/14	91,679	7,256
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/24	117,357	9,289

Year	Production Cost				Capital Cost and Other Project Costs							Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Costs (\$1,000)	Biomass Fuel, VOM, & FOM Cost (\$1,000)	Total Capital Cost (\$1,000)			
		Variable (\$1,000)	Fixed (\$1,000)										
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868	
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415	
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253	
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159	
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880	
2011	\$45,093	\$22,166	\$7,953	\$75,212	\$9,219	\$0	\$0	\$0	\$7,881	\$17,100	\$92,311	\$296,208	
2012	\$39,345	\$22,416	\$9,457	\$71,218	\$13,734	\$0	\$0	\$0	\$12,034	\$25,769	\$96,987	\$368,582	
2013	\$40,588	\$23,938	\$9,615	\$74,140	\$13,734	\$0	\$0	\$0	\$12,335	\$26,070	\$100,210	\$439,799	
2014	\$46,273	\$22,198	\$11,033	\$79,503	\$18,605	\$0	\$0	\$0	\$12,643	\$31,249	\$118,752	\$514,760	
2015	\$50,112	\$21,316	\$12,631	\$84,058	\$20,991	\$0	\$0	\$0	\$12,960	\$33,950	\$118,009	\$590,830	
2016	\$54,978	\$22,820	\$12,839	\$90,637	\$20,991	\$0	\$0	\$0	\$13,283	\$34,274	\$124,912	\$667,515	
2017	\$57,725	\$24,427	\$13,038	\$95,190	\$20,991	\$0	\$0	\$0	\$13,616	\$34,606	\$129,797	\$743,404	
2018	\$74,978	\$3,971	\$11,827	\$90,775	\$26,367	\$0	\$0	\$0	\$13,956	\$40,323	\$131,099	\$816,405	
2019	\$77,917	\$4,117	\$13,436	\$95,470	\$29,001	\$0	\$0	\$0	\$14,305	\$43,305	\$138,775	\$890,000	
2020	\$81,890	\$4,246	\$13,594	\$99,730	\$29,001	\$0	\$0	\$0	\$14,662	\$43,663	\$143,393	\$962,423	
2021	\$86,255	\$4,378	\$13,756	\$104,389	\$29,001	\$0	\$0	\$0	\$15,029	\$44,030	\$148,419	\$1,033,815	
2022	\$90,656	\$4,515	\$13,922	\$109,093	\$29,001	\$0	\$0	\$0	\$15,405	\$44,405	\$153,499	\$1,104,135	
2023	\$95,479	\$4,656	\$14,092	\$114,227	\$29,001	\$0	\$0	\$0	\$15,790	\$44,790	\$159,017	\$1,173,514	
2024	\$100,408	\$4,804	\$17,459	\$122,672	\$35,235	\$0	\$0	\$0	\$16,185	\$51,420	\$174,092	\$1,245,852	
2025	\$105,591	\$4,955	\$19,260	\$129,806	\$38,289	\$0	\$0	\$0	\$16,589	\$54,879	\$184,684	\$1,318,938	
2026	\$110,321	\$5,078	\$19,505	\$134,905	\$38,289	\$0	\$0	\$0	\$17,004	\$55,293	\$194,198	\$1,390,622	
2027	\$115,391	\$5,205	\$19,755	\$140,351	\$38,289	\$0	\$0	\$0	\$17,429	\$55,718	\$196,070	\$1,461,000	
2028	\$120,644	\$5,336	\$20,012	\$145,991	\$38,289	\$0	\$0	\$0	\$17,865	\$56,154	\$202,145	\$1,530,103	
2029	\$126,088	\$5,469	\$20,275	\$151,832	\$38,289	\$0	\$0	\$0	\$18,311	\$56,601	\$208,433	\$1,597,962	
2030	\$131,909	\$5,606	\$20,544	\$158,059	\$38,289	\$0	\$0	\$0	\$18,769	\$57,059	\$215,118	\$1,664,664	
2031	\$137,996	\$5,746	\$20,821	\$164,562	\$38,289	\$0	\$0	\$0	\$19,238	\$57,528	\$222,090	\$1,730,247	
2032	\$144,357	\$5,889	\$21,104	\$171,351	\$38,289	\$0	\$0	\$0	\$19,719	\$58,009	\$229,360	\$1,794,753	
2033	\$151,023	\$6,037	\$21,394	\$178,454	\$38,289	\$0	\$0	\$0	\$20,212	\$58,502	\$236,955	\$1,858,221	
2034	\$157,989	\$6,188	\$21,692	\$185,869	\$38,289	\$0	\$0	\$0	\$20,718	\$59,007	\$244,876	\$1,920,687	
2035	\$165,277	\$6,342	\$21,997	\$193,616	\$38,289	\$0	\$0	\$0	\$21,236	\$59,525	\$253,141	\$1,982,187	

Table D.1-24 Expansion Plan Economic Summary - With Taylor Energy Center in 2012 on PRB

Case Description						Economic Parameters			Financial Parameters		
Fuel Forecast:		Base Case				CPW Discount Rate:	5.0%		Interest During Construction:		5.00%
Load Forecast:		Base Case				Final Capital Escalation Rate:	2.5%		Fixed Charge Rate CT: (20 year)		8.97%
						Base Year for CPW \$	2006		Fixed Charge Rate CC: (25 year)		7.92%
									Fixed Charge Rate Coal: (30 year)		7.25%

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/12	162,490	11,787
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs							Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)	Total System Cost (\$1,000)	
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$141,253
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,179	\$295,321
2012	\$46,478	\$16,960	\$7,041	\$70,479	\$14,629	\$233	\$678	\$141	\$0	\$15,680	\$86,159	\$359,615
2013	\$49,596	\$9,300	\$7,891	\$66,788	\$18,525	\$238	\$1,017	\$221	\$0	\$20,001	\$86,789	\$421,294
2014	\$45,826	\$20,530	\$11,491	\$77,847	\$18,525	\$244	\$1,017	\$230	\$0	\$20,017	\$97,864	\$487,532
2015	\$44,512	\$26,819	\$11,702	\$83,033	\$18,525	\$250	\$1,017	\$241	\$0	\$20,034	\$103,067	\$553,970
2016	\$49,542	\$28,695	\$11,915	\$90,152	\$18,525	\$257	\$1,017	\$252	\$0	\$20,051	\$110,203	\$621,625
2017	\$52,095	\$30,563	\$12,116	\$94,774	\$18,525	\$263	\$1,017	\$263	\$0	\$20,068	\$114,842	\$688,771
2018	\$71,967	\$3,936	\$12,642	\$88,544	\$29,278	\$270	\$1,017	\$275	\$0	\$30,840	\$119,383	\$755,248
2019	\$72,918	\$4,118	\$15,764	\$92,800	\$34,545	\$276	\$1,017	\$287	\$0	\$36,125	\$128,925	\$823,620
2020	\$76,534	\$4,248	\$15,980	\$96,762	\$34,545	\$283	\$1,017	\$300	\$0	\$36,145	\$132,907	\$890,747
2021	\$80,586	\$4,380	\$16,201	\$101,168	\$34,545	\$290	\$1,017	\$314	\$0	\$36,166	\$137,334	\$956,807
2022	\$84,142	\$4,517	\$16,428	\$105,087	\$34,545	\$298	\$1,017	\$328	\$0	\$36,187	\$141,274	\$1,021,526
2023	\$89,398	\$4,658	\$16,661	\$110,717	\$34,545	\$305	\$1,017	\$342	\$0	\$36,209	\$146,926	\$1,085,630
2024	\$94,845	\$4,803	\$16,900	\$116,548	\$34,545	\$313	\$1,017	\$358	\$0	\$36,232	\$152,781	\$1,149,113
2025	\$99,885	\$4,953	\$17,144	\$121,982	\$34,545	\$321	\$1,017	\$374	\$0	\$36,256	\$158,238	\$1,211,734
2026	\$103,949	\$5,077	\$17,395	\$126,421	\$34,545	\$329	\$1,017	\$391	\$0	\$36,281	\$162,702	\$1,273,054
2027	\$108,677	\$5,204	\$17,652	\$131,533	\$34,545	\$337	\$1,017	\$408	\$0	\$36,307	\$167,840	\$1,333,299
2028	\$113,543	\$5,334	\$17,915	\$136,792	\$34,545	\$345	\$1,017	\$427	\$0	\$36,334	\$173,126	\$1,392,482
2029	\$118,657	\$5,467	\$18,185	\$142,310	\$34,545	\$354	\$1,017	\$446	\$0	\$36,362	\$178,671	\$1,450,652
2030	\$124,021	\$5,604	\$18,462	\$148,087	\$34,545	\$363	\$1,017	\$466	\$0	\$36,391	\$184,478	\$1,507,853
2031	\$129,630	\$5,744	\$18,745	\$154,120	\$34,545	\$372	\$1,017	\$487	\$0	\$36,421	\$190,540	\$1,564,120
2032	\$135,503	\$5,888	\$19,036	\$160,427	\$34,545	\$381	\$1,017	\$509	\$0	\$36,452	\$196,878	\$1,619,490
2033	\$141,652	\$6,035	\$19,334	\$167,021	\$34,545	\$391	\$1,017	\$532	\$0	\$36,484	\$203,505	\$1,673,999
2034	\$148,087	\$6,186	\$19,640	\$173,912	\$34,545	\$400	\$1,017	\$556	\$0	\$36,518	\$210,430	\$1,727,678
2035	\$154,834	\$6,340	\$19,953	\$181,127	\$34,545	\$410	\$1,017	\$581	\$0	\$36,553	\$217,680	\$1,780,563

Table D.1-25 Expansion Plan Economic Summary - With Taylor Energy Center in May of 2013

Case Description		Economic Parameters		Financial Parameters	
Fuel Forecast:	Base Case	CPW Discount Rate:	5.0%	Interest During Construction:	5.00%
Load Forecast:	Base Case	Final Capital Escalation Rate:	2.5%	Fixed Charge Rate CT: (20 year)	8.97%
		Base Year for CPW \$	2006	Fixed Charge Rate CC: (25 year)	7.92%
				Fixed Charge Rate Coal: (30 year)	7.25%

Generation Additions					
Unit Addition	2006 Capital Cost (\$1,000)	Construction and Development Period (months)	Month/Day/Year Installed (mm/dd/yy)	Installed Cost (\$1,000)	Levelized Cost (\$1,000)
GE LM6000 1X1 CC	73,300	18	05/01/11	85,133	6,738
TEC	NA	NA	05/01/13	166,887	12,106
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010
GE LM6000 1X1 CC	73,300	18	05/01/18	101,196	8,010

Year	Production Cost				Capital Cost and Other Project Costs						Total System Cost (\$1,000)	Cumulative Present Worth Cost (\$1,000)
	Fuel and Energy Cost (\$1,000)	O&M		Total Production Cost (\$1,000)	Unit Capital Cost (\$1,000)	Community Contribution (\$1,000)	Transmission Charge (\$1,000)	Ongoing Capex Cost (\$1,000)	Other Capital Cost (\$1,000)	Total Capital Cost (\$1,000)		
		Variable (\$1,000)	Fixed (\$1,000)									
2006	\$51,566	\$302	\$0	\$51,868	\$0	\$0	\$0	\$0	\$0	\$0	\$51,868	\$51,868
2007	\$48,623	\$251	\$0	\$48,874	\$0	\$0	\$0	\$0	\$0	\$0	\$48,874	\$98,415
2008	\$46,946	\$283	\$0	\$47,229	\$0	\$0	\$0	\$0	\$0	\$0	\$47,229	\$141,253
2009	\$48,189	\$323	\$0	\$48,512	\$0	\$0	\$0	\$0	\$0	\$0	\$48,512	\$183,159
2010	\$49,143	\$353	\$0	\$49,496	\$0	\$0	\$0	\$0	\$0	\$0	\$49,496	\$223,880
2011	\$42,749	\$33,016	\$10,892	\$86,656	\$4,523	\$0	\$0	\$0	\$0	\$4,523	\$91,179	\$295,321
2012	\$45,382	\$34,305	\$12,396	\$92,083	\$6,738	\$0	\$0	\$0	\$0	\$6,738	\$98,821	\$369,063
2013	\$52,996	\$18,066	\$7,118	\$78,180	\$14,864	\$238	\$679	\$145	\$0	\$15,927	\$94,107	\$435,943
2014	\$51,263	\$20,518	\$11,491	\$83,272	\$18,844	\$244	\$1,019	\$226	\$0	\$20,334	\$103,606	\$506,068
2015	\$50,370	\$27,021	\$11,702	\$89,093	\$18,844	\$250	\$1,019	\$237	\$0	\$20,350	\$109,443	\$576,616
2016	\$52,194	\$28,854	\$11,915	\$92,964	\$18,844	\$257	\$1,019	\$247	\$0	\$20,367	\$113,331	\$646,191
2017	\$53,521	\$30,725	\$12,116	\$96,362	\$18,844	\$263	\$1,019	\$258	\$0	\$20,385	\$116,747	\$714,451
2018	\$71,165	\$3,941	\$12,641	\$87,747	\$29,597	\$270	\$1,019	\$270	\$0	\$31,156	\$118,903	\$780,661
2019	\$73,029	\$4,106	\$15,763	\$92,898	\$34,864	\$276	\$1,019	\$282	\$0	\$36,441	\$129,339	\$849,252
2020	\$76,824	\$4,234	\$15,979	\$97,138	\$34,864	\$283	\$1,019	\$295	\$0	\$36,461	\$133,599	\$916,728
2021	\$80,453	\$4,367	\$16,201	\$101,020	\$34,864	\$290	\$1,019	\$308	\$0	\$36,481	\$137,502	\$982,869
2022	\$83,711	\$4,503	\$16,428	\$104,642	\$34,864	\$298	\$1,019	\$322	\$0	\$36,502	\$141,145	\$1,047,529
2023	\$87,983	\$4,644	\$16,661	\$109,288	\$34,864	\$305	\$1,019	\$337	\$0	\$36,524	\$145,812	\$1,111,146
2024	\$93,679	\$4,789	\$16,899	\$115,367	\$34,864	\$313	\$1,019	\$352	\$0	\$36,547	\$151,914	\$1,174,270
2025	\$98,417	\$4,938	\$17,144	\$120,499	\$34,864	\$321	\$1,019	\$368	\$0	\$36,571	\$157,070	\$1,236,428
2026	\$102,555	\$5,061	\$17,395	\$125,011	\$34,864	\$329	\$1,019	\$384	\$0	\$36,595	\$161,607	\$1,297,335
2027	\$106,352	\$5,188	\$17,652	\$129,192	\$34,864	\$337	\$1,019	\$401	\$0	\$36,621	\$165,813	\$1,356,853
2028	\$111,213	\$5,318	\$17,915	\$134,445	\$34,864	\$345	\$1,019	\$419	\$0	\$36,647	\$171,093	\$1,415,341
2029	\$116,031	\$5,451	\$18,185	\$139,666	\$34,864	\$354	\$1,019	\$438	\$0	\$36,675	\$176,341	\$1,472,752
2030	\$121,050	\$5,587	\$18,462	\$145,099	\$34,864	\$363	\$1,019	\$458	\$0	\$36,703	\$181,802	\$1,529,123
2031	\$126,298	\$5,726	\$18,745	\$150,770	\$34,864	\$372	\$1,019	\$479	\$0	\$36,733	\$187,503	\$1,584,493
2032	\$131,796	\$5,870	\$19,036	\$156,701	\$34,864	\$381	\$1,019	\$500	\$0	\$36,764	\$193,465	\$1,638,903
2033	\$137,552	\$6,016	\$19,334	\$162,902	\$34,864	\$391	\$1,019	\$523	\$0	\$36,796	\$199,698	\$1,692,392
2034	\$143,580	\$6,167	\$19,639	\$169,386	\$34,864	\$400	\$1,019	\$546	\$0	\$36,829	\$206,215	\$1,744,997
2035	\$149,882	\$6,321	\$19,952	\$176,155	\$34,864	\$410	\$1,019	\$571	\$0	\$36,864	\$213,019	\$1,796,749