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August 19, 2005

VIA HAND DELIVERY

Ms. Elizabeth O'Donnell
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602-0615

RE: The 2005 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company
Case No: 2005-00162

Dear Ms. O'Donnell:

Enclosed please find and accept for filing the original and seven (7) copies of the Response of Louisville Gas and Electric Company and Kentucky Utilities Company to the Attorney General's Supplemental Request for Information dated July 26, 2005, in the above referenced matter.

Should you have any questions concerning the enclosed, please contact me at your convenience.

Sincerely,

Kent W. Blake

Enclosures

cc: Parties of Record

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

CASE NO. 2005-00162

**Response to the Attorney General's
Supplemental Request for Information
Dated: July 26, 2005**

INITIAL OBJECTION

The Companies object to these requests to the extent that they seek information which is beyond the scope of the information discussed in the first round of discovery in this proceeding. The Attorney General was an Intervenor in this proceeding at the time of the first round of discovery and had the right to file initial requests for information at that time but did not do so. The present requests seek, in large part, new information and do not seek to obtain clarifying or follow-up information from the first round of discovery, which is contrary to established discovery practice before this Commission. However, without waiver of this objection, the Companies respond to the Attorney General's requests as set forth on the following pages.

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The 2005 Joint Integrated Resource Plan of)
Louisville Gas and Electric Company and) **Case No. 2005-00162**
Kentucky Utilities Company)

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY
TO THE ATTORNEY GENERAL'S
SUPPLEMENTAL REQUEST FOR INFORMATION
DATED JULY 26, 2005

FILED: AUGUST 19, 2005

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

CASE NO. 2005-00162

**Response to the Attorney General's
Supplemental Request for Information
Dated: July 26, 2005**

Question No. 1

Responding Witness: Robert Thomson / Counsel

- Q-1. On page 5-11 of Volume 1 of the IRP, the key energy assumption stated was that oil prices would remain below \$31 per barrel through 2009 and only rise to \$45 per barrel by 2019.
- a. Please provide the year-by-year assumption of oil price used in the IRP between 2005 and 2019.
 - b. Please provide the year-by-year assumption of natural gas price used in the IRP between 2005 and 2019.
 - c. Please provide the year-by-year assumption of coal prices used in the IRP between 2005 and 2019.
 - d. Please provide a revised load forecast based on the assumption of \$60 per barrel oil prices (per current oil pricing) through 2009 and escalating to \$100 per barrel in 2019, as well as associated increases in natural gas and coal prices.
- A-1. a. Primary fuel prices are not direct inputs to the load forecast models. Fuel price considerations do of course influence the macroeconomic outlook. The oil price forecast incorporated in the Summer 2003 issue of Global Insight's long-term national macroeconomic outlook - the basis for the Companies' 2004 electricity demand forecast - is shown in Volume II of the Integrated Resource Plan, Global Insight Long-Term Macro Forecast, page 20.
- b. The fuel prices used for resource optimization (i.e. to develop the least-cost long-term capacity expansion plan, as outlined in Volume 1, Section 8 of the 2005 IRP) are shown in Table 4 of Appendix A, Volume III of the Plan.

Fuel prices were not used directly in the load forecasting exercise, except – in the case of the residential sales forecast - to determine the extent of (potential) fuel switching between electricity and gas in heating applications. The (retail) gas price forecast used for this exercise is displayed in the table below.

Retail Natural Gas Price (\$/MMBtu) (residential sales)	
2005	\$8.26
2006	\$8.28
2007	\$8.38
2008	\$8.44
2009	\$8.52
2010	\$8.66
2011	\$8.79
2012	\$8.93
2013	\$9.07
2014	\$9.23
2015	\$9.38
2016	\$9.55
2017	\$9.71
2018	\$9.89
2019	\$10.07

- c. Primary fuel prices are not direct inputs to the load forecast models. The coal prices used for resource optimization (i.e. to develop the least-cost long-term capacity expansion plan, as outlined in Volume 1, Section 8 of the 2005 IRP) are shown in Table 4 of Appendix A, Volume III of the Plan.
- d. Objection. Development of a revised load forecast based on a different macroeconomic outlook (resulting from a significantly different projection of primary fuel prices) would require significant original work and is beyond the scope of permissible discovery. Without waiver of that objection, however, the Companies state that, while not based on any specific macroeconomic projections, the high and low forecasts outlined in the 2005 IRP are intended to provide a general indication of the sensitivity of the forecast to changing economic conditions (as experienced over the last decade).

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Question No. 2

Responding Witness: Keith Yocum / Counsel

- Q-2. On page 5-46 of Volume 1 of the IRP, a list of possible plant retirements is provided. On that list is Zorn 1. Zorn 1 not only provides peaking power for LG&E, but is also under contract with the Louisville Water Company to provide emergency power for pumping water if the electric system fails.
- a) Has the Louisville Water Company been consulted about the retirement of Zorn 1 and the contract for the provision of emergency power in the event of its retirement? If so, please detail the nature and extent of the consultation and the resolution of the means by which the contractual obligation is to be fulfilled in the event of the retirement.
 - b) If the Louisville Water Company has not been consulted in connection with the retirement of Zorn 1, why not?
 - c) Will LG&E continue to be obligated under the current contract with Louisville Water Company to provide emergency power for pumping water if the electric system fails in the event of the retirement of Zorn 1?
- A-2. As an initial matter, the Companies object to the premise of this request and to the characterization of the nature of, and duties and obligations arising from, the contractual relationship referred to. Without waiver of that objection, however, the Companies state that the Louisville Water Company has not been consulted about the possible retirement of Zorn 1, because at this time that list of units is, just as stated, a "possible" plant retirement list that was utilized in the sensitivity evaluations to the optimal expansion plan. The current plan does not show a retirement of this unit. Until such time as studies are performed and such retirements would be deemed to occur, contacting the water company would be premature. With regard to any obligations under the referenced contract, that contract speaks for itself.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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**Response to the Attorney General's
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Question No. 3

Responding Witness: Keith Yocum / Counsel

- Q-3. On page 6-3 of Volume 1 of the IRP, it states that the LG&E ownership of OVEC is to be reduced from 7% to 5.63%. Please provide a detailed explanation as to why LG&E is giving up ownership of part of this low cost source of power.
- A-3. The Companies object to the premise of the question and to the characterization that anything has been "given up." LG&E reiterates, as stated on page 6-3 of Volume I of the IRP, that the current Inter-Company Power Agreement ("ICPA"), which sets LG&E's Power Participation Ratio ("PPR") at 7%, was set to expire in 2006. LG&E negotiated a contract extension in the form of an Amended and Restated ICPA dated March 13, 2006. This contract was filed with and approved by the Commission in Case No. 2004-00396. Under the Amended and Restated ICPA, LG&E's PPR will become 5.63%. LG&E's ownership interest will remain at 4.9%.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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Question No. 4

Responding Witness: John Wolfram

- Q-4. On page 6-17 of Volume 1 of the IRP, a reduction in interruptible/curtailable power is shown. Please detail LG&E and KU's efforts to increase the amount of interruptible/curtailable power, and explain why these efforts are not working.
- A-4. The Companies meet regularly with industrial and commercial customers to advance the provision of quality customer service on an on-going basis. Many of these customers qualify for service under the new terms of the Curtailable Service Riders ("CSR") that were approved in Case Nos. 2003-00433 and 2003-00434. While the Companies are interested in increasing the amount of energy subject to curtailment under the CSR during times of peak demand, the Companies cannot speak for those customers who qualify for, but have either cancelled or declined to take service under the CSR.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

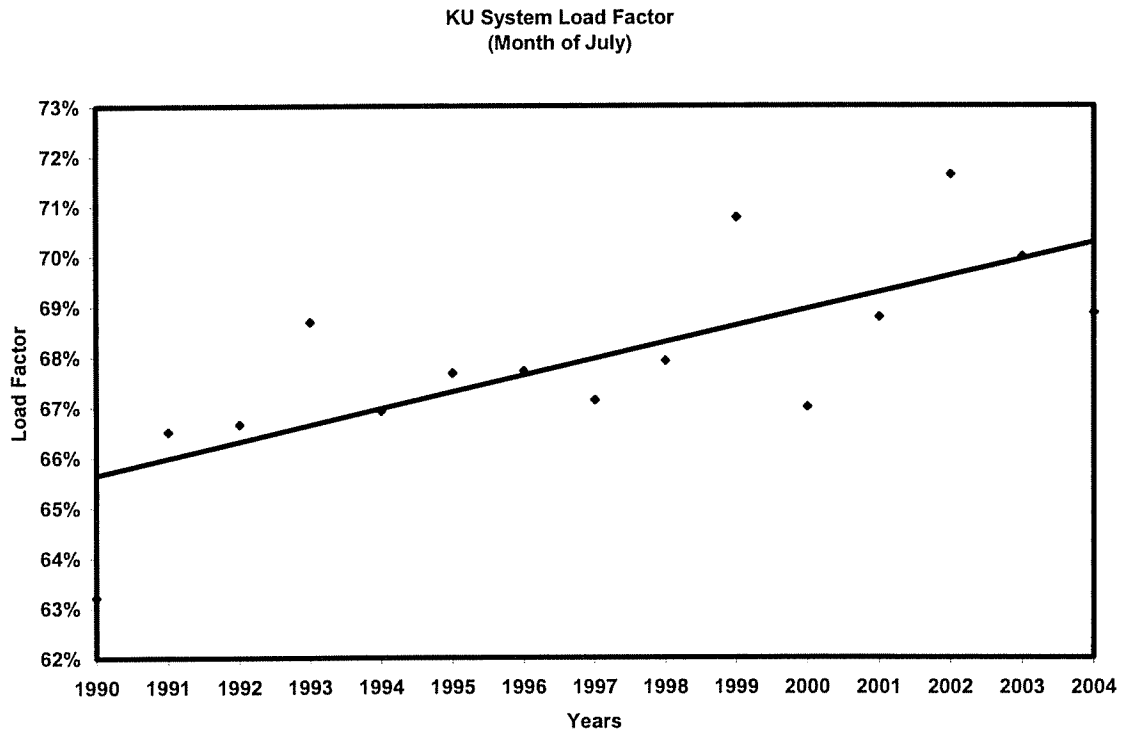
CASE NO. 2005-00162

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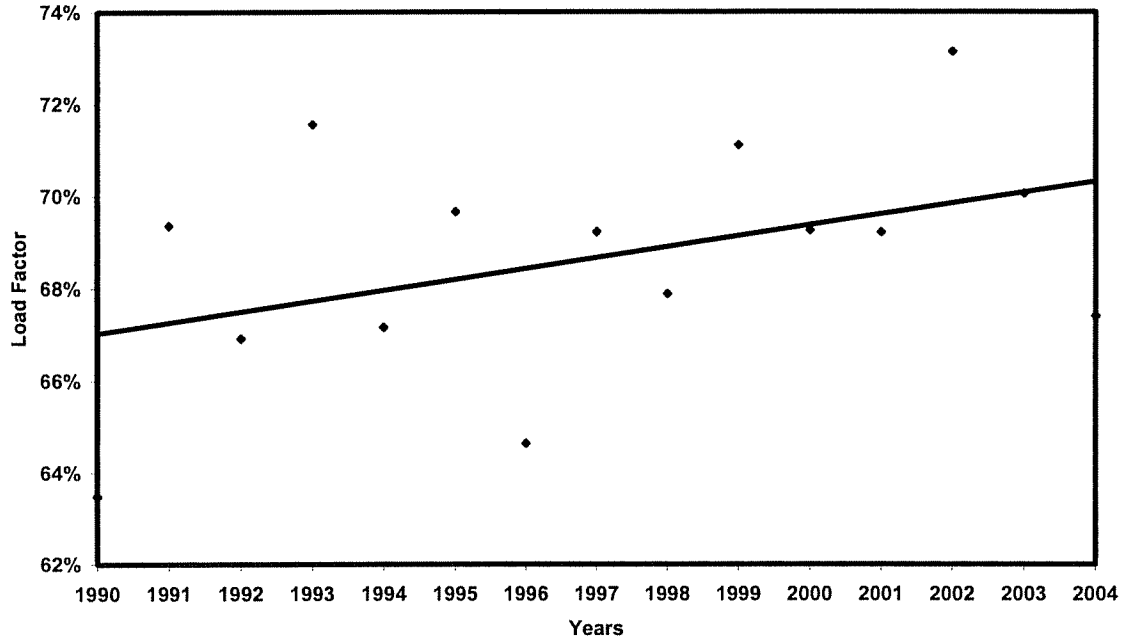
Question No. 5

Responding Witness: Robert Thomson

- Q-5. On page 6-23 of Volume 1 of the IRP, in the last paragraph, it says, "see Graphs 7.(4)(e)1." This graph does not seem to appear in the IRP. Please provide the page number where this graph can be found. If it was left out of the IRP, please supply a copy of this graph.
- A-5. These charts – which show historical load factors for the KU and LG&E systems for the peak month of the year - were inadvertently omitted, and are provided below.



LG&E System Load Factor
(Month of July)



**LOUISVILLE GAS AND ELECTRIC COMPANY
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Question No. 6

Responding Witness: Robert Thomson / Counsel

- Q-6. On page 6-23 of Volume I of the IRP, reference is made to using historic monthly load duration curves and peak load data. For each month of the last five years through July 2005, please provide the following:
- a) The actual recorded peak load for the combined LG&E/KU system for the month and the time at which it occurred.
 - b) The weather normalized peak load for each on the monthly peaks supplied in part (a) above.
 - c) This is an ongoing request, please provide the actual recorded combined system peaks and weather normalized peaks in upcoming months, as this case proceeds, and until this case is concluded.
- A-6. a) This data is supplied in the attached Table 1.
- b) Weather-normalized peak load data is available only on a seasonal basis. Weather-normalized data for the "summer peak" and the "winter peak" for each utility for the 2000 – 2004 period is shown in the IRP, Volume 1, Tables 5.(3)-7 and 5.(3)-12 and Table 5.(3)-1 for the combined system (summer only).
 - c) The Companies object to the "ongoing" nature of the request as beyond the scope of permissible discovery in this proceeding. However, without waiver of that objection, the Companies agree that data will be provided the later of September 2, 2005, or at the informal conference, in the event one should be scheduled.

Table 1
Actual Recorded Peak Load – Combined Companies

Month	2000			2001			2002			2003			2004		
	Day	Hr	Peak (MW)	Day	Hr	Peak (MW)	Day	Hr	Peak (MW)	Day	Hr	Peak (MW)	Day	Hr	Peak (MW)
1	27	8	5,335	3	9	5,449	4	8	5,077	23	21	5,706	7	8	5,446
2	2	8	4,850	2	10	4,584	27	11	5,024	25	10	5,026	16	9	5,040
3	13	9	4,157	6	9	4,611	4	11	5,103	3	8	4,700	10	8	4,607
4	5	8	3,862	11	14	4,420	18	16	4,939	30	17	4,382	13	20	4,365
5	31	17	5,174	18	14	4,986	31	16	5,395	9	14	4,647	21	17	5,615
6	13	16	5,989	14	16	5,824	4	14	6,086	25	16	5,727	17	15	6,050
7	10	15	5,983	24	15	6,016	29	16	6,351	8	14	6,032	13	16	6,223
8	9	16	6,317	8	16	6,221	5	15	6,513	27	15	6,393	19	15	6,093
9	1	16	5,248	6	16	5,688	3	16	6,224	10	16	5,224	15	16	5,519
10	4	16	4,794	18	7	4,019	3	16	5,348	9	14	4,100	29	15	4,193
11	22	8	4,746	21	9	4,173	27	11	4,576	25	9	4,595	29	19	4,386
12	19	19	5,387	31	9	4,471	4	19	5,066	17	19	4,960	20	9	5,690

Month	2005		
	Day	Hr	Peak (MW)
1	18	8	5,829
2	10	20	5,055
3	2	8	5,028
4	11	14	4,372
5	11	17	5,296
6	30	16	6,438
7	25	16	6,833

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Question No. 7

Responding Witness: Robert Thomson

- Q-7. On page 7-18 of Volume 1 of the IRP, cooling equipment efficiencies are mentioned specifically. Please detail where and how the new federal minimum SEER of 13 requirement is included in the load forecast.
- A-7. This was not explicitly included in the load forecast. This regulation was adopted in January 2004, after the completion of the end-use modeling component of the residential forecast. The EIA projections used in the forecast relating to appliance efficiency trends reflected the prior standard (SEER 12).

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Question No. 8

Responding Witness: Keith Yocum

- Q-8. On page 8-2 of Volume 1 of the IRP, pending legislation is discussed, including renewable tax credits. In June 2005, the U.S. Senate passed a comprehensive energy bill that included a 1.8 cent per kilowatt-hour tax credit for incremental hydro at existing facilities for a period of 10 years. If approved in conference committee, this tax credit could become law by this fall.
- a) Did the Companies include this tax credit in the analysis of the addition of units 9 and 10 to the Falls of the Ohio plant?
 - b) If the answer to part (a) is no, please provide an analysis of how the tax credits will affect the cost of the addition of units 9 and 10, and whether this would become a component of the Companies' optimum expansion plan.
 - c) Please provide the study that quantified the cost of adding units 9 and 10 to the Falls of the Ohio plant.
- A-8.
- a) No. The referenced Energy Bill was not passed into law until President Bush signed it on August 8, 2005, well after the filing of this IRP on April 21, 2005.
 - b) The Companies are looking at the various sections of this new energy policy, and that review will be included in the Companies' planning studies, as appropriate, on a prospective basis. That review will not impact the 2005 IRP
 - c) The Companies based the cost for Ohio Falls Units 9 and 10 in the Supply Side screening analysis on information provided by Voith Siemens Hydro ("Voith") in June 2002 and escalated such costs for inflation for 2004. However, the information provided by Voith was only one small paragraph that was incorporated in the modernization report done for Ohio Falls Units 1-8. Therefore, not having the breakdown of the values Voith used, it can be assumed that the tax credit was not included in this addition. Implementing such would require a further study and details from Voith. The paragraph of information which was provided by Voith stated the following:

An expansion of the powerhouse for new Units 9 and 10 was evaluated. The total civil, mechanical, electrical, and controls costs could not be financially justified by the additional energy produced. This expansion included two (2) 209.2" diameter propeller units housed in an extension of the existing powerhouse. These units would rotate at 149 rpm and have a maximum turbine output of 16.8 MW each. The existing intake limited the size of these units. The approximate cost is \$45M. The addition of these units to the scope decreased the ROR of the Units 1-7 upgrade by approximately 8%. ROR for the additional, [sic] Units 9 and 10 alone was negative and further investigation was abandoned.

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Question No. 9

Responding Witness: Keith Yocum

- Q-9. Page 8-75 of Volume 1 of the IRP shows the WV Hydro capacity to have a 69.7% capacity factor. Please reconcile this figure with the 50% capacity factor figure used in the screening of this option in Volume 3, Supply side Analysis. Which figure is correct?
- A-9. As stated in the note at the bottom of page 8-75 of Volume I, the 69.7% capacity factor represents a "summer" capacity factor. The 50% capacity factor is an annual capacity factor for WV Hydro, and is consistent with the annual capacity factor used in modeling for both the supply-side screening analysis and the optimal expansion plan analysis.

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Question No. 10

Responding Witness: Keith Yocum

- Q-10. On page 8-91 of Volume 1 of the IRP, the recommended plan calls for the purchase of power from WV Hydro in 2014 as a result of an RFP. Please provide an update concerning the purchase of this power.
- A-10. As discussed in detail in the record in Case No. 2004-00507, the Companies are continuing discussions with WV Hydro. Updated pricing for the Meldahl facility was provided on June 27, 2005. Pricing associated with the Meldahl project is increasing. The other two hydro projects, at Smithland and Cannelton dams, were not included in WV Hydro's latest offer.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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**Response to the Attorney General's
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Question No. 11

Responding Witness: Keith Yocum

Q-11. Page 8-91 of Volume 1 of the IRP lays out the results of the optimum expansion plan.

- a) Please provide all data input and output results associated with this plan.
- b) Please provide all data input and output results for other expansion plans considered but not selected.
- c) Please provide a detailed description of how the optimum plan is developed, and why the optimum plan did not include other generating options or the generating options being built in different time frames.

A-11. a) Inputs are provided in Volume III's Optimal Expansion Plan Analysis. Model output associated with the base case is provided as an attached CD.

- b) See the response to part (a).
- c) The requested information can be found in Volume III's Optimal Expansion Plan Analysis.

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**Response to the Attorney General's
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Question No. 12

Responding Witness: Keith Yocum

Q-12. On page 8-115 of Volume 1 of the IRP, CO₂ emissions are discussed.

- a) For each of the last 15 years, please provide the combined system CO₂ emissions, including the sum of the emissions of LG&E and KU individually in the applicable years of operation before the system was combined.
- b) For each of the 15 years in the IRP planning horizon, please provide the combined system CO₂ emissions, based on the optimal expansion plan in the IRP.

A-12. Both a) and b) are provided in the table below:

<u>Year</u>	<u>CO₂ tons</u>
1990	25,034,149
1991	26,401,852
1992	25,987,166
1993	28,534,047
1994	28,784,046
1995	28,472,055
1996	31,486,609
1997	30,879,477
1998	32,878,326
1999	33,778,361
2000	32,372,314
2001	33,215,100
2002	35,097,401
2003	36,160,778
<u>2004</u>	<u>35,072,854</u>
2005	31,802,691
2006	32,404,536
2007	33,333,496
2008	33,407,256
2009	34,665,467
2010	35,589,081
2011	36,033,785
2012	36,713,667
2013	36,271,102
2014	37,133,784
2015	37,280,236
2016	37,733,491
2017	38,765,074
2018	39,829,796
2019	41,455,742

**LOUISVILLE GAS AND ELECTRIC COMPANY
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**Response to the Attorney General's
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Question No. 13

Responding Witness: Keith Yocum

Q-13. On page 18 of Volume 3, Reserve Margin Analysis of the IRP, it is stated that the IRP uses a 14% reserve margin for planning purposes. Nowhere in the IRP is an explanation given as to how and why a 14% target was chosen. Please provide an explanation as to how this conclusion was reached, as well as all calculations, assumptions and workpapers used to develop the 14% target for planning purposes.

A-13. The explanation is provided in the Summary on pages 18-19 of Volume III, Reserve Margin Analysis, where it states,

Key variables representing a base case series of simulations and sensitivities were analyzed in optimization studies. The key variables were evaluated over a range of target reserve margin levels. For each series, the minimum reserve margin level was determined. This minimum value strikes the best balance between the perceived cost to the customer of unserved energy and capital/operational expenditures for generation construction or purchased power options. The balance between unserved energy cost and capital expenditures/purchase power is apparent through graphical analysis as the relatively flat region near and around the minimum PVRR value for each case. This suggests that reserve margins in this region of values can be maintained at or near the same cost. Therefore, the value for reserve margin at the high end of the range of reserve margins can be recommended as the planning reserve margin because it represents the maximum system reliability at the lowest cost. The analysis summarized in Table 6, Table 7, Table 8 and Table 9 suggest a 12%-14% reserve margin range would provide the most flexibility to minimize the cost impacts associated with decreasing unit availabilities, variances in seasonal or annual load projections and the wholesale power market. Therefore, given the assumptions and sensitivities analyzed in this study this analysis suggests an optimal target

reserve margin in the range of 12% - 14% and that 14% be the Companies target reserve margin for planning purposes.

Another way of stating the response to Q-7 part d of the Commission Staff's Initial Data Request is that the reserve margin at each level in the range between 12-14% was economically equivalent. As such, the 14% reserve margin was selected as this upper end of the range provides the highest reliability and the greatest insurance for the Companies' ratepayers. Model assumptions are provided in Volume III's Reserve Margin Analysis Appendix A. Supporting documentation is provided as 288 model output files on two attached CD's.

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**Response to the Attorney General's
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Question No. 14

Responding Witness: Keith Yocum

Q-14. In Volume 3, Supply Side Analysis, Exhibits 6 and 8, some renewable resource technologies seem to have capacity factor limits placed on them based on how they operate and their limitations while coal technologies have no capacity factor limitations.

- a) Do you agree that it is impossible for any power plant to achieve a 100% capacity factor over a long period of years?
- b) Please explain why coal fired plants are modeled as 100% capacity factor, when their maximum capacity factor is closer to 90% due to both planned and forced outages.

A-14. a) To achieve 100% capacity factor, a unit would have to run at full capability around the clock and have 100% equivalent availability factor as well. While this is possible, it is not likely. See part b) for further explanation.

- b) In the Supply Side Analysis, the capacity factors that were used were the maximum capacity factor that type of unit could achieve. Therefore, all conventional units were entered with 100% being their maximum. The maximum capacity factors for the renewable resources were provided in a study done by Black and Veatch. As can be seen in Exhibits 6 and 8 of the Supply Side Analysis in Volume III, not only were the coal units given 100%, but so were both the simple cycle and combined cycle combustion turbines. The Companies anticipate that any future base load unit would run in excess of 90%.

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Question No. 15

Responding Witness: Keith Yocum

- Q-15. In Volume 3, Supply Side Analysis, page 21 states that WV Hydro is available in 2008, yet the IRP calls for this option to come on-line in 2014.
- a) Does the Letter of Intent signed with WV Hydro call for this plant to be on-line in 2008 or 2014?
 - b) Is it not correct that WV Hydro will need to bring its units on-line by the end of 2008 to receive the tax credits contained in the U.S. Senate energy bill?
 - c) Since the Letter of Intent only covers a few months, isn't it true that WV Hydro may find a different buyer if it must wait an additional 6 years to sell power to LG&E in 2014?
- A-15. a) Neither. No deal terms are defined in the Letter of Intent ("LOI").
- b) The Companies are not responsible for obtaining tax credits for WV Hydro's facilities and therefore cannot address the issue. If the tax credits provide relief to WV Hydro, the benefits are assumed to be incorporated into any future pricing for the hydro facilities.
 - c) The LOI is not definitive on terms, nor is it public information. The LOI provides exclusivity to LG&E and provides adequate time to negotiate the terms of a Power Purchase Agreement once specific information is provided by WV Hydro.

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Question No. 16

Responding Witness: Keith Yocum

Q-16. In Volume 3, Supply Side Analysis, page 24 states that a price of \$172 per SO₂ allowance was used in the supply side analysis. Please compare this to Volume 3, SO₂ Compliance, where here the Companies used a price of \$400, which also appears to be very low.

- a) Would you agree that the price used by the Companies in the Supply Side Analysis is extremely low?
- b) Would you agree that a low SO₂ allowance price creates a bias toward coal fired options?

A-16. a) In today's prices for SO₂ allowances, the price used in the Supply Side Analysis is low. When the Supply Side Analysis was begun, SO₂ allowances for 2004 were based on the current figures used for planning purposes at the time. However, at the time the SO₂ Compliance report was begun, actual prices had risen and current figures used for planning purposes at that time were based on those actual figures.

- b) No. New coal-fired options would also benefit in a high SO₂ priced environment due to the improved efficiency over aging units resulting in greater displacement of SO₂ costs.

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Question No. 17

Responding Witness: Keith Yocum

Q-17. In Volume 3, Supply Side Analysis, on page 37, the results of the sensitivity analysis for \$20 and \$40 carbon taxes is discussed in a narrative form, but the actual results of these sensitivity analyses are not provided.

a) Please provide Exhibits 8 and 9, but with a \$20 carbon tax instead of \$10.

b) Please provide Exhibits 8 and 9, but with a \$40 carbon tax instead of \$10.

A-17. a) See attached.

b) See attached.

Ehibit 8

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	153	205	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	228	299	369	440	511	582	653	724	795	866
Simple Cycle GE 7EA CT - 73 MW	108	196	284	372	460	548	636	724	813	901	989
Simple Cycle GE 7FA CT - 148 MW	81	168	255	342	429	516	603	690	777	864	951
Simple Cycle GE 7FA CT - 119 MW	145	200	255	310	365	420	476	531	586	641	696
Combined Cycle GE 7EA CT - 119 MW	116	166	216	266	316	367	417	467	517	567	617
Combined Cycle GE 7FA CT - 235 MW	96	146	196	246	296	345	395	445	495	545	595
Combined Cycle 2x1 GE 7FA CT - 484 MW	109	161	212	264	316	368	420	471	523	575	627
W 501F CC CT - 258 MW	141	231	321	411	501	591	---	---	---	---	---
Spark Ignition Engine - 5 MW	103	181	258	336	413	491	---	---	---	---	---
Compression Ignition Engine - 10 MW	191	191	191	191	---	---	---	---	---	---	---
Wind Energy Conversion - 50 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Central Receiver - 50 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Thermal, Solar Chimney - 200 MW	958	982	1007	---	---	---	---	---	---	---	---
Solar Photovoltaic - 50 kW	321	329	338	346	355	364	372	381	390	---	---
Biomass (Co-Fire) - 27.5MW	664	664	664	664	664	664	664	664	664	---	---
Geothermal - 30 MW	402	407	412	416	421	425	---	---	---	---	---
Hydroelectric - New - 30 MW	0	37	73	110	146	183	---	---	---	---	---
WV Hydro	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
MSW Mass Burn - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
RDF Stoker-Fired - 7 MW	219	269	318	368	418	467	517	566	616	---	---
Landfill Gas IC Engine - 5 MW	345	350	355	360	365	370	375	380	385	390	396
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	335	351	367	383	400	416	432	448	464	---	---
Sewage Sludge & Anaerobic Digestion - .085 MW	91	136	182	228	273	319	364	410	---	---	---
Humid Air Turbine Cycle CT - 450 MW	114	161	208	255	302	348	395	442	---	---	---
Kalina Cycle CC CT - 275 MW	140	198	257	316	374	433	491	550	---	---	---
Cheng Cycle CT - 140 MW	213	273	333	394	454	515	575	636	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	237	273	310	346	382	419	455	491	528	---	---
IGCC - 267 MW	207	243	279	315	351	387	423	459	495	---	---
IGCC - 534 MW	1394	1455	1517	1579	1641	1703	---	---	---	---	---
Fuel Cell - 0.2 MW	122	221	---	---	---	---	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	216	311	405	499	593	688	782	---	---	---
Baseload Microturbine - 0.03 MW	167	194	222	249	276	303	330	357	384	411	438
Supercritical Pulverized Coal - 500 MW	177	201	225	250	274	298	322	346	370	394	418
Supercritical Pulverized Coal, High Sulfur - 500 MW	150	177	204	230	257	283	310	337	363	390	416
Supercritical Pulverized Coal - 750 MW	206	234	262	290	318	347	375	403	431	459	488
Subcritical Pulverized Coal - 250 MW	163	191	218	245	273	300	328	355	382	410	437
Subcritical Pulverized Coal - 500 MW	173	197	222	246	270	295	319	344	368	392	417
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	183	206	230	254	277	301	324	348	372	395
Supercritical Pulverized Coal, High Sulfur - 750 MW	215	244	272	301	330	358	387	416	445	473	502
Circulating Fluidized Bed - 250 MW	164	192	220	248	276	305	333	361	389	417	446
Circulating Fluidized Bed - 500 MW	144	144	144	144	---	---	---	---	---	---	---
Ohio Falls 9 and 10	129	149	169	189	209	229	249	269	289	309	329
TC2 732 MW Supercritical Pulverized Coal	129	149	169	189	209	229	249	269	289	309	329
Minimum Levelized \$/kW	0	37	73	110	146	183	249	269	289	309	329

Levelized Dollars at Various Capacity Factors With SO₂ Adders, with CO₂ Adders, and with NO_x Adders

Technology	2004 Dollars (\$/kW yr)											
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Capital Cost-Low												
Heat Rate-Low												
Fuel Forecast-Low												
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	141	189	---	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	209	271	332	393	455	516	578	639	700	762	824
Simple Cycle GE 7EA CT - 73 MW	102	178	255	332	409	485	562	639	715	792	869	946
Simple Cycle GE 7FA CT - 148 MW	77	154	230	307	384	460	537	614	690	767	844	921
Combined Cycle GE 7EA CT - 119 MW	136	184	232	280	328	375	423	471	519	567	615	663
Combined Cycle GE 7FA CT - 235 MW	108	152	195	239	283	327	370	414	458	501	545	589
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	133	177	220	264	307	350	394	437	481	524	568
W 501F CC CT - 258 MW	102	147	192	237	282	327	372	418	463	508	553	598
Spark Ignition Engine - 5 MW	127	208	289	371	452	533	---	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	162	233	303	374	444	---	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---	---
Landfill Gas IC Engine - 5 MW	176	221	267	312	357	402	448	493	538	---	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341	346
Sewage Sludge & Anaerobic Digestion - 085 MW	268	284	300	316	333	349	365	381	397	---	---	---
Humid Air Turbine Cycle CT - 450 MW	80	119	159	199	238	278	317	357	---	---	---	---
Kalina Cycle CC CT - 275 MW	98	139	180	220	261	302	342	383	---	---	---	---
Cheng Cycle CT - 140 MW	119	170	220	271	322	372	423	474	---	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	229	282	334	387	439	492	545	---	---	---	---
IGCC - 267 MW	201	233	266	298	331	363	396	428	461	---	---	---
IGCC - 534 MW	173	205	237	269	301	333	365	397	429	---	---	---
Fuel Cell - 0.2 MW	1263	1317	1371	1425	1479	1534	---	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	184	---	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	180	264	347	430	513	597	680	---	---	---	---
Supercritical Pulverized Coal - 500 MW	153	176	198	221	243	266	288	311	333	356	378	401
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	186	208	230	253	275	298	320	342	365	387	410
Supercritical Pulverized Coal - 750 MW	137	159	181	203	225	247	269	291	313	335	357	380
Subcritical Pulverized Coal - 250 MW	189	212	236	259	283	306	330	353	377	400	424	447
Subcritical Pulverized Coal - 500 MW	149	172	195	218	240	263	286	309	332	354	377	400
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	182	204	227	250	272	295	318	340	363	386	409
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	168	190	213	235	257	279	301	323	345	367	390
Circulating Fluidized Bed - 250 MW	197	221	245	269	293	317	341	365	389	413	437	461
Circulating Fluidized Bed - 500 MW	150	173	196	220	243	267	290	313	337	360	384	408
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	135	154	172	191	209	228	246	265	283	302	321
Minimum Levelized \$/kW	0	37	73	110	146	183	228	246	265	283	302	321

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	144	195	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	215	283	351	418	486	553	621	689	756	824
Simple Cycle GE 7EA CT - 73 MW	102	186	270	354	438	522	606	690	775	859	943
Simple Cycle GE 7FA CT - 148 MW	77	160	243	327	410	493	577	660	743	827	910
Combined Cycle GE 7EA CT - 119 MW	136	188	241	293	346	398	451	503	556	608	661
Combined Cycle GE 7FA CT - 235 MW	108	156	204	251	299	347	395	443	490	538	586
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	138	185	233	280	328	376	423	471	518	566
W 501F CC CT - 258 MW	102	151	201	250	299	349	398	448	497	546	596
Spark Ignition Engine - 5 MW	127	214	301	387	474	561	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	167	242	317	392	467	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	224	272	320	368	416	464	512	560	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	123	167	210	254	297	340	384	---	---	---
Kalina Cycle CC CT - 275 MW	98	143	187	232	276	321	366	410	---	---	---
Cheng Cycle CT - 140 MW	119	175	230	286	342	397	453	509	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	234	292	349	407	464	522	580	---	---	---
IGCC - 267 MW	201	236	271	305	340	375	410	445	479	---	---
IGCC - 534 MW	173	208	242	277	311	345	380	414	448	---	---
Fuel Cell - 0.2 MW	1263	1322	1381	1440	1499	1558	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	192	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	187	278	368	459	549	640	730	---	---	---
Supercritical Pulverized Coal - 500 MW	153	179	205	231	257	282	308	334	360	386	411
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	186	209	232	255	278	301	324	347	370	393
Supercritical Pulverized Coal - 750 MW	137	163	188	213	239	264	289	315	340	365	390
Subcritical Pulverized Coal - 250 MW	189	215	242	269	296	323	350	377	404	431	458
Subcritical Pulverized Coal - 500 MW	149	175	202	228	254	280	306	333	359	385	411
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	182	205	229	252	275	299	322	345	369	392
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	169	192	214	237	260	282	305	328	351	373
Circulating Fluidized Bed - 250 MW	197	224	252	279	307	334	362	389	417	444	472
Circulating Fluidized Bed - 500 MW	150	176	203	230	257	284	310	337	364	391	418
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	136	155	174	193	212	231	250	270	289	308
Minimum Levelized \$/kW	0	37	73	110	146	183	231	250	270	289	308

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
Fuel Forecast- High	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	146	200	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	221	295	369	443	516	590	664	737	811	885
Simple Cycle GE 7EA CT - 73 MW	102	193	285	376	468	559	651	742	834	925	1017
Simple Cycle GE 7FA CT - 148 MW	77	167	257	347	436	526	616	706	796	886	976
Combined Cycle GE 7EA CT - 119 MW	136	193	250	307	364	421	479	536	593	650	707
Combined Cycle GE 7FA CT - 235 MW	108	160	212	264	316	368	420	472	524	576	628
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	142	193	245	297	348	400	452	504	555	607
W 501F CC CT - 258 MW	102	156	209	263	317	371	425	478	532	586	640
Spark Ignition Engine - 5 MW	127	220	312	405	497	590	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	172	252	331	411	491	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	227	277	328	379	429	480	530	581	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	127	174	222	269	316	364	411	---	---	---
Kalina Cycle CC CT - 275 MW	98	147	195	244	292	341	390	438	---	---	---
Cheng Cycle CT - 140 MW	119	180	241	301	362	423	484	545	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	239	302	365	427	490	553	616	---	---	---
IGCC - 267 MW	201	238	275	313	350	387	425	462	499	---	---
IGCC - 534 MW	173	210	247	284	321	358	394	431	468	---	---
Fuel Cell - 0.2 MW	1263	1327	1391	1455	1519	1583	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	199	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	195	292	390	487	585	682	780	---	---	---
Supercritical Pulverized Coal - 500 MW	153	181	209	236	264	291	319	347	374	402	429
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	189	215	242	268	294	320	346	372	398	424
Supercritical Pulverized Coal - 750 MW	137	165	192	219	246	273	300	327	354	381	408
Subcritical Pulverized Coal - 250 MW	189	217	246	275	304	333	361	390	419	448	477
Subcritical Pulverized Coal - 500 MW	149	177	205	233	261	289	317	345	373	401	429
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	185	212	238	264	291	317	344	370	396	423
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	172	198	223	249	275	300	326	352	378	403
Circulating Fluidized Bed - 250 MW	197	226	256	285	315	344	373	403	432	462	491
Circulating Fluidized Bed - 500 MW	150	178	207	236	264	293	322	350	379	408	437
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	139	161	183	205	227	249	271	293	315	337
Minimum Levelized \$/kW	0	37	73	110	146	183	249	271	293	315	337

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	143	193	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	212	277	341	406	470	535	599	664	728	793
Simple Cycle GE 7EA CT - 73 MW	102	182	263	343	423	504	584	665	745	825	906
Simple Cycle GE 7FA CT - 148 MW	77	157	237	317	397	477	557	637	717	797	877
Combined Cycle GE 7EA CT - 119 MW	136	186	236	287	337	387	437	487	538	588	638
Combined Cycle GE 7FA CT - 235 MW	108	154	199	245	291	337	382	428	474	519	565
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	135	181	226	272	317	363	408	454	499	545
W 501F CC CT - 258 MW	102	149	196	243	291	338	385	432	479	527	574
Spark Ignition Engine - 5 MW	127	211	295	379	463	547	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	165	238	310	383	456	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	---	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	223	270	316	363	410	457	503	550	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	121	163	204	246	287	328	370	---	---	---
Kalina Cycle CC CT - 275 MW	98	141	183	226	268	311	354	396	---	---	---
Cheng Cycle CT - 140 MW	119	172	225	279	332	385	439	492	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	232	287	342	397	452	507	563	---	---	---
IGCC - 267 MW	201	235	268	302	336	370	403	437	471	---	---
IGCC - 534 MW	173	207	240	273	307	340	373	407	440	---	---
Fuel Cell - 0.2 MW	1263	1319	1376	1432	1489	1546	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	188	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	184	271	358	444	531	618	705	---	---	---
Supercritical Pulverized Coal - 500 MW	153	177	201	224	248	271	295	319	342	366	389
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	187	210	233	257	280	304	327	350	374	397
Supercritical Pulverized Coal - 750 MW	137	161	184	207	230	253	276	299	322	345	368
Subcritical Pulverized Coal - 250 MW	189	213	238	262	287	311	336	360	385	409	434
Subcritical Pulverized Coal - 500 MW	149	173	197	221	245	269	293	316	340	364	388
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	183	206	230	254	278	302	325	349	373	397
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	169	192	215	238	261	284	307	330	353	376
Circulating Fluidized Bed - 250 MW	197	222	247	272	297	322	348	373	398	423	448
Circulating Fluidized Bed - 500 MW	150	174	199	223	248	273	297	322	346	371	396
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	136	156	175	194	214	233	253	272	291	311
Minimum Levelized \$/kW	0	37	73	110	146	183	233	253	272	291	311

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	Capacity Factors						
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	145	197	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	219	290	360	431	502	573	644	715	786	857
Simple Cycle GE 7EA CT - 73 MW	102	190	278	366	454	542	630	718	807	895	983
Simple Cycle GE 7FA CT - 148 MW	77	164	251	338	425	512	599	686	773	860	947
Combined Cycle GE 7EA CT - 119 MW	136	191	246	301	356	411	467	522	577	632	687
Combined Cycle GE 7FA CT - 235 MW	108	158	208	258	308	359	409	459	509	559	609
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	140	190	240	290	339	389	439	489	539	589
W 501F CC CT - 258 MW	102	154	205	257	309	361	413	464	516	568	620
Spark Ignition Engine - 5 MW	127	217	307	397	487	577	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	170	247	325	402	480	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	226	275	325	375	424	474	523	573	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - 085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	125	171	217	262	308	353	399	---	---	---
Kalina Cycle CC CT - 275 MW	98	145	192	239	286	332	379	426	---	---	---
Cheng Cycle CT - 140 MW	119	177	236	295	353	412	470	529	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	237	297	358	418	479	539	600	---	---	---
IGCC - 267 MW	201	237	274	310	346	383	419	455	492	---	---
IGCC - 534 MW	173	209	245	281	317	353	389	425	461	---	---
Fuel Cell - 0.2 MW	1263	1324	1386	1448	1510	1572	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	196	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	191	286	380	474	568	663	757	---	---	---
Supercritical Pulverized Coal - 500 MW	153	180	208	235	262	289	316	343	370	397	424
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	187	211	236	260	284	308	332	356	380	404
Supercritical Pulverized Coal - 750 MW	137	164	191	217	244	270	297	324	350	377	403
Subcritical Pulverized Coal - 250 MW	189	217	245	273	301	330	358	386	414	442	471
Subcritical Pulverized Coal - 500 MW	149	177	204	231	259	286	314	341	368	396	423
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	183	208	232	256	281	305	330	354	378	403
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	170	193	217	241	264	288	311	335	359	382
Circulating Fluidized Bed - 250 MW	197	226	254	283	312	340	369	398	427	455	484
Circulating Fluidized Bed - 500 MW	150	178	206	234	262	291	319	347	375	403	432
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	137	157	177	197	217	237	257	277	297	317
Minimum Levelized \$/kW	0	37	73	110	146	183	237	257	277	297	317

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	148	203	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	225	303	380	457	535	612	690	767	844	922
Simple Cycle GE 7EA CT - 73 MW	102	198	294	389	485	581	677	773	869	965	1061
Simple Cycle GE 7FA CT - 148 MW	77	171	265	359	452	546	640	734	828	922	1016
Combined Cycle GE 7EA CT - 119 MW	136	196	256	316	376	435	495	555	615	675	735
Combined Cycle GE 7FA CT - 235 MW	108	163	217	272	326	381	435	490	544	599	653
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	144	198	253	307	361	415	469	524	578	632
W 501F CC CT - 258 MW	102	158	215	271	327	384	440	497	553	609	666
Spark Ignition Engine - 5 MW	127	223	319	415	511	607	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	175	257	340	422	505	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	229	281	334	386	439	491	544	596	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	---
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	129	179	229	278	328	377	427	---	---	---
Kalina Cycle CC CT - 275 MW	98	149	200	251	302	353	404	455	---	---	---
Cheng Cycle CT - 140 MW	119	183	247	310	374	438	502	566	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	242	308	374	439	505	571	637	---	---	---
IGCC - 267 MW	201	240	279	318	357	396	435	473	512	---	---
IGCC - 534 MW	173	212	250	289	327	366	404	443	481	---	---
Fuel Cell - 0.2 MW	1263	1330	1397	1464	1531	1598	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	204	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	199	301	403	504	606	708	810	---	---	---
Supercritical Pulverized Coal - 500 MW	153	182	211	240	269	298	327	356	385	414	443
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	191	218	245	272	300	327	354	382	409	436
Supercritical Pulverized Coal - 750 MW	137	166	194	223	251	279	308	336	365	393	421
Subcritical Pulverized Coal - 250 MW	189	219	249	279	309	340	370	400	430	460	491
Subcritical Pulverized Coal - 500 MW	149	179	208	237	267	296	326	355	384	414	443
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	187	214	242	270	297	325	353	380	408	436
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	173	200	227	253	280	307	334	361	387	414
Circulating Fluidized Bed - 250 MW	197	228	258	289	320	350	381	412	443	473	504
Circulating Fluidized Bed - 500 MW	150	180	210	240	270	300	330	360	390	420	451
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	140	163	186	209	232	255	278	302	325	348
Minimum Levelized \$/kW	0	37	73	110	146	183	255	278	302	325	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	144	195	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	215	283	350	418	485	553	620	688	755	823
Simple Cycle GE 7EA CT - 73 MW	102	186	270	354	438	522	606	690	775	859	943
Simple Cycle GE 7FA CT - 148 MW	77	160	243	327	410	493	577	660	743	827	910
Combined Cycle GE 7EA CT - 119 MW	136	188	241	293	346	398	451	503	556	608	661
Combined Cycle GE 7FA CT - 235 MW	108	156	204	251	299	347	395	443	490	538	586
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	138	185	233	280	328	376	423	471	518	566
W 501F CC CT - 258 MW	102	151	201	250	299	349	398	448	497	546	596
Spark Ignition Engine - 5 MW	127	214	301	387	474	561	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	167	242	317	392	467	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	---	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	224	273	321	370	418	466	515	563	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	123	167	210	254	297	340	384	---	---	---
Kalina Cycle CC CT - 275 MW	98	143	187	232	276	321	366	410	---	---	---
Cheng Cycle CT - 140 MW	119	175	230	286	342	397	453	509	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	234	292	349	407	464	522	580	---	---	---
IGCC - 267 MW	201	236	271	306	342	377	412	447	482	---	---
IGCC - 534 MW	173	208	243	278	312	347	382	416	451	---	---
Fuel Cell - 0.2 MW	1263	1322	1381	1440	1499	1558	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	192	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	187	278	368	459	549	640	730	---	---	---
Supercritical Pulverized Coal - 500 MW	153	178	203	227	252	276	301	326	350	375	399
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	188	212	236	261	285	310	334	358	383	407
Supercritical Pulverized Coal - 750 MW	137	162	186	210	234	258	283	307	331	355	379
Subcritical Pulverized Coal - 250 MW	189	214	240	265	291	317	342	368	393	419	445
Subcritical Pulverized Coal - 500 MW	149	174	199	224	249	274	299	324	349	374	399
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	184	208	233	258	282	307	332	356	381	406
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	170	194	218	242	266	290	314	337	361	385
Circulating Fluidized Bed - 250 MW	197	223	250	276	302	328	355	381	407	434	460
Circulating Fluidized Bed - 500 MW	150	175	201	227	252	278	304	329	355	381	407
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	137	157	178	198	218	239	259	279	299	320
Minimum Levelized \$/kW	0	37	73	110	146	183	239	259	279	299	320

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	146	200	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	222	296	371	445	519	594	668	742	816	891
Simple Cycle GE 7EA CT - 73 MW	102	194	286	378	471	563	655	747	839	932	1024
Simple Cycle GE 7FA CT - 148 MW	77	167	258	349	439	530	620	711	802	892	983
Combined Cycle GE 7EA CT - 119 MW	136	194	251	309	366	424	482	539	597	654	712
Combined Cycle GE 7FA CT - 235 MW	108	160	213	265	318	370	422	475	527	580	632
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	142	194	246	298	350	403	455	507	559	611
W 501F CC CT - 258 MW	102	156	210	264	319	373	427	481	535	590	644
Spark Ignition Engine - 5 MW	127	220	313	407	500	593	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	172	252	333	413	493	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	227	279	330	382	433	484	536	587	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	127	175	223	270	318	365	413	---	---	---
Kalina Cycle CC CT - 275 MW	98	147	196	245	294	343	392	441	---	---	---
Cheng Cycle CT - 140 MW	119	180	241	303	364	425	487	548	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	240	303	366	429	492	555	619	---	---	---
IGCC - 267 MW	201	239	277	315	352	390	428	466	504	---	---
IGCC - 534 MW	173	211	248	286	323	361	398	435	473	---	---
Fuel Cell - 0.2 MW	1263	1327	1391	1456	1520	1585	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	200	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	195	294	392	490	588	687	785	---	---	---
Supercritical Pulverized Coal - 500 MW	153	182	210	238	267	295	323	351	380	408	436
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	188	213	238	263	288	313	338	363	388	413
Supercritical Pulverized Coal - 750 MW	137	165	193	221	249	276	304	332	360	388	415
Subcritical Pulverized Coal - 250 MW	189	218	248	277	307	336	366	395	425	454	484
Subcritical Pulverized Coal - 500 MW	149	178	207	236	264	293	322	351	380	408	437
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	184	210	235	260	286	311	337	362	387	413
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	171	195	220	245	269	294	318	343	368	392
Circulating Fluidized Bed - 250 MW	197	227	257	287	317	347	378	408	438	468	498
Circulating Fluidized Bed - 500 MW	150	179	208	238	267	297	326	355	385	414	444
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	138	159	179	200	221	242	263	284	305	326
Minimum Levelized \$/kW	0	37	73	110	146	183	242	263	284	305	326

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	149	205	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	229	310	391	472	553	634	715	797	878	959
Simple Cycle GE 7EA CT - 73 MW	102	202	302	403	503	603	704	804	904	1004	1105
Simple Cycle GE 7FA CT - 148 MW	77	175	273	371	468	566	664	762	860	958	1056
Combined Cycle GE 7EA CT - 119 MW	136	199	261	324	387	449	512	575	638	700	763
Combined Cycle GE 7FA CT - 235 MW	108	165	222	279	336	393	450	507	564	621	678
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	147	203	260	317	373	430	487	544	600	657
W 501F CC CT - 258 MW	102	161	220	279	338	397	456	515	574	633	692
Spark Ignition Engine - 5 MW	127	227	326	426	525	625	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	177	262	348	433	518	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
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Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
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Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	230	285	339	394	448	502	557	611	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	132	184	235	287	339	391	443	---	---	---
Kalina Cycle CC CT - 275 MW	98	152	205	258	312	365	419	472	---	---	---
Cheng Cycle CT - 140 MW	119	186	253	319	386	453	520	587	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	245	314	383	451	520	589	658	---	---	---
IGCC - 267 MW	201	241	282	323	363	404	444	485	526	---	---
IGCC - 534 MW	173	214	254	294	334	374	414	454	494	---	---
Fuel Cell - 0.2 MW	1263	1332	1402	1472	1542	1612	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	208	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	203	309	415	522	628	734	840	---	---	---
Supercritical Pulverized Coal - 500 MW	153	184	214	244	275	305	335	365	396	426	456
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	192	220	248	277	305	334	362	390	419	447
Supercritical Pulverized Coal - 750 MW	137	167	197	227	256	286	316	345	375	405	434
Subcritical Pulverized Coal - 250 MW	189	220	252	283	315	346	378	409	441	472	504
Subcritical Pulverized Coal - 500 MW	149	180	211	242	272	303	334	365	396	426	457
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	188	217	246	274	303	332	361	390	419	448
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	174	202	230	258	286	314	342	369	397	425
Circulating Fluidized Bed - 250 MW	197	229	261	294	326	358	390	422	455	487	519
Circulating Fluidized Bed - 500 MW	150	181	213	244	276	307	339	370	402	433	465
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	141	165	189	214	238	262	286	310	335	359
Minimum Levelized \$/kW	0	37	73	110	146	183	262	286	310	335	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	149	197	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	218	280	341	402	464	525	587	648	709	771
Simple Cycle GE 7EA CT - 73 MW	108	184	261	338	415	491	568	645	721	798	875
Simple Cycle GE 7FA CT - 148 MW	81	158	234	311	388	464	541	618	694	771	848
Simple Cycle GE 7FA CT - 119 MW	145	193	241	289	337	384	432	480	528	576	624
Combined Cycle GE 7EA CT - 235 MW	116	160	203	247	291	335	378	422	466	509	553
Combined Cycle GE 7FA CT - 235 MW	96	139	183	226	270	313	356	400	443	487	530
Combined Cycle 2x1 GE 7FA CT - 484 MW	109	154	199	244	289	334	379	425	470	515	560
W 501F CC CT - 258 MW	141	222	303	385	466	547	---	---	---	---	---
Spark Ignition Engine - 5 MW	103	173	244	314	385	455	---	---	---	---	---
Compression Ignition Engine - 10 MW	191	191	191	191	---	---	---	---	---	---	---
Wind Energy Conversion - 50 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Central Receiver - 50 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Thermal, Solar Chimney - 200 MW	958	982	1007	---	---	---	---	---	---	---	---
Solar Photovoltaic - 50 kW	321	329	338	346	355	364	372	381	390	---	---
Biomass (Co-Fire) - 27.5MW	664	664	664	664	664	664	664	664	664	---	---
Geothermal - 30 MW	402	407	412	416	421	425	---	---	---	---	---
Hydroelectric - New - 30 MW	0	37	73	110	146	183	---	---	---	---	---
WV Hydro	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
MSW Mass Burn - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
RDF Stoker-Fired - 7 MW	219	264	310	355	400	445	491	536	581	---	---
Landfill Gas IC Engine - 5 MW	345	350	355	360	365	370	375	380	385	390	396
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	335	351	367	383	400	416	432	448	464	---	---
Sewage Sludge & Anaerobic Digestion - .085 MW	91	130	170	210	249	289	328	368	---	---	---
Humid Air Turbine Cycle CT - 450 MW	114	155	196	236	277	318	358	399	---	---	---
Kalina Cycle CC CT - 275 MW	140	191	241	292	343	393	444	495	---	---	---
Cheng Cycle CT - 140 MW	213	265	318	370	423	475	528	581	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	237	269	302	334	367	399	432	464	497	---	---
IGCC - 267 MW	207	239	271	303	335	367	399	431	463	---	---
IGCC - 534 MW	1394	1448	1502	1556	1610	1665	---	---	---	---	---
Fuel Cell - 0.2 MW	122	209	---	---	---	---	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	205	289	372	455	538	622	705	---	---	---
Baseload Microturbine - 0.03 MW	167	190	212	235	257	280	302	325	347	370	392
Supercritical Pulverized Coal - 500 MW	177	200	222	244	267	289	312	334	356	379	401
Supercritical Pulverized Coal, High Sulfur - 500 MW	150	172	194	216	238	260	282	304	326	348	370
Supercritical Pulverized Coal - 750 MW	206	229	253	276	300	323	347	370	394	417	441
Subcritical Pulverized Coal - 250 MW	163	186	209	232	254	277	300	323	346	368	391
Subcritical Pulverized Coal - 500 MW	173	196	218	241	264	286	309	332	354	377	400
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	181	203	226	248	270	292	314	336	358	380
Supercritical Pulverized Coal, High Sulfur - 750 MW	215	239	263	287	311	335	359	383	407	431	455
Circulating Fluidized Bed - 250 MW	164	187	210	234	257	281	304	327	351	374	398
Circulating Fluidized Bed - 500 MW	144	144	144	144	---	---	---	---	---	---	---
Ohio Falls 9 and 10	129	147	166	184	203	221	240	258	277	295	314
TC2 732 MW Supercritical Pulverized Coal	0	37	73	110	146	183	240	258	277	295	314
Minimum Levelized \$/kW	0	37	73	110	146	183	240	258	277	295	314

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	152	203	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	224	292	360	427	495	562	630	698	765	833
Simple Cycle GE 7EA CT - 73 MW	108	192	276	360	444	528	612	696	781	865	949
Simple Cycle GE 7FA CT - 148 MW	81	164	247	331	414	497	581	664	747	831	914
Combined Cycle GE 7EA CT - 119 MW	145	197	250	302	355	407	460	512	565	617	670
Combined Cycle GE 7FA CT - 235 MW	116	164	212	259	307	355	403	451	498	546	594
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	144	191	239	286	334	382	429	477	524	572
W 501F CC CT - 258 MW	109	158	208	257	306	356	405	455	504	553	603
Spark Ignition Engine - 5 MW	141	228	315	401	488	575	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	178	253	328	403	478	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	267	315	363	411	459	507	555	603	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	134	178	221	265	308	351	395	---	---	---
Kalina Cycle CC CT - 275 MW	114	159	203	248	292	337	382	426	---	---	---
Cheng Cycle CT - 140 MW	140	196	251	307	363	418	474	530	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	270	328	385	443	500	558	616	---	---	---
IGCC - 267 MW	237	272	307	341	376	411	446	481	515	---	---
IGCC - 534 MW	207	242	276	311	345	379	414	448	482	---	---
Fuel Cell - 0.2 MW	1394	1453	1512	1571	1630	1689	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	217	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	212	303	393	484	574	665	755	---	---	---
Supercritical Pulverized Coal - 500 MW	167	193	219	245	271	296	322	348	374	400	425
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	200	223	246	269	292	315	338	361	384	407
Supercritical Pulverized Coal - 750 MW	150	176	201	226	252	277	302	328	353	378	403
Subcritical Pulverized Coal - 250 MW	206	232	259	286	313	340	367	394	421	448	475
Subcritical Pulverized Coal - 500 MW	163	189	216	242	268	294	320	347	373	399	425
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	196	219	243	266	289	313	336	359	383	406
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	182	205	227	250	273	295	318	341	364	386
Circulating Fluidized Bed - 250 MW	215	242	270	297	325	352	380	407	435	462	490
Circulating Fluidized Bed - 500 MW	164	190	217	244	271	298	324	351	378	405	432
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	148	167	186	205	224	243	262	282	301	320
Minimum Levelized \$/kW	0	37	73	110	146	183	243	262	282	301	320

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	154	208	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	230	304	378	452	525	599	673	746	820	894
Simple Cycle GE 7EA CT - 73 MW	108	199	291	382	474	565	657	748	840	931	1023
Simple Cycle GE 7FA CT - 148 MW	81	171	261	351	440	530	620	710	800	890	980
Combined Cycle GE 7EA CT - 119 MW	145	202	259	316	373	430	488	545	602	659	716
Combined Cycle GE 7FA CT - 235 MW	116	168	220	272	324	376	428	480	532	584	636
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	148	199	251	303	354	406	458	510	561	613
W 501F CC CT - 258 MW	109	163	216	270	324	378	432	485	539	593	647
Spark Ignition Engine - 5 MW	141	234	326	419	511	604	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	183	263	342	422	502	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	270	320	371	422	472	523	573	624	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	138	185	233	280	327	375	422	---	---	---
Kalina Cycle CC CT - 275 MW	114	163	211	260	308	357	406	454	---	---	---
Cheng Cycle CT - 140 MW	140	201	262	322	383	444	505	566	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	275	338	401	463	526	589	652	---	---	---
IGCC - 267 MW	237	274	311	349	386	423	461	498	535	---	---
IGCC - 534 MW	207	244	281	318	355	392	428	465	502	---	---
Fuel Cell - 0.2 MW	1394	1458	1522	1586	1650	1714	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	224	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	220	317	415	512	610	707	805	---	---	---
Supercritical Pulverized Coal - 500 MW	167	195	223	250	278	305	333	361	388	416	443
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	203	229	256	282	308	334	360	386	412	438
Supercritical Pulverized Coal - 750 MW	150	178	205	232	259	286	313	340	367	394	421
Subcritical Pulverized Coal - 250 MW	206	234	263	292	321	350	378	407	436	465	494
Subcritical Pulverized Coal - 500 MW	163	191	219	247	275	303	331	359	387	415	443
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	199	226	252	278	305	331	358	384	410	437
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	185	211	236	262	288	313	339	365	391	416
Circulating Fluidized Bed - 250 MW	215	244	274	303	333	362	391	421	450	480	509
Circulating Fluidized Bed - 500 MW	164	192	221	250	278	307	336	364	393	422	451
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	151	173	195	217	239	261	283	305	327	349
Minimum Levelized \$/kW	0	37	73	110	146	183	261	283	305	327	349

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	151	201	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	221	286	350	415	479	544	608	673	737	802
Simple Cycle GE 7EA CT - 73 MW	108	188	269	349	429	510	590	671	751	831	912
Simple Cycle GE 7FA CT - 148 MW	81	161	241	321	401	481	561	641	721	801	881
Combined Cycle GE 7EA CT - 119 MW	145	195	245	296	346	396	446	496	547	597	647
Combined Cycle GE 7FA CT - 235 MW	116	162	207	253	299	345	390	436	482	527	573
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	141	187	232	278	323	369	414	460	505	551
W 501F CC CT - 258 MW	109	156	203	250	298	345	392	439	486	534	581
Spark Ignition Engine - 5 MW	141	225	309	393	477	561	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	176	249	321	394	467	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
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TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - 085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	132	174	215	257	298	339	381	---	---	---
Kalina Cycle CC CT - 275 MW	114	157	199	242	284	327	370	412	---	---	---
Cheng Cycle CT - 140 MW	140	193	246	300	353	406	460	513	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	268	323	378	433	488	543	599	---	---	---
IGCC - 267 MW	237	271	304	338	372	406	439	473	507	---	---
IGCC - 534 MW	207	241	274	307	341	374	407	441	474	---	---
Fuel Cell - 0.2 MW	1394	1450	1507	1563	1620	1677	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	213	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	209	296	383	469	556	643	730	---	---	---
Supercritical Pulverized Coal - 500 MW	167	191	215	238	262	285	309	333	356	380	403
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	201	224	247	271	294	318	341	364	388	411
Supercritical Pulverized Coal - 750 MW	150	174	197	220	243	266	289	312	335	358	381
Subcritical Pulverized Coal - 250 MW	206	230	255	279	304	328	353	377	402	426	451
Subcritical Pulverized Coal - 500 MW	163	187	211	235	259	283	307	330	354	378	402
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	197	220	244	268	292	316	339	363	387	411
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	182	205	228	251	274	297	320	343	366	389
Circulating Fluidized Bed - 250 MW	215	240	265	290	315	340	366	391	416	441	466
Circulating Fluidized Bed - 500 MW	164	188	213	237	262	287	311	336	360	385	410
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	148	168	187	206	226	245	265	284	303	323
Minimum Levelized \$/kW	0	37	73	110	146	183	245	265	284	303	323

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	156	211	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	234	312	389	466	544	621	699	776	853	931
Simple Cycle GE 7EA CT - 73 MW	108	204	300	395	491	587	683	779	875	971	1067
Simple Cycle GE 7FA CT - 148 MW	81	175	269	363	456	550	644	738	832	926	1020
Combined Cycle GE 7EA CT - 119 MW	145	205	265	325	385	444	504	564	624	684	744
Combined Cycle GE 7FA CT - 235 MW	116	171	225	280	334	389	443	498	552	607	661
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	150	204	259	313	367	421	475	530	584	638
W 501F CC CT - 258 MW	109	165	222	278	334	391	447	504	560	616	673
Spark Ignition Engine - 5 MW	141	237	333	429	525	621	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	186	268	351	433	516	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	272	324	377	429	482	534	587	639	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - 0.85 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	140	190	240	289	339	388	438	---	---	---
Kalina Cycle CC CT - 275 MW	114	165	216	267	318	369	420	471	---	---	---
Cheng Cycle CT - 140 MW	140	204	268	331	395	459	523	587	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	278	344	410	475	541	607	673	---	---	---
IGCC - 267 MW	237	276	315	354	393	432	471	509	548	---	---
IGCC - 534 MW	207	246	284	323	361	400	438	477	515	---	---
Fuel Cell - 0.2 MW	1394	1461	1528	1595	1662	1729	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	229	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	224	326	428	529	631	733	835	---	---	---
Supercritical Pulverized Coal - 500 MW	167	196	225	254	283	312	341	370	399	428	457
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	205	232	259	286	314	341	368	396	423	450
Supercritical Pulverized Coal - 750 MW	150	179	207	236	264	292	321	349	378	406	434
Subcritical Pulverized Coal - 250 MW	206	236	266	296	326	357	387	417	447	477	508
Subcritical Pulverized Coal - 500 MW	163	193	222	251	281	310	340	369	398	428	457
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	201	228	256	284	311	339	367	394	422	450
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	186	213	240	266	293	320	347	374	400	427
Circulating Fluidized Bed - 250 MW	215	246	276	307	338	368	399	430	461	491	522
Circulating Fluidized Bed - 500 MW	164	194	224	254	284	314	344	374	404	434	465
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	152	175	198	221	244	267	290	314	337	360
Minimum Levelized \$/kW	0	37	73	110	146	183	267	290	314	337	360

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	152	203	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	224	292	359	427	494	562	629	697	764	832
Simple Cycle GE 7EA CT - 73 MW	108	192	276	360	444	528	612	696	781	865	949
Simple Cycle GE 7FA CT - 148 MW	81	164	247	331	414	497	581	664	747	831	914
Combined Cycle GE 7EA CT - 119 MW	145	197	250	302	355	407	460	512	565	617	670
Combined Cycle GE 7FA CT - 235 MW	116	164	212	259	307	355	403	451	498	546	594
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	144	191	239	286	334	382	429	477	524	572
W 501F CC CT - 258 MW	109	158	208	257	306	356	405	455	504	553	603
Spark Ignition Engine - 5 MW	141	228	315	401	488	575	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	178	253	328	403	478	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
MSW Mass Burn - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
RDF Stoker-Fired - 7 MW	219	267	316	364	413	461	509	558	606	---	---
Landfill Gas IC Engine - 5 MW	345	350	355	360	365	370	375	380	385	390	396
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	335	351	367	383	400	416	432	448	464	---	---
Sewage Sludge & Anaerobic Digestion - .085 MW	91	134	178	221	265	308	351	395	---	---	---
Humid Air Turbine Cycle CT - 450 MW	114	159	203	248	292	337	382	426	---	---	---
Kalina Cycle CC CT - 275 MW	140	196	251	307	363	418	474	530	---	---	---
Cheng Cycle CT - 140 MW	213	270	328	385	443	500	558	616	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	237	272	307	342	378	413	448	483	518	---	---
IGCC - 267 MW	207	242	277	312	346	381	416	450	485	---	---
IGCC - 534 MW	1394	1453	1512	1571	1630	1689	---	---	---	---	---
Fuel Cell - 0.2 MW	122	217	---	---	---	---	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	212	303	393	484	574	665	755	---	---	---
Baseload Microturbine - 0.03 MW	167	192	217	241	266	290	315	340	364	389	413
Supercritical Pulverized Coal - 500 MW	177	202	226	250	275	299	324	348	372	397	421
Supercritical Pulverized Coal, High Sulfur - 500 MW	150	175	199	223	247	271	296	320	344	368	392
Supercritical Pulverized Coal - 750 MW	206	231	257	282	308	334	359	385	410	436	462
Subcritical Pulverized Coal - 250 MW	163	188	213	238	263	288	313	338	363	388	413
Subcritical Pulverized Coal - 500 MW	173	198	222	247	272	296	321	346	370	395	420
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	183	207	231	255	279	303	327	350	374	398
Supercritical Pulverized Coal, High Sulfur - 750 MW	215	241	268	294	320	346	373	399	425	452	478
Circulating Fluidized Bed - 250 MW	164	189	215	241	266	292	318	343	369	395	421
Circulating Fluidized Bed - 500 MW	144	144	144	144	---	---	---	---	---	---	---
Ohio Falls 9 and 10	129	149	169	190	210	230	251	271	291	311	332
TC2 732 MW Supercritical Pulverized Coal	129	149	169	190	210	230	251	271	291	311	332
Minimum Levelized \$/kW	0	37	73	110	146	183	251	271	291	311	332

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	154	208	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	231	305	380	454	528	603	677	751	825	900
Simple Cycle GE 7EA CT - 73 MW	108	200	292	384	477	569	661	753	845	938	1030
Simple Cycle GE 7FA CT - 148 MW	81	171	262	353	443	534	624	715	806	896	987
Combined Cycle GE 7EA CT - 119 MW	145	203	260	318	375	433	491	548	606	663	721
Combined Cycle GE 7FA CT - 235 MW	116	168	221	273	326	378	430	483	535	588	640
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	148	200	252	304	356	409	461	513	565	617
W 501F CC CT - 258 MW	109	163	217	271	326	380	434	488	542	597	651
Spark Ignition Engine - 5 MW	141	234	327	421	514	607	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	183	263	344	424	504	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	270	322	373	425	476	527	579	630	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	138	186	234	281	329	376	424	---	---	---
Kalina Cycle CC CT - 275 MW	114	163	212	261	310	359	408	457	---	---	---
Cheng Cycle CT - 140 MW	140	201	262	324	385	446	508	569	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	276	339	402	465	528	591	655	---	---	---
IGCC - 267 MW	237	275	313	351	388	426	464	502	540	---	---
IGCC - 534 MW	207	245	282	320	357	395	432	469	507	---	---
Fuel Cell - 0.2 MW	1394	1458	1522	1587	1651	1716	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	225	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	220	319	417	515	613	712	810	---	---	---
Supercritical Pulverized Coal - 500 MW	167	196	224	252	281	309	337	365	394	422	450
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	202	227	252	277	302	327	352	377	402	427
Supercritical Pulverized Coal - 750 MW	150	178	206	234	262	289	317	345	373	401	428
Subcritical Pulverized Coal - 250 MW	206	235	265	294	324	353	383	412	442	471	501
Subcritical Pulverized Coal - 500 MW	163	192	221	250	278	307	336	365	394	422	451
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	198	224	249	274	300	325	351	376	401	427
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	184	208	233	258	282	307	331	356	381	405
Circulating Fluidized Bed - 250 MW	215	245	275	305	335	365	396	426	456	486	516
Circulating Fluidized Bed - 500 MW	164	193	222	252	281	311	340	369	399	428	458
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	150	171	191	212	233	254	275	296	317	338
Minimum Levelized \$/kW	0	37	73	110	146	183	254	275	296	317	338

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	157	213	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	238	319	400	481	562	643	724	806	887	968
Simple Cycle GE 7EA CT - 73 MW	108	208	308	409	509	609	710	810	910	1010	1111
Simple Cycle GE 7FA CT - 148 MW	81	179	277	375	472	570	668	766	864	962	1060
Combined Cycle GE 7EA CT - 119 MW	145	208	270	333	396	458	521	584	647	709	772
Combined Cycle GE 7FA CT - 235 MW	116	173	230	287	344	401	458	515	572	629	686
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	153	209	266	323	379	436	493	550	606	663
W 501F CC CT - 258 MW	109	168	227	286	345	404	463	522	581	640	699
Spark Ignition Engine - 5 MW	141	241	340	440	539	639	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	188	273	359	444	529	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	273	328	382	437	491	545	600	654	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	143	195	246	298	350	402	454	---	---	---
Kalina Cycle CC CT - 275 MW	114	168	221	274	328	381	435	488	---	---	---
Cheng Cycle CT - 140 MW	140	207	274	340	407	474	541	608	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	281	350	419	487	556	625	694	---	---	---
IGCC - 267 MW	237	277	318	359	399	440	480	521	562	---	---
IGCC - 534 MW	207	248	288	328	368	408	448	488	528	---	---
Fuel Cell - 0.2 MW	1394	1463	1533	1603	1673	1743	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	233	---	---	---	---	759	865	---	---	---
Baseload Microturbine - 0.03 MW	122	228	334	440	547	653	759	865	---	---	---
Supercritical Pulverized Coal - 500 MW	167	198	228	258	289	319	349	379	410	440	470
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	206	234	262	291	319	348	376	404	433	461
Supercritical Pulverized Coal - 750 MW	150	180	210	240	269	299	329	358	388	418	447
Subcritical Pulverized Coal - 250 MW	206	237	269	300	332	363	395	426	458	489	521
Subcritical Pulverized Coal - 500 MW	163	194	225	256	286	317	348	379	410	440	471
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	202	231	260	288	317	346	375	404	433	462
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	187	215	243	271	299	327	355	382	410	438
Circulating Fluidized Bed - 250 MW	215	247	279	312	344	376	408	440	473	505	537
Circulating Fluidized Bed - 500 MW	164	195	227	258	290	321	353	384	416	447	479
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	153	177	201	226	250	274	298	322	347	371
Minimum Levelized \$/kW	0	37	73	110	146	183	274	298	322	347	371

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	165	213	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	227	289	350	411	473	534	596	657	718	780
Simple Cycle GE 7EA CT - 73 MW	114	190	267	344	421	497	574	651	727	804	881
Simple Cycle GE 7FA CT - 148 MW	86	163	239	316	393	469	546	623	699	776	853
Combined Cycle GE 7EA CT - 119 MW	155	203	251	299	347	394	442	490	538	586	634
Combined Cycle GE 7FA CT - 235 MW	123	167	210	254	298	342	385	429	473	516	560
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	144	188	231	275	318	361	405	448	492	535
W 501F CC CT - 258 MW	116	161	206	251	296	341	386	432	477	522	567
Spark Ignition Engine - 5 MW	155	236	317	399	480	561	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	183	254	324	395	465	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	---	---	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	308	354	399	444	489	535	580	625	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	141	181	221	260	300	339	379	---	---	---
Kalina Cycle CC CT - 275 MW	131	172	213	253	294	335	375	416	---	---	---
Cheng Cycle CT - 140 MW	160	211	261	312	363	413	464	515	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	300	353	405	458	510	563	616	---	---	---
IGCC - 267 MW	273	305	338	370	403	435	468	500	533	---	---
IGCC - 534 MW	240	272	304	336	368	400	432	464	496	---	---
Fuel Cell - 0.2 MW	1526	1580	1634	1688	1742	1797	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	233	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	229	313	396	479	562	646	729	---	---	---
Supercritical Pulverized Coal - 500 MW	181	204	226	249	271	294	316	339	361	384	406
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	215	237	259	282	304	327	349	371	394	416
Supercritical Pulverized Coal - 750 MW	162	184	206	228	250	272	294	316	338	360	382
Subcritical Pulverized Coal - 250 MW	223	246	270	293	317	340	364	387	411	434	458
Subcritical Pulverized Coal - 500 MW	176	199	222	245	267	290	313	336	359	381	404
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	210	232	255	278	300	323	346	368	391	414
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	195	217	240	262	284	306	328	350	372	394
Circulating Fluidized Bed - 250 MW	232	256	280	304	328	352	376	400	424	448	472
Circulating Fluidized Bed - 500 MW	178	201	224	248	271	295	318	341	365	388	412
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	158	177	195	214	232	251	269	288	306	325
Minimum Levelized \$/kW	0	37	73	110	146	183	251	269	288	306	325

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	168	219	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	233	301	369	436	504	571	639	707	774	842
Simple Cycle GE 7EA CT - 73 MW	114	198	282	366	450	534	618	702	787	871	955
Simple Cycle GE 7FA CT - 148 MW	86	169	252	336	419	502	586	669	752	836	919
Combined Cycle GE 7EA CT - 119 MW	155	207	260	312	365	417	470	522	575	627	680
Combined Cycle GE 7FA CT - 235 MW	123	171	219	266	314	362	410	458	505	553	601
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	149	196	244	291	339	387	434	482	529	577
W 501F CC CT - 258 MW	116	165	215	264	313	363	412	462	511	560	610
Spark Ignition Engine - 5 MW	155	242	329	415	502	589	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	188	263	338	413	488	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	---	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	311	359	407	455	503	551	599	647	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - 085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	145	189	232	276	319	362	406	---	---	---
Kalina Cycle CC CT - 275 MW	131	176	220	265	309	354	399	443	---	---	---
Cheng Cycle CT - 140 MW	160	216	271	327	383	438	494	550	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	305	363	420	478	535	593	651	---	---	---
IGCC - 267 MW	273	308	343	377	412	447	482	517	551	---	---
IGCC - 534 MW	240	275	309	344	378	412	447	481	515	---	---
Fuel Cell - 0.2 MW	1526	1585	1644	1703	1762	1821	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	241	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	236	327	417	508	598	689	779	---	---	---
Supercritical Pulverized Coal - 500 MW	181	207	233	259	285	310	336	362	388	414	439
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	215	238	261	284	307	330	353	376	399	422
Supercritical Pulverized Coal - 750 MW	162	188	213	238	264	289	314	340	365	390	415
Subcritical Pulverized Coal - 250 MW	223	249	276	303	330	357	384	411	438	465	492
Subcritical Pulverized Coal - 500 MW	176	202	229	255	281	307	333	360	386	412	438
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	210	233	257	280	303	327	350	373	397	420
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	196	219	241	264	287	309	332	355	378	400
Circulating Fluidized Bed - 250 MW	232	259	287	314	342	369	397	424	452	479	507
Circulating Fluidized Bed - 500 MW	178	204	231	258	285	312	338	365	392	419	446
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	159	178	197	216	235	254	273	293	312	331
Minimum Levelized \$/kW	0	37	73	110	146	183	254	273	293	312	331

Levelized Dollars at Various Capacity Factors With SO₂ Adders, with CO₂ Adders, and with NO_x Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	170	224	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	239	313	387	461	534	608	682	755	829	903
Simple Cycle GE 7EA CT - 73 MW	114	205	297	388	480	571	663	754	846	937	1029
Simple Cycle GE 7FA CT - 148 MW	86	176	266	356	445	535	625	715	805	895	985
Combined Cycle GE 7EA CT - 119 MW	155	212	269	326	383	440	498	555	612	669	726
Combined Cycle GE 7FA CT - 235 MW	123	175	227	279	331	383	435	487	539	591	643
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	153	204	256	308	359	411	463	515	566	618
W 501F CC CT - 258 MW	116	170	223	277	331	385	439	492	546	600	654
Spark Ignition Engine - 5 MW	155	248	340	433	525	618	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	193	273	352	432	512	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	314	364	415	466	516	567	617	668	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	149	196	244	291	338	386	433	---	---	---
Kalina Cycle CC CT - 275 MW	131	180	228	277	325	374	423	471	---	---	---
Cheng Cycle CT - 140 MW	160	221	282	342	403	464	525	586	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	310	373	436	498	561	624	687	---	---	---
IGCC - 267 MW	273	310	347	385	422	459	497	534	571	---	---
IGCC - 534 MW	240	277	314	351	388	425	461	498	535	---	---
Fuel Cell - 0.2 MW	1526	1590	1654	1718	1782	1846	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	248	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	244	341	439	536	634	731	829	---	---	---
Supercritical Pulverized Coal - 500 MW	181	209	237	264	292	319	347	375	402	430	457
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	218	244	271	297	323	349	375	401	427	453
Supercritical Pulverized Coal - 750 MW	162	190	217	244	271	298	325	352	379	406	433
Subcritical Pulverized Coal - 250 MW	223	251	280	309	338	367	395	424	453	482	511
Subcritical Pulverized Coal - 500 MW	176	204	232	260	288	316	344	372	400	428	456
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	213	240	266	292	319	345	372	398	424	451
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	199	225	250	276	302	327	353	379	405	430
Circulating Fluidized Bed - 250 MW	232	261	291	320	350	379	408	438	467	497	526
Circulating Fluidized Bed - 500 MW	178	206	235	264	292	321	350	378	407	436	465
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	162	184	206	228	250	272	294	316	338	360
Minimum Levelized \$/kW	0	37	73	110	146	183	272	294	316	338	360

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	167	217	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	230	295	359	424	488	553	617	682	746	811
Simple Cycle GE 7EA CT - 73 MW	114	194	275	355	435	516	596	677	757	837	918
Simple Cycle GE 7FA CT - 148 MW	86	166	246	326	406	486	566	646	726	806	886
Combined Cycle GE 7EA CT - 119 MW	155	205	255	306	356	406	456	506	557	607	657
Combined Cycle GE 7FA CT - 235 MW	123	169	214	260	306	352	397	443	489	534	580
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	146	192	237	283	328	374	419	465	510	556
W 501F CC CT - 258 MW	116	163	210	257	305	352	399	446	493	541	588
Spark Ignition Engine - 5 MW	155	239	323	407	491	575	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	186	259	331	404	477	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	---	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	310	357	403	450	497	544	590	637	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	143	185	226	268	309	350	392	---	---	---
Kalina Cycle CC CT - 275 MW	131	174	216	259	301	344	387	429	---	---	---
Cheng Cycle CT - 140 MW	160	213	266	320	373	426	480	533	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	303	358	413	468	523	578	634	---	---	---
IGCC - 267 MW	273	307	340	374	408	442	475	509	543	---	---
IGCC - 534 MW	240	274	307	340	374	407	440	474	507	---	---
Fuel Cell - 0.2 MW	1526	1582	1639	1695	1752	1809	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	237	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	233	320	407	493	580	667	754	---	---	---
Supercritical Pulverized Coal - 500 MW	181	205	229	252	276	299	323	347	370	394	417
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	216	239	262	286	309	333	356	379	403	426
Supercritical Pulverized Coal - 750 MW	162	186	209	232	255	278	301	324	347	370	393
Subcritical Pulverized Coal - 250 MW	223	247	272	296	321	345	370	394	419	443	468
Subcritical Pulverized Coal - 500 MW	176	200	224	248	272	296	320	343	367	391	415
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	211	234	258	282	306	330	353	377	401	425
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	196	219	242	265	288	311	334	357	380	403
Circulating Fluidized Bed - 250 MW	232	257	282	307	332	357	383	408	433	458	483
Circulating Fluidized Bed - 500 MW	178	202	227	251	276	301	325	350	374	399	424
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	159	179	198	217	237	256	276	295	314	334
Minimum Levelized \$/kW	0	37	73	110	146	183	256	276	295	314	334

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	169	221	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	237	308	378	449	520	591	662	733	804	875
Simple Cycle GE 7EA CT - 73 MW	114	202	290	378	466	554	642	730	819	907	995
Simple Cycle GE 7FA CT - 148 MW	86	173	260	347	434	521	608	695	782	869	956
Combined Cycle GE 7EA CT - 119 MW	155	210	265	320	375	430	486	541	596	651	706
Combined Cycle GE 7FA CT - 235 MW	123	173	223	273	323	374	424	474	524	574	624
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	151	201	251	301	350	400	450	500	550	600
W 501F CC CT - 258 MW	116	168	219	271	323	375	427	478	530	582	634
Spark Ignition Engine - 5 MW	155	245	335	425	515	605	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	191	268	346	423	501	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	313	362	412	462	511	561	610	660	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	147	193	239	284	330	375	421	---	---	---
Kalina Cycle CC CT - 275 MW	131	178	225	272	319	365	412	459	---	---	---
Cheng Cycle CT - 140 MW	160	218	277	336	394	453	511	570	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	308	368	429	489	550	610	671	---	---	---
IGCC - 267 MW	273	309	346	382	418	455	491	527	564	---	---
IGCC - 534 MW	240	276	312	348	384	420	456	492	528	---	---
Fuel Cell - 0.2 MW	1526	1587	1649	1711	1773	1835	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	245	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	240	335	429	523	617	712	806	---	---	---
Supercritical Pulverized Coal - 500 MW	181	208	236	263	290	317	344	371	398	425	452
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	216	240	265	289	313	337	361	385	409	433
Supercritical Pulverized Coal - 750 MW	162	189	216	242	269	295	322	349	375	402	428
Subcritical Pulverized Coal - 250 MW	223	251	279	307	335	364	392	420	448	476	505
Subcritical Pulverized Coal - 500 MW	176	204	231	258	286	313	341	368	395	423	450
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	211	236	260	284	309	333	358	382	406	431
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	197	220	244	268	291	315	338	362	386	409
Circulating Fluidized Bed - 250 MW	232	261	289	318	347	375	404	433	462	490	519
Circulating Fluidized Bed - 500 MW	178	206	234	262	290	319	347	375	403	431	460
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	160	180	200	220	240	260	280	300	320	340
Minimum Levelized \$/kW	0	37	73	110	146	183	260	280	300	320	340

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	172	227	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	243	321	398	475	553	630	708	785	862	940
Simple Cycle GE 7EA CT - 73 MW	114	210	306	401	497	593	689	785	881	977	1073
Simple Cycle GE 7FA CT - 148 MW	86	180	274	368	461	555	649	743	837	931	1025
Combined Cycle GE 7EA CT - 119 MW	155	215	275	335	395	454	514	574	634	694	754
Combined Cycle GE 7FA CT - 235 MW	123	178	232	287	341	396	450	505	559	614	668
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	155	209	264	318	372	426	480	535	589	643
W 501F CC CT - 258 MW	116	172	229	285	341	398	454	511	567	623	680
Spark Ignition Engine - 5 MW	155	251	347	443	539	635	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	196	278	361	443	526	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	316	368	421	473	526	578	631	683	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	151	201	251	300	350	399	449	---	---	---
Kalina Cycle CC CT - 275 MW	131	182	233	284	335	386	437	488	---	---	---
Cheng Cycle CT - 140 MW	160	224	288	351	415	479	543	607	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	313	379	445	510	576	642	708	---	---	---
IGCC - 267 MW	273	312	351	390	429	468	507	545	584	---	---
IGCC - 534 MW	240	279	317	356	394	433	471	510	548	---	---
Fuel Cell - 0.2 MW	1526	1593	1660	1727	1794	1861	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	253	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	248	350	452	553	655	757	859	---	---	---
Supercritical Pulverized Coal - 500 MW	181	210	239	268	297	326	355	384	413	442	471
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	220	247	274	301	329	356	383	411	438	465
Supercritical Pulverized Coal - 750 MW	162	191	219	248	276	304	333	361	390	418	446
Subcritical Pulverized Coal - 250 MW	223	253	283	313	343	374	404	434	464	494	525
Subcritical Pulverized Coal - 500 MW	176	206	235	264	294	323	353	382	411	441	470
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	215	242	270	298	325	353	381	408	436	464
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	200	227	254	280	307	334	361	388	414	441
Circulating Fluidized Bed - 250 MW	232	263	293	324	355	385	416	447	478	508	539
Circulating Fluidized Bed - 500 MW	178	208	238	268	298	328	358	388	418	448	479
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	163	186	209	232	255	278	301	325	348	371
Minimum Levelized \$/kW	0	37	73	110	146	183	278	301	325	348	371

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	168	219	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	233	301	368	436	503	571	638	706	773	841
Simple Cycle GE 7EA CT - 73 MW	114	198	282	366	450	534	618	702	787	871	955
Simple Cycle GE 7FA CT - 148 MW	86	169	252	336	419	502	586	669	752	836	919
Combined Cycle GE 7EA CT - 119 MW	155	207	260	312	365	417	470	522	575	627	680
Combined Cycle GE 7FA CT - 235 MW	123	171	219	266	314	362	410	458	505	553	601
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	149	196	244	291	339	387	434	482	529	577
W 501F CC CT - 258 MW	116	165	215	264	313	363	412	462	511	560	610
Spark Ignition Engine - 5 MW	155	242	329	415	502	589	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	188	263	338	413	488	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	---	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	311	360	408	457	505	553	602	650	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	145	189	232	276	319	362	406	---	---	---
Kalina Cycle CC CT - 275 MW	131	176	220	265	309	354	399	443	---	---	---
Cheng Cycle CT - 140 MW	160	216	271	327	383	438	494	550	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	305	363	420	478	535	593	651	---	---	---
IGCC - 267 MW	273	308	343	378	414	449	484	519	554	---	---
IGCC - 534 MW	240	275	310	345	379	414	449	483	518	---	---
Fuel Cell - 0.2 MW	1526	1585	1644	1703	1762	1821	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	241	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	236	327	417	508	598	689	779	---	---	---
Supercritical Pulverized Coal - 500 MW	181	206	231	255	280	304	329	354	378	403	427
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	217	241	265	290	314	339	363	387	412	436
Supercritical Pulverized Coal - 750 MW	162	187	211	235	259	283	308	332	356	380	404
Subcritical Pulverized Coal - 250 MW	223	248	274	299	325	351	376	402	427	453	479
Subcritical Pulverized Coal - 500 MW	176	201	226	251	276	301	326	351	376	401	426
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	212	236	261	286	310	335	360	384	409	434
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	197	221	245	269	293	317	341	364	388	412
Circulating Fluidized Bed - 250 MW	232	258	285	311	337	363	390	416	442	469	495
Circulating Fluidized Bed - 500 MW	178	203	229	255	280	306	332	357	383	409	435
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	160	180	201	221	241	262	282	302	322	343
Minimum Levelized \$/kW	0	37	73	110	146	183	262	282	302	322	343

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)											
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	
Capital Cost- High												
Heat Rate- High												
Fuel Forecast- Base												
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	170	224	---	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	240	314	389	463	537	612	686	760	834	909	1036
Simple Cycle GE 7EA CT - 73 MW	114	206	298	390	483	575	667	759	851	944	1036	1092
Simple Cycle GE 7FA CT - 148 MW	86	176	267	358	448	539	629	720	811	901	992	1092
Combined Cycle GE 7EA CT - 119 MW	155	213	270	328	385	443	501	558	616	673	731	792
Combined Cycle GE 7FA CT - 235 MW	123	175	228	280	333	385	437	490	542	595	647	702
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	153	205	257	309	361	414	466	518	570	622	678
W 501F CC CT - 258 MW	116	170	224	278	333	387	441	495	549	604	658	714
Spark Ignition Engine - 5 MW	155	248	341	435	528	621	---	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	193	273	354	434	514	---	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---	---
WV Hydro	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---	---
MSW Mass Burn - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---	---
RDF Stoker-Fired - 7 MW	263	314	366	417	469	520	571	623	674	---	---	---
Landfill Gas IC Engine - 5 MW	400	405	410	415	420	425	430	435	440	445	451	457
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	402	418	434	450	467	483	499	515	531	---	---	---
Sewage Sludge & Anaerobic Digestion - 085 MW	102	149	197	245	292	340	387	435	---	---	---	---
Humid Air Turbine Cycle CT - 450 MW	131	180	229	278	327	376	425	474	---	---	---	---
Kalina Cycle CC CT - 275 MW	160	221	282	344	405	466	528	589	---	---	---	---
Cheng Cycle CT - 140 MW	248	311	374	437	500	563	626	690	---	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	273	311	349	387	424	462	500	538	576	---	---	---
IGCC - 267 MW	240	278	315	353	390	428	465	502	540	---	---	---
IGCC - 534 MW	1526	1590	1654	1719	1783	1848	---	---	---	---	---	---
Fuel Cell - 0.2 MW	146	249	---	---	---	---	---	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	244	343	441	539	637	736	834	---	---	---	---
Baseload Microturbine - 0.03 MW	181	210	238	266	295	323	351	379	408	436	464	492
Supercritical Pulverized Coal - 500 MW	192	217	242	267	292	317	342	367	392	417	442	467
Supercritical Pulverized Coal, High Sulfur - 500 MW	162	190	218	246	274	301	329	357	385	413	440	468
Supercritical Pulverized Coal - 750 MW	223	252	282	311	341	370	400	429	459	488	518	548
Subcritical Pulverized Coal - 250 MW	176	205	234	263	291	320	349	378	407	435	464	493
Subcritical Pulverized Coal - 500 MW	187	212	238	263	288	314	339	365	390	415	441	467
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	198	222	247	272	296	321	345	370	395	419	444
Supercritical Pulverized Coal, High Sulfur - 750 MW	232	262	292	322	352	382	413	443	473	503	533	563
Circulating Fluidized Bed - 250 MW	178	207	236	266	295	325	354	383	413	442	472	502
Circulating Fluidized Bed - 500 MW	157	157	157	157	---	---	---	---	---	---	---	---
Ohio Falls 9 and 10	140	161	182	202	223	244	265	286	307	328	349	370
TC2 732 MW Supercritical Pulverized Coal	140	161	182	202	223	244	265	286	307	328	349	370
Minimum Levelized \$/kW	0	37	73	110	146	183	265	286	307	328	349	370

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	173	229	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	247	328	409	490	571	652	733	815	896	977
Simple Cycle GE 7EA CT - 73 MW	114	214	314	415	515	615	716	816	916	1016	1117
Simple Cycle GE 7FA CT - 148 MW	86	184	282	380	477	575	673	771	869	967	1065
Combined Cycle GE 7EA CT - 119 MW	155	218	280	343	406	468	531	594	657	719	782
Combined Cycle GE 7FA CT - 235 MW	123	180	237	294	351	408	465	522	579	636	693
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	158	214	271	328	384	441	498	555	611	668
W 501F CC CT - 258 MW	116	175	234	293	352	411	470	529	588	647	706
Spark Ignition Engine - 5 MW	155	255	354	454	553	653	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	198	283	369	454	539	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	317	372	426	481	535	589	644	698	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	154	206	257	309	361	413	465	---	---	---
Kalina Cycle CC CT - 275 MW	131	185	238	291	345	398	452	505	---	---	---
Cheng Cycle CT - 140 MW	160	227	294	360	427	494	561	628	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	316	385	454	522	591	660	729	---	---	---
IGCC - 267 MW	273	313	354	395	435	476	516	557	598	---	---
IGCC - 534 MW	240	281	321	361	401	441	481	521	561	---	---
Fuel Cell - 0.2 MW	1526	1595	1665	1735	1805	1875	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	257	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	252	358	464	571	677	783	889	---	---	---
Supercritical Pulverized Coal - 500 MW	181	212	242	272	303	333	363	393	424	454	484
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	221	249	277	306	334	363	391	419	448	476
Supercritical Pulverized Coal - 750 MW	162	192	222	252	281	311	341	370	400	430	459
Subcritical Pulverized Coal - 250 MW	223	254	286	317	349	380	412	443	475	506	538
Subcritical Pulverized Coal - 500 MW	176	207	238	269	299	330	361	392	423	453	484
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	216	245	274	302	331	360	389	418	447	476
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	201	229	257	285	313	341	369	396	424	452
Circulating Fluidized Bed - 250 MW	232	264	296	329	361	393	425	457	490	522	554
Circulating Fluidized Bed - 500 MW	178	209	241	272	304	335	367	398	430	461	493
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	164	188	212	237	261	285	309	333	358	382
Minimum Levelized \$/kW	0	37	73	110	146	183	285	309	333	358	382

Exhibit 9

Least Cost Technologies Considered For Further Analysis

Base Capital, Base Heatrate, Base Fuel

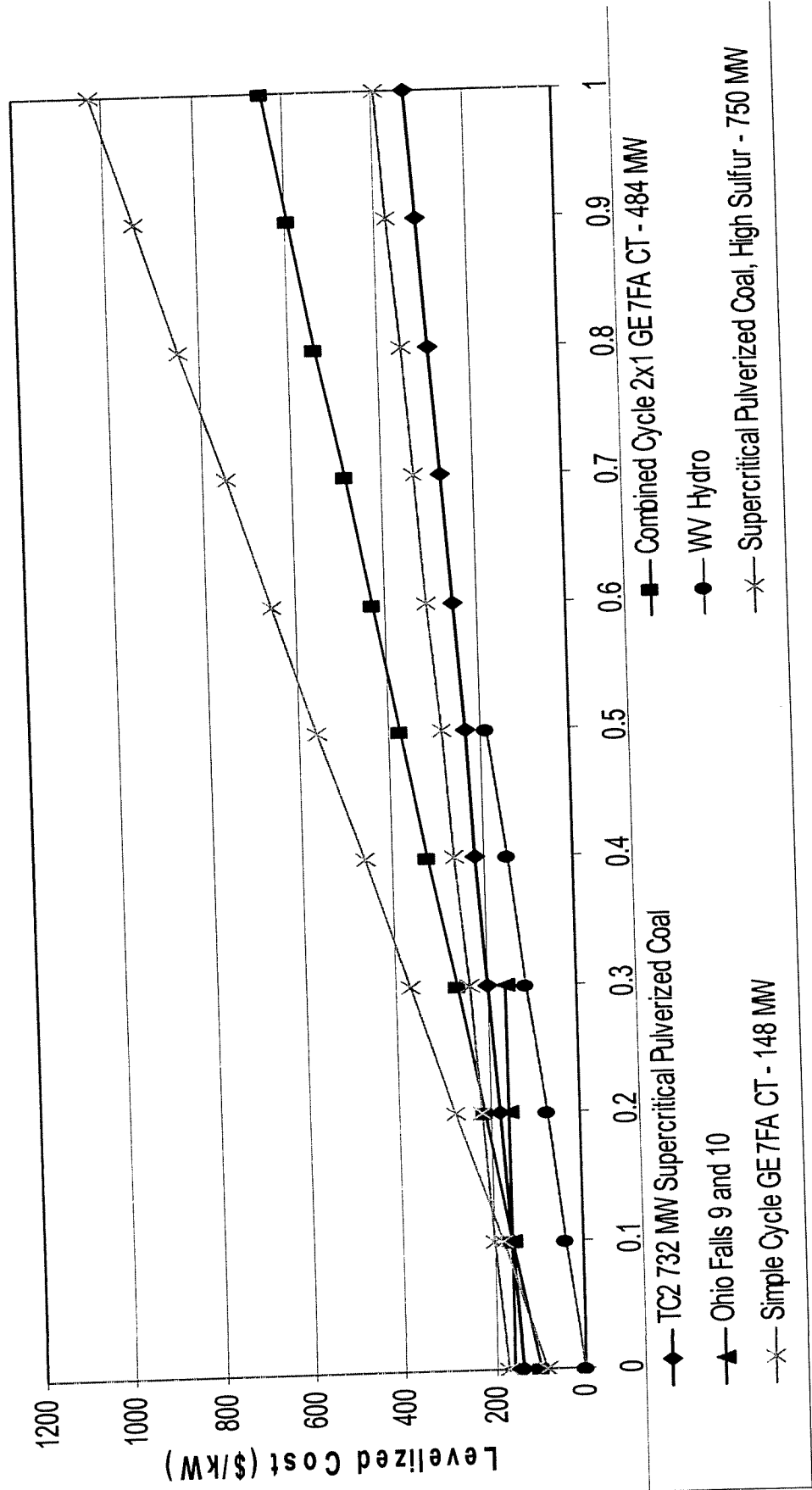


Exhibit 8

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	154	208	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	231	304	378	452	526	600	673	747	821	895
Simple Cycle GE 7EA CT - 73 MW	108	199	291	383	474	566	657	749	841	932	1024
Simple Cycle GE 7FA CT - 148 MW	81	171	261	351	441	531	621	712	802	892	982
Combined Cycle GE 7EA CT - 119 MW	145	202	259	317	374	431	488	545	603	660	717
Combined Cycle GE 7FA CT - 235 MW	116	168	220	272	324	377	429	481	533	585	637
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	148	200	251	303	355	407	459	510	562	614
W 501F CC CT - 258 MW	109	163	217	271	324	378	432	486	540	594	648
Spark Ignition Engine - 5 MW	141	234	327	419	512	605	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	183	263	342	422	502	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	274	328	383	438	492	547	601	656	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	138	185	233	280	327	375	422	---	---	---
Kalina Cycle CC CT - 275 MW	114	163	212	260	309	358	406	455	---	---	---
Cheng Cycle CT - 140 MW	140	201	262	322	383	444	505	566	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	275	338	401	463	526	589	652	---	---	---
IGCC - 267 MW	237	278	318	359	400	440	481	522	563	---	---
IGCC - 534 MW	207	248	288	328	368	409	449	489	529	---	---
Fuel Cell - 0.2 MW	1394	1458	1522	1586	1650	1714	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	224	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	220	317	415	513	611	708	806	---	---	---
Supercritical Pulverized Coal - 500 MW	167	200	232	264	296	328	361	393	425	457	489
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	206	235	265	294	323	352	381	410	439	468
Supercritical Pulverized Coal - 750 MW	150	182	214	245	277	308	340	372	403	435	466
Subcritical Pulverized Coal - 250 MW	206	239	273	306	340	373	407	440	474	507	541
Subcritical Pulverized Coal - 500 MW	163	196	228	261	294	326	359	391	424	457	489
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	202	232	261	291	320	350	379	409	438	468
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	188	216	245	273	302	330	359	387	416	444
Circulating Fluidized Bed - 250 MW	215	249	283	317	351	385	420	454	488	522	556
Circulating Fluidized Bed - 500 MW	164	197	230	264	297	331	364	397	431	464	498
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	154	178	203	228	253	278	302	327	352	377
Minimum Levelized \$/kW	0	37	73	110	146	183	278	302	327	352	377

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	142	192	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	212	276	340	405	469	533	597	661	726	790
Simple Cycle GE 7EA CT - 73 MW	102	182	262	342	422	502	582	662	742	822	902
Simple Cycle GE 7FA CT - 148 MW	77	157	236	316	396	475	555	635	714	794	874
Combined Cycle GE 7EA CT - 119 MW	136	186	236	286	336	386	436	486	536	586	636
Combined Cycle GE 7FA CT - 235 MW	108	154	199	245	290	336	381	427	472	518	563
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	135	181	226	271	316	362	407	452	498	543
W 501F CC CT - 258 MW	102	149	196	243	290	337	384	431	478	525	572
Spark Ignition Engine - 5 MW	127	211	294	378	461	545	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	165	237	310	382	455	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	226	276	326	376	425	475	525	575	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - 085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	121	162	204	245	286	328	369	---	---	---
Kalina Cycle CC CT - 275 MW	98	141	183	225	268	310	353	395	---	---	---
Cheng Cycle CT - 140 MW	119	172	225	278	331	384	437	490	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	231	286	341	396	451	506	561	---	---	---
IGCC - 267 MW	201	237	274	311	347	384	420	457	494	---	---
IGCC - 534 MW	173	210	246	282	318	354	390	426	462	---	---
Fuel Cell - 0.2 MW	1263	1319	1375	1432	1488	1545	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	187	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	184	270	357	443	530	616	703	---	---	---
Supercritical Pulverized Coal - 500 MW	153	181	208	235	262	289	317	344	371	398	425
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	190	217	245	272	299	326	353	380	407	434
Supercritical Pulverized Coal - 750 MW	137	164	191	217	244	270	297	324	350	377	403
Subcritical Pulverized Coal - 250 MW	189	217	245	273	302	330	358	387	415	443	472
Subcritical Pulverized Coal - 500 MW	149	177	204	232	260	287	315	342	370	398	425
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	186	214	241	269	296	324	351	379	406	434
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	173	200	226	253	280	306	333	360	387	413
Circulating Fluidized Bed - 250 MW	197	226	255	284	313	341	370	399	428	457	486
Circulating Fluidized Bed - 500 MW	150	178	206	234	262	291	319	347	375	403	432
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	140	163	186	209	232	255	278	301	324	347
Minimum Levelized \$/kW	0	37	73	110	146	183	255	278	301	324	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	145	197	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	218	288	359	429	499	570	640	710	780	851
Simple Cycle GE 7EA CT - 73 MW	102	189	277	364	451	539	626	714	801	888	976
Simple Cycle GE 7FA CT - 148 MW	77	163	249	336	422	508	595	681	767	854	940
Combined Cycle GE 7EA CT - 119 MW	136	191	245	300	354	409	464	518	573	627	682
Combined Cycle GE 7FA CT - 235 MW	108	158	207	257	307	357	406	456	506	555	605
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	139	189	238	288	337	386	436	485	535	584
W 501F CC CT - 258 MW	102	153	205	256	307	359	410	462	513	564	616
Spark Ignition Engine - 5 MW	127	216	306	395	485	574	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	169	246	324	401	478	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1 2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	229	281	334	387	439	492	544	597	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	---
Sewage Sludge & Anaerobic Digestion - 085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	125	170	215	260	306	351	396	---	---	---
Kalina Cycle CC CT - 275 MW	98	145	191	237	284	330	377	423	---	---	---
Cheng Cycle CT - 140 MW	119	177	235	293	351	409	467	525	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	236	296	356	416	476	536	596	---	---	---
IGCC - 267 MW	201	240	279	318	357	396	435	474	513	---	---
IGCC - 534 MW	173	212	251	289	328	366	405	444	482	---	---
Fuel Cell - 0.2 MW	1263	1324	1385	1446	1507	1569	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	195	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	191	284	378	471	565	658	752	---	---	---
Supercritical Pulverized Coal - 500 MW	153	184	215	245	276	306	337	368	398	429	459
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	191	219	246	274	302	329	357	385	413	440
Supercritical Pulverized Coal - 750 MW	137	167	197	227	257	287	317	347	377	407	437
Subcritical Pulverized Coal - 250 MW	189	221	253	285	317	349	381	413	445	477	509
Subcritical Pulverized Coal - 500 MW	149	180	211	242	274	305	336	367	398	429	460
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	187	215	243	271	299	327	356	384	412	440
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	174	201	228	255	283	310	337	365	392	419
Circulating Fluidized Bed - 250 MW	197	229	262	294	327	359	392	424	457	489	522
Circulating Fluidized Bed - 500 MW	150	181	213	245	277	309	340	372	404	436	468
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	140	164	188	211	235	258	282	306	329	353
Minimum Levelized \$/kW	0	37	73	110	146	183	258	282	306	329	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	148	202	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	224	301	377	453	530	606	683	759	835	912
Simple Cycle GE 7EA CT - 73 MW	102	196	291	386	481	575	670	765	859	954	1049
Simple Cycle GE 7FA CT - 148 MW	77	170	263	356	448	541	634	727	820	913	1006
Combined Cycle GE 7EA CT - 119 MW	136	195	254	314	373	432	491	550	610	669	728
Combined Cycle GE 7FA CT - 235 MW	108	162	216	270	324	378	431	485	539	593	647
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	144	197	251	304	358	412	465	519	572	626
W 501F CC CT - 258 MW	102	158	213	269	325	380	436	492	547	603	659
Spark Ignition Engine - 5 MW	127	222	317	413	508	603	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	174	256	337	419	501	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	231	287	342	398	453	508	564	619	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	340
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	129	178	227	276	325	374	423	---	---	---
Kalina Cycle CC CT - 275 MW	98	149	199	249	300	350	401	451	---	---	---
Cheng Cycle CT - 140 MW	119	182	245	308	371	434	497	560	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	241	306	371	436	501	566	631	---	---	---
IGCC - 267 MW	201	242	284	325	367	408	449	491	532	---	---
IGCC - 534 MW	173	214	255	296	337	378	419	460	501	---	---
Fuel Cell - 0.2 MW	1263	1329	1395	1461	1527	1594	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	203	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	198	298	399	500	601	701	802	---	---	---
Supercritical Pulverized Coal - 500 MW	153	186	218	251	283	316	348	381	413	446	478
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	194	225	256	287	318	349	380	411	442	473
Supercritical Pulverized Coal - 750 MW	137	169	201	233	265	297	329	361	393	425	456
Subcritical Pulverized Coal - 250 MW	189	222	256	290	324	358	392	426	460	494	528
Subcritical Pulverized Coal - 500 MW	149	182	215	248	282	315	348	381	414	447	480
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	190	222	253	285	316	348	379	411	442	474
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	177	207	238	268	299	329	360	390	421	451
Circulating Fluidized Bed - 250 MW	197	231	266	300	335	369	404	438	473	507	542
Circulating Fluidized Bed - 500 MW	150	183	217	251	284	318	352	385	419	453	487
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	143	170	197	224	250	277	304	330	357	384
Minimum Levelized \$/kW	0	37	73	110	146	183	277	304	330	335	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	144	194	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	215	283	350	417	485	552	620	687	754	822
Simple Cycle GE 7EA CT - 73 MW	102	186	270	353	437	521	605	689	773	857	941
Simple Cycle GE 7FA CT - 148 MW	77	160	243	326	409	492	575	659	742	825	908
Combined Cycle GE 7EA CT - 119 MW	136	188	241	293	346	398	450	503	555	608	660
Combined Cycle GE 7FA CT - 235 MW	108	156	203	251	299	347	394	442	490	537	585
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	137	185	232	280	327	374	422	469	517	564
W 501F CC CT - 258 MW	102	151	200	250	299	348	398	447	496	546	595
Spark Ignition Engine - 5 MW	127	214	300	387	473	560	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	167	242	317	392	467	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	228	280	331	383	435	487	538	590	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	340
Sewage Sludge & Anaerobic Digestion - 085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	123	166	210	253	296	340	383	---	---	---
Kalina Cycle CC CT - 275 MW	98	143	187	231	276	320	365	409	---	---	---
Cheng Cycle CT - 140 MW	119	174	230	286	341	397	452	508	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	234	291	349	406	464	521	579	---	---	---
IGCC - 267 MW	201	239	277	316	354	392	430	469	507	---	---
IGCC - 534 MW	173	211	249	287	325	362	400	438	476	---	---
Fuel Cell - 0.2 MW	1263	1322	1381	1440	1499	1558	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	191	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	187	277	367	458	548	638	728	---	---	---
Supercritical Pulverized Coal - 500 MW	153	182	210	239	267	296	324	353	381	410	438
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	192	220	248	277	305	334	362	390	419	447
Supercritical Pulverized Coal - 750 MW	137	165	193	221	249	277	305	333	361	389	417
Subcritical Pulverized Coal - 250 MW	189	218	248	278	307	337	367	396	426	456	486
Subcritical Pulverized Coal - 500 MW	149	178	207	236	265	294	323	351	380	409	438
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	188	216	245	274	303	332	360	389	418	447
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	174	202	230	258	286	314	342	369	397	425
Circulating Fluidized Bed - 250 MW	197	227	257	288	318	348	378	408	439	469	499
Circulating Fluidized Bed - 500 MW	150	179	209	238	268	298	327	357	386	416	446
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	141	165	189	213	237	261	285	310	334	358
Minimum Levelized \$/kW	0	37	73	110	146	183	261	285	310	334	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	146	200	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	222	295	369	443	517	591	664	738	812	886
Simple Cycle GE 7EA CT - 73 MW	102	193	285	377	468	560	651	743	835	926	1018
Simple Cycle GE 7FA CT - 148 MW	77	167	257	347	437	527	617	708	798	888	978
Combined Cycle GE 7EA CT - 119 MW	136	193	250	308	365	422	479	536	594	651	708
Combined Cycle GE 7FA CT - 235 MW	108	160	212	264	316	369	421	473	525	577	629
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	142	194	245	297	349	401	453	504	556	608
W 501F CC CT - 258 MW	102	156	210	264	317	371	425	479	533	587	641
Spark Ignition Engine - 5 MW	127	220	313	405	498	591	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	172	252	331	411	491	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	231	285	340	395	449	504	558	613	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	127	174	222	269	316	364	411	---	---	---
Kalina Cycle CC CT - 275 MW	98	147	196	244	293	342	390	439	---	---	---
Cheng Cycle CT - 140 MW	119	180	241	301	362	423	484	545	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	239	302	365	427	490	553	616	---	---	---
IGCC - 267 MW	201	242	282	323	364	404	445	486	527	---	---
IGCC - 534 MW	173	214	254	294	334	375	415	455	495	---	---
Fuel Cell - 0.2 MW	1263	1327	1391	1455	1519	1583	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	199	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	195	292	390	488	586	683	781	---	---	---
Supercritical Pulverized Coal - 500 MW	153	186	218	250	282	314	347	379	411	443	475
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	192	221	251	280	309	338	367	396	425	454
Supercritical Pulverized Coal - 750 MW	137	169	201	232	264	295	327	359	390	422	453
Subcritical Pulverized Coal - 250 MW	189	222	256	289	323	356	390	423	457	490	524
Subcritical Pulverized Coal - 500 MW	149	182	214	247	280	312	345	377	410	443	475
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	188	218	247	277	306	336	365	395	424	454
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	175	203	232	260	289	317	346	374	403	431
Circulating Fluidized Bed - 250 MW	197	231	265	299	333	367	402	436	470	504	538
Circulating Fluidized Bed - 500 MW	150	183	216	250	283	317	350	383	417	450	484
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	142	166	191	216	241	266	290	315	340	365
Minimum Levelized \$/kW	0	37	73	110	146	183	266	290	315	335	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	149	205	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	228	308	388	469	549	629	709	789	870	950
Simple Cycle GE 7EA CT - 73 MW	102	201	301	400	499	599	698	798	897	996	1096
Simple Cycle GE 7FA CT - 148 MW	77	174	271	368	465	562	659	756	853	950	1047
Combined Cycle GE 7EA CT - 119 MW	136	198	260	322	384	446	509	571	633	695	757
Combined Cycle GE 7FA CT - 235 MW	108	165	221	278	334	391	447	504	560	617	673
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	146	202	258	314	370	427	483	539	595	651
W 501F CC CT - 258 MW	102	160	219	277	335	394	452	511	569	627	686
Spark Ignition Engine - 5 MW	127	226	325	423	522	621	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	177	261	346	430	515	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	233	291	348	406	463	520	578	635	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	340
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	131	183	234	286	337	388	440	---	---	---
Kalina Cycle CC CT - 275 MW	98	151	204	257	310	362	415	468	---	---	---
Cheng Cycle CT - 140 MW	119	185	251	317	383	450	516	582	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	245	313	381	449	517	585	653	---	---	---
IGCC - 267 MW	201	244	287	331	374	417	461	504	547	---	---
IGCC - 534 MW	173	216	259	302	345	388	430	473	516	---	---
Fuel Cell - 0.2 MW	1263	1332	1401	1470	1539	1609	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	207	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	202	307	412	518	623	728	833	---	---	---
Supercritical Pulverized Coal - 500 MW	153	188	222	256	290	324	359	393	427	461	495
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	196	228	261	293	326	358	391	423	456	488
Supercritical Pulverized Coal - 750 MW	137	171	204	238	271	305	338	372	405	439	472
Subcritical Pulverized Coal - 250 MW	189	224	260	295	331	367	402	438	473	509	545
Subcritical Pulverized Coal - 500 MW	149	184	219	253	288	323	357	392	427	461	496
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	192	225	258	291	324	357	390	423	456	489
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	178	210	242	274	306	338	370	401	433	465
Circulating Fluidized Bed - 250 MW	197	233	269	306	342	378	414	450	487	523	559
Circulating Fluidized Bed - 500 MW	150	185	220	256	291	327	362	397	433	468	504
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	145	173	201	229	257	285	313	341	369	397
Minimum Levelized \$/kW	0	37	73	110	146	183	285	313	330	335	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	145	197	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	218	289	359	430	500	571	641	712	782	853
Simple Cycle GE 7EA CT - 73 MW	102	189	277	365	453	540	628	716	803	891	979
Simple Cycle GE 7FA CT - 148 MW	77	163	250	336	423	509	596	682	769	855	942
Combined Cycle GE 7EA CT - 119 MW	136	191	246	300	355	410	465	520	574	629	684
Combined Cycle GE 7FA CT - 235 MW	108	158	208	258	308	358	407	457	507	557	607
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	140	189	239	288	338	388	437	487	536	586
W 501F CC CT - 258 MW	102	153	205	256	308	359	411	462	514	565	617
Spark Ignition Engine - 5 MW	127	217	306	396	485	575	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	169	247	324	402	479	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	230	283	337	390	444	497	551	604	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - 085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	125	170	216	261	306	352	397	---	---	---
Kalina Cycle CC CT - 275 MW	98	145	191	238	284	331	378	424	---	---	---
Cheng Cycle CT - 140 MW	119	177	235	294	352	410	469	527	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	237	297	357	417	477	537	598	---	---	---
IGCC - 267 MW	201	241	280	320	360	400	439	479	519	---	---
IGCC - 534 MW	173	213	252	291	331	370	409	449	488	---	---
Fuel Cell - 0.2 MW	1263	1324	1385	1447	1508	1570	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	195	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	191	285	379	472	566	660	754	---	---	---
Supercritical Pulverized Coal - 500 MW	153	183	213	243	273	302	332	362	392	422	451
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	193	222	252	282	311	341	370	400	430	459
Supercritical Pulverized Coal - 750 MW	137	167	196	225	254	283	313	342	371	400	429
Subcritical Pulverized Coal - 250 MW	189	220	251	282	313	344	375	406	437	468	499
Subcritical Pulverized Coal - 500 MW	149	179	210	240	270	301	331	361	392	422	452
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	189	219	249	279	309	339	369	399	429	459
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	175	204	233	262	291	320	349	378	407	436
Circulating Fluidized Bed - 250 MW	197	229	260	292	324	355	387	419	451	482	514
Circulating Fluidized Bed - 500 MW	150	181	212	243	274	305	336	367	398	429	460
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	142	167	193	218	243	269	294	319	344	370
Minimum Levelized \$/kW	0	37	73	110	146	183	269	294	319	335	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	148	202	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	225	302	380	457	534	612	689	766	843	921
Simple Cycle GE 7EA CT - 73 MW	102	198	293	389	485	581	677	772	868	964	1060
Simple Cycle GE 7FA CT - 148 MW	77	171	264	358	452	546	640	733	827	921	1015
Combined Cycle GE 7EA CT - 119 MW	136	196	256	316	376	435	495	555	615	675	735
Combined Cycle GE 7FA CT - 235 MW	108	163	217	272	326	381	435	490	544	599	653
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	144	198	253	307	361	415	469	524	578	632
W 501F CC CT - 258 MW	102	158	215	271	327	384	440	497	553	609	666
Spark Ignition Engine - 5 MW	127	223	319	415	511	607	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	174	257	339	422	504	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	233	289	346	402	459	515	572	628	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	341
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	129	179	229	278	328	377	427	---	---	---
Kalina Cycle CC CT - 275 MW	98	149	200	251	302	353	404	455	---	---	---
Cheng Cycle CT - 140 MW	119	183	247	310	374	438	502	566	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	242	308	374	439	505	571	637	---	---	---
IGCC - 267 MW	201	243	286	328	371	413	456	498	541	---	---
IGCC - 534 MW	173	215	257	299	341	383	425	467	509	---	---
Fuel Cell - 0.2 MW	1263	1329	1396	1463	1530	1597	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	204	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	199	300	402	504	606	707	809	---	---	---
Supercritical Pulverized Coal - 500 MW	153	187	221	254	288	322	356	389	423	457	490
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	194	224	254	284	315	345	375	406	436	466
Supercritical Pulverized Coal - 750 MW	137	170	203	236	269	302	335	368	401	434	467
Subcritical Pulverized Coal - 250 MW	189	224	259	294	329	364	399	434	469	504	539
Subcritical Pulverized Coal - 500 MW	149	183	218	252	286	320	354	389	423	457	491
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	190	220	251	282	312	343	374	404	435	466
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	176	206	235	265	295	324	354	384	414	443
Circulating Fluidized Bed - 250 MW	197	233	268	304	340	375	411	447	483	518	554
Circulating Fluidized Bed - 500 MW	150	184	219	254	289	324	359	394	429	464	499
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	143	169	194	220	246	272	298	324	350	376
Minimum Levelized \$/kW	0	37	73	110	146	183	272	298	324	350	376

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	176	207	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	145	258	370	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	93	150	208	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	148	232	316	400	484	568	652	736	821	905	989
Simple Cycle GE 7EA CT - 73 MW	102	206	310	414	518	622	726	830	934	1038	1142
Simple Cycle GE 7FA CT - 148 MW	77	178	279	380	481	582	683	785	886	987	1088
Combined Cycle GE 7EA CT - 119 MW	136	201	266	331	396	461	526	591	656	721	786
Combined Cycle GE 7FA CT - 235 MW	108	167	226	285	344	404	463	522	581	640	699
Combined Cycle 2x1 GE 7FA CT - 484 MW	90	149	207	266	325	383	442	501	560	618	677
W 501F CC CT - 258 MW	102	163	224	285	347	408	469	530	591	653	714
Spark Ignition Engine - 5 MW	127	229	332	434	537	639	---	---	---	---	---
Compression Ignition Engine - 10 MW	92	180	267	355	442	530	---	---	---	---	---
Wind Energy Conversion - 50 MW	160	160	160	160	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	395	424	454	483	513	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	307	323	339	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Thermal, Solar Chimney - 200 MW	351	367	383	399	416	432	448	464	---	---	---
Solar Photovoltaic - 50 kW	771	795	820	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	272	280	289	297	306	315	323	332	341	---	---
Geothermal - 30 MW	592	592	592	592	592	592	592	592	592	---	---
Hydroelectric - New - 30 MW	364	369	374	378	383	387	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	895	975	1056	1137	1217	1298	1378	1459	---	---	---
RDF Stoker-Fired - 7 MW	1315	1401	1487	1573	1659	1745	1831	1917	---	---	---
Landfill Gas IC Engine - 5 MW	176	236	295	355	414	474	533	593	652	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	290	295	300	305	310	315	320	325	330	335	340
Sewage Sludge & Anaerobic Digestion - .085 MW	268	284	300	316	333	349	365	381	397	---	---
Humid Air Turbine Cycle CT - 450 MW	80	134	187	241	295	348	402	456	---	---	---
Kalina Cycle CC CT - 275 MW	98	153	209	264	319	375	430	485	---	---	---
Cheng Cycle CT - 140 MW	119	188	258	327	397	466	535	605	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	177	248	319	390	462	533	604	676	---	---	---
IGCC - 267 MW	201	246	291	336	382	427	472	517	562	---	---
IGCC - 534 MW	173	218	263	308	352	397	442	486	531	---	---
Fuel Cell - 0.2 MW	1263	1335	1407	1479	1551	1624	---	---	---	---	---
Peaking Microturbine - 0.03 MW	97	212	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	97	207	316	426	535	645	754	864	---	---	---
Supercritical Pulverized Coal - 500 MW	153	189	225	261	297	332	368	404	440	476	511
Supercritical Pulverized Coal, High Sulfur - 500 MW	163	197	231	265	299	333	367	401	434	468	502
Supercritical Pulverized Coal - 750 MW	137	173	208	243	278	313	348	383	418	453	488
Subcritical Pulverized Coal - 250 MW	189	226	263	300	337	375	412	449	486	523	561
Subcritical Pulverized Coal - 500 MW	149	186	222	258	295	331	368	404	440	477	513
Subcritical Pulverized Coal, High Sulfur - 500 MW	159	193	228	262	296	331	365	400	434	468	503
Supercritical Pulverized Coal, High Sulfur - 750 MW	146	180	213	246	279	313	346	379	413	446	479
Circulating Fluidized Bed - 250 MW	197	235	273	311	349	386	424	462	500	538	576
Circulating Fluidized Bed - 500 MW	150	187	224	261	298	335	372	409	446	483	520
Ohio Falls 9 and 10	130	130	130	130	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	117	146	176	205	234	264	293	323	352	381	411
Minimum Levelized \$/kW	0	37	73	110	146	183	293	323	330	335	341

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	150	200	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	221	285	349	414	478	542	606	670	735	799
Simple Cycle GE 7EA CT - 73 MW	108	188	268	348	428	508	588	668	748	828	908
Simple Cycle GE 7FA CT - 148 MW	81	161	240	320	400	479	559	639	718	798	878
Combined Cycle GE 7EA CT - 119 MW	145	195	245	295	345	395	445	495	545	595	645
Combined Cycle GE 7FA CT - 235 MW	116	162	207	253	298	344	389	435	480	526	571
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	141	187	232	277	322	368	413	458	504	549
W 501F CC CT - 258 MW	109	156	203	250	297	344	391	438	485	532	579
Spark Ignition Engine - 5 MW	141	225	308	392	475	559	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	176	248	321	393	466	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27 5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	269	319	369	419	468	518	568	618	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	132	173	215	256	297	339	380	---	---	---
Kalina Cycle CC CT - 275 MW	114	157	199	241	284	326	369	411	---	---	---
Cheng Cycle CT - 140 MW	140	193	246	299	352	405	458	511	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	267	322	377	432	487	542	597	---	---	---
IGCC - 267 MW	237	273	310	347	383	420	456	493	530	---	---
IGCC - 534 MW	207	244	280	316	352	388	424	460	496	---	---
Fuel Cell - 0 2 MW	1394	1450	1506	1563	1619	1676	---	---	---	---	---
Peaking Microturbine - 0 03 MW	122	212	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	209	295	382	468	555	641	728	---	---	---
Supercritical Pulverized Coal - 500 MW	167	195	222	249	276	303	331	358	385	412	439
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	204	231	259	286	313	340	367	394	421	448
Supercritical Pulverized Coal - 750 MW	150	177	204	230	257	283	310	337	363	390	416
Subcritical Pulverized Coal - 250 MW	206	234	262	290	319	347	375	404	432	460	489
Subcritical Pulverized Coal - 500 MW	163	191	218	246	274	301	329	356	384	412	439
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	200	228	255	283	310	338	365	393	420	448
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	186	213	239	266	293	319	346	373	400	426
Circulating Fluidized Bed - 250 MW	215	244	273	302	331	359	388	417	446	475	504
Circulating Fluidized Bed - 500 MW	164	192	220	248	276	305	333	361	389	417	446
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	152	175	198	221	244	267	290	313	336	359
Minimum Levelized \$/kW	0	37	73	110	146	183	267	290	313	336	359

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	153	205	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	227	297	368	438	508	579	649	719	789	860
Simple Cycle GE 7EA CT - 73 MW	108	195	283	370	457	545	632	720	807	894	982
Simple Cycle GE 7FA CT - 148 MW	81	167	253	340	426	512	599	685	771	858	944
Combined Cycle GE 7EA CT - 119 MW	145	200	254	309	363	418	473	527	582	636	691
Combined Cycle GE 7FA CT - 235 MW	116	166	215	265	315	365	414	464	514	563	613
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	145	195	244	294	343	392	442	491	541	590
W 501F CC CT - 258 MW	109	160	212	263	314	366	417	469	520	571	623
Spark Ignition Engine - 5 MW	141	230	320	409	499	588	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	180	257	335	412	489	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	272	324	377	430	482	535	587	640	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	136	181	226	271	317	362	407	---	---	---
Kalina Cycle CC CT - 275 MW	114	161	207	253	300	346	393	439	---	---	---
Cheng Cycle CT - 140 MW	140	198	256	314	372	430	488	546	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	272	332	392	452	512	572	632	---	---	---
IGCC - 267 MW	237	276	315	354	393	432	471	510	549	---	---
IGCC - 534 MW	207	246	285	323	362	400	439	478	516	---	---
Fuel Cell - 0.2 MW	1394	1455	1516	1577	1638	1700	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	220	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	216	309	403	496	590	683	777	---	---	---
Supercritical Pulverized Coal - 500 MW	167	198	229	259	290	320	351	382	412	443	473
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	205	233	260	288	316	343	371	399	427	454
Supercritical Pulverized Coal - 750 MW	150	180	210	240	270	300	330	360	390	420	450
Subcritical Pulverized Coal - 250 MW	206	238	270	302	334	366	398	430	462	494	526
Subcritical Pulverized Coal - 500 MW	163	194	225	256	288	319	350	381	412	443	474
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	201	229	257	285	313	341	370	398	426	454
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	187	214	241	268	296	323	350	378	405	432
Circulating Fluidized Bed - 250 MW	215	247	280	312	345	377	410	442	475	507	540
Circulating Fluidized Bed - 500 MW	164	195	227	259	291	323	354	386	418	450	482
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	152	176	200	223	247	270	294	318	341	365
Minimum Levelized \$/kW	0	37	73	110	146	183	270	294	318	341	365

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	156	210	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	233	310	386	462	539	615	692	768	844	921
Simple Cycle GE 7EA CT - 73 MW	108	202	297	392	487	581	676	771	865	960	1055
Simple Cycle GE 7FA CT - 148 MW	81	174	267	360	452	545	638	731	824	917	1010
Combined Cycle GE 7EA CT - 119 MW	145	204	263	323	382	441	500	559	619	678	737
Combined Cycle GE 7FA CT - 235 MW	116	170	224	278	332	386	439	493	547	601	655
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	150	203	257	310	364	418	471	525	578	632
W 501F CC CT - 258 MW	109	165	220	276	332	387	443	499	554	610	666
Spark Ignition Engine - 5 MW	141	236	331	427	522	617	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	185	267	348	430	512	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	274	330	385	441	496	551	607	662	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	395
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	140	189	238	287	336	385	434	---	---	---
Kalina Cycle CC CT - 275 MW	114	165	215	265	316	366	417	467	---	---	---
Cheng Cycle CT - 140 MW	140	203	266	329	392	455	518	581	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	277	342	407	472	537	602	667	---	---	---
IGCC - 267 MW	237	278	320	361	403	444	485	527	568	---	---
IGCC - 534 MW	207	248	289	330	371	412	453	494	535	---	---
Fuel Cell - 0.2 MW	1394	1460	1526	1592	1658	1725	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	228	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	223	323	424	525	626	726	827	---	---	---
Supercritical Pulverized Coal - 500 MW	167	200	232	265	297	330	362	395	427	460	492
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	208	239	270	301	332	363	394	425	456	487
Supercritical Pulverized Coal - 750 MW	150	182	214	246	278	310	342	374	406	438	469
Subcritical Pulverized Coal - 250 MW	206	239	273	307	341	375	409	443	477	511	545
Subcritical Pulverized Coal - 500 MW	163	196	229	262	296	329	362	395	428	461	494
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	204	236	267	299	330	362	393	425	456	488
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	190	220	251	281	312	342	373	403	434	464
Circulating Fluidized Bed - 250 MW	215	249	284	318	353	387	422	456	491	525	560
Circulating Fluidized Bed - 500 MW	164	197	231	265	298	332	366	399	433	467	501
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	155	182	209	236	262	286	316	342	369	396
Minimum Levelized \$/kW	0	37	73	110	146	183	289	316	342	369	396

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	152	202	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	224	292	359	426	494	561	629	696	763	831
Simple Cycle GE 7EA CT - 73 MW	108	192	276	359	443	527	611	695	779	863	947
Simple Cycle GE 7FA CT - 148 MW	81	164	247	330	413	496	579	663	746	829	912
Combined Cycle GE 7EA CT - 119 MW	145	197	250	302	355	407	459	512	564	617	669
Combined Cycle GE 7FA CT - 235 MW	116	164	211	259	307	355	402	450	498	545	593
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	143	191	238	286	333	380	428	475	523	570
W 501F CC CT - 258 MW	109	158	207	257	306	355	405	454	503	553	602
Spark Ignition Engine - 5 MW	141	228	314	401	487	574	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	178	253	328	403	478	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	271	323	374	426	478	530	581	633	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	134	177	221	264	307	351	394	---	---	---
Kalina Cycle CC CT - 275 MW	114	159	203	247	292	336	381	425	---	---	---
Cheng Cycle CT - 140 MW	140	195	251	307	362	418	473	529	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	270	327	385	442	500	557	615	---	---	---
IGCC - 267 MW	237	275	313	352	390	428	466	505	543	---	---
IGCC - 534 MW	207	245	283	321	359	396	434	472	510	---	---
Fuel Cell - 0.2 MW	1394	1453	1512	1571	1630	1689	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	216	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	212	302	392	483	573	663	753	---	---	---
Supercritical Pulverized Coal - 500 MW	167	196	224	253	281	310	338	367	395	424	452
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	206	234	262	291	319	348	376	404	433	461
Supercritical Pulverized Coal - 750 MW	150	178	206	234	262	290	318	346	374	402	430
Subcritical Pulverized Coal - 250 MW	206	235	265	295	324	354	384	413	443	473	503
Subcritical Pulverized Coal - 500 MW	163	192	221	250	279	308	337	365	394	423	452
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	202	230	259	288	317	346	374	403	432	461
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	187	215	243	271	299	327	355	382	410	438
Circulating Fluidized Bed - 250 MW	215	245	275	306	336	366	396	426	457	487	517
Circulating Fluidized Bed - 500 MW	164	193	223	252	282	312	341	371	400	430	460
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	153	177	201	225	249	273	297	322	346	370
Minimum Levelized \$/kW	0	37	73	110	146	183	273	297	322	346	370

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	157	213	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	237	317	397	478	558	638	718	798	879	959
Simple Cycle GE 7EA CT - 73 MW	108	207	307	406	505	605	704	804	903	1002	1102
Simple Cycle GE 7FA CT - 148 MW	81	178	275	372	469	566	663	760	857	954	1051
Combined Cycle GE 7EA CT - 119 MW	145	207	269	331	393	455	518	580	642	704	766
Combined Cycle GE 7FA CT - 235 MW	116	173	229	286	342	399	455	512	568	625	681
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	152	208	264	320	376	433	489	545	601	657
W 501F CC CT - 258 MW	109	167	226	284	342	401	459	518	576	634	693
Spark Ignition Engine - 5 MW	141	240	339	437	536	635	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	188	272	357	441	526	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
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Landfill Gas IC Engine - 5 MW	219	276	334	391	449	506	563	621	678	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	395
Sewage Sludge & Anaerobic Digestion - 085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	142	194	245	297	348	399	451	---	---	---
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Pressurized Fluidized Bed Combustion - 250 MW	213	281	349	417	485	553	621	689	---	---	---
IGCC - 267 MW	237	280	323	367	410	453	497	540	583	---	---
IGCC - 534 MW	207	250	293	336	379	422	464	507	550	---	---
Fuel Cell - 0.2 MW	1394	1463	1532	1601	1670	1740	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	232	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	227	332	437	543	648	753	858	---	---	---
Supercritical Pulverized Coal - 500 MW	167	202	236	270	304	338	373	407	441	475	509
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	210	242	275	307	340	372	405	437	470	502
Supercritical Pulverized Coal - 750 MW	150	184	217	251	284	318	351	385	418	452	485
Subcritical Pulverized Coal - 250 MW	206	241	277	312	348	384	419	455	490	526	562
Subcritical Pulverized Coal - 500 MW	163	198	233	267	302	337	371	406	441	475	510
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	206	239	272	305	338	371	404	437	470	503
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	191	223	255	287	319	351	383	414	446	478
Circulating Fluidized Bed - 250 MW	215	251	287	324	360	396	432	468	505	541	577
Circulating Fluidized Bed - 500 MW	164	199	234	270	305	341	376	411	447	482	518
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	157	185	213	241	269	297	325	353	381	409
Minimum Levelized \$/kW	0	37	73	110	146	183	297	325	353	381	396

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	153	205	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	227	298	368	439	509	580	650	721	791	862
Simple Cycle GE 7EA CT - 73 MW	108	195	283	371	459	546	634	722	809	897	985
Simple Cycle GE 7FA CT - 148 MW	81	167	254	340	427	513	600	686	773	859	946
Combined Cycle GE 7EA CT - 119 MW	145	200	255	309	364	419	474	529	583	638	693
Combined Cycle GE 7FA CT - 235 MW	116	166	216	266	316	366	415	465	515	565	615
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	146	195	245	294	344	394	443	493	542	592
W 501F CC CT - 258 MW	109	160	212	263	315	366	418	469	521	572	624
Spark Ignition Engine - 5 MW	141	231	320	410	499	589	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	180	258	335	413	490	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	273	326	380	433	487	540	594	647	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - .085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	136	181	227	272	317	363	408	---	---	---
Kalina Cycle CC CT - 275 MW	114	161	207	254	300	347	394	440	---	---	---
Cheng Cycle CT - 140 MW	140	198	256	315	373	431	490	548	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	273	333	393	453	513	573	634	---	---	---
IGCC - 267 MW	237	277	316	356	396	436	475	515	555	---	---
IGCC - 534 MW	207	247	286	325	365	404	443	483	522	---	---
Fuel Cell - 0.2 MW	1394	1455	1516	1578	1639	1701	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	220	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	216	310	404	497	591	685	779	---	---	---
Supercritical Pulverized Coal - 500 MW	167	197	227	257	287	316	346	376	406	436	465
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	207	236	266	296	325	355	384	414	444	473
Supercritical Pulverized Coal - 750 MW	150	180	209	238	267	296	326	355	384	413	442
Subcritical Pulverized Coal - 250 MW	206	237	268	299	330	361	392	423	454	485	516
Subcritical Pulverized Coal - 500 MW	163	193	224	254	284	315	345	375	406	436	466
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	203	233	263	293	323	353	383	413	443	473
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	188	217	246	275	304	333	362	391	420	449
Circulating Fluidized Bed - 250 MW	215	247	278	310	342	373	405	437	469	500	532
Circulating Fluidized Bed - 500 MW	164	195	226	257	288	319	350	381	412	443	474
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	154	179	205	230	255	281	306	331	356	382
Minimum Levelized \$/kW	0	37	73	110	146	183	281	306	331	356	382

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Capital Cost- Base
Heat Rate- High
Fuel Forecast- Base

2004 Dollars (\$/kW yr)

Technology	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	156	210	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	234	311	389	466	543	621	698	775	852	930
Simple Cycle GE 7EA CT - 73 MW	108	204	299	395	491	587	683	778	874	970	1066
Simple Cycle GE 7FA CT - 148 MW	81	175	268	362	456	550	644	737	831	925	1019
Combined Cycle GE 7EA CT - 119 MW	145	205	265	325	385	444	504	564	624	684	744
Combined Cycle GE 7FA CT - 235 MW	116	171	225	280	334	389	443	498	552	607	661
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	150	204	259	313	367	421	475	530	584	638
W 501F CC CT - 258 MW	109	165	222	278	334	391	447	504	560	616	673
Spark Ignition Engine - 5 MW	141	237	333	429	525	621	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	185	268	350	433	515	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27 5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	276	332	389	445	502	558	615	671	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	396
Sewage Sludge & Anaerobic Digestion - 085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	140	190	240	289	339	388	438	---	---	---
Kalina Cycle CC CT - 275 MW	114	165	216	267	318	369	420	471	---	---	---
Cheng Cycle CT - 140 MW	140	204	268	331	395	459	523	587	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	278	344	410	475	541	607	673	---	---	---
IGCC - 267 MW	237	279	322	364	407	449	492	534	577	---	---
IGCC - 534 MW	207	249	291	333	375	417	459	501	543	---	---
Fuel Cell - 0.2 MW	1394	1460	1527	1594	1661	1728	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	229	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	224	325	427	529	631	732	834	---	---	---
Supercritical Pulverized Coal - 500 MW	167	201	235	268	302	336	370	403	437	471	504
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	208	238	268	298	329	359	389	420	450	480
Supercritical Pulverized Coal - 750 MW	150	183	216	249	282	315	348	381	414	447	480
Subcritical Pulverized Coal - 250 MW	206	241	276	311	346	381	416	451	486	521	556
Subcritical Pulverized Coal - 500 MW	163	197	232	266	300	334	368	403	437	471	505
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	204	234	265	296	326	357	388	418	449	480
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	189	219	248	278	308	337	367	397	427	456
Circulating Fluidized Bed - 250 MW	215	251	286	322	358	393	429	465	501	536	572
Circulating Fluidized Bed - 500 MW	164	198	233	268	303	338	373	408	443	478	513
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	155	181	206	232	258	284	310	336	362	388
Minimum Levelized \$/kW	0	37	73	110	146	183	284	310	336	362	388

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	195	226	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	159	272	384	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	101	158	216	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	157	241	325	409	493	577	661	745	830	914	998
Simple Cycle GE 7EA CT - 73 MW	108	212	316	420	524	628	732	836	940	1044	1148
Simple Cycle GE 7FA CT - 148 MW	81	182	283	384	485	586	687	789	890	991	1092
Combined Cycle GE 7EA CT - 119 MW	145	210	275	340	405	470	535	600	665	730	795
Combined Cycle GE 7FA CT - 235 MW	116	175	234	293	352	412	471	530	589	648	707
Combined Cycle 2x1 GE 7FA CT - 484 MW	96	155	213	272	331	389	448	507	566	624	683
W 501F CC CT - 258 MW	109	170	231	292	354	415	476	537	598	660	721
Spark Ignition Engine - 5 MW	141	243	346	448	551	653	---	---	---	---	---
Compression Ignition Engine - 10 MW	103	191	278	366	453	541	---	---	---	---	---
Wind Energy Conversion - 50 MW	191	191	191	191	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	494	523	553	582	612	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	384	400	416	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	658	674	690	706	723	739	755	771	---	---	---
Solar Thermal, Solar Chimney - 200 MW	439	455	471	487	504	520	536	552	---	---	---
Solar Photovoltaic - 50 kW	958	982	1007	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	321	329	338	346	355	364	372	381	390	---	---
Geothermal - 30 MW	664	664	664	664	664	664	664	664	664	---	---
Hydroelectric - New - 30 MW	402	407	412	416	421	425	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1026	1106	1187	1268	1348	1429	1509	1590	---	---	---
RDF Stoker-Fired - 7 MW	1491	1577	1663	1749	1835	1921	2007	2093	---	---	---
Landfill Gas IC Engine - 5 MW	219	279	338	398	457	517	576	636	695	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	345	350	355	360	365	370	375	380	385	390	395
Sewage Sludge & Anaerobic Digestion - 085 MW	335	351	367	383	400	416	432	448	464	---	---
Humid Air Turbine Cycle CT - 450 MW	91	145	198	252	306	359	413	467	---	---	---
Kalina Cycle CC CT - 275 MW	114	169	225	280	335	391	446	501	---	---	---
Cheng Cycle CT - 140 MW	140	209	279	348	418	487	556	626	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	213	284	355	426	498	569	640	712	---	---	---
IGCC - 267 MW	237	282	327	372	418	463	508	553	598	---	---
IGCC - 534 MW	207	252	297	342	386	431	476	520	565	---	---
Fuel Cell - 0.2 MW	1394	1466	1538	1610	1682	1755	---	---	---	---	---
Peaking Microturbine - 0.03 MW	122	237	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	122	232	341	451	560	670	779	889	---	---	---
Supercritical Pulverized Coal - 500 MW	167	203	239	275	311	346	382	418	454	490	525
Supercritical Pulverized Coal, High Sulfur - 500 MW	177	211	245	279	313	347	381	415	448	482	516
Supercritical Pulverized Coal - 750 MW	150	186	221	256	291	326	361	396	431	466	501
Subcritical Pulverized Coal - 250 MW	206	243	280	317	354	392	429	466	503	540	578
Subcritical Pulverized Coal - 500 MW	163	200	236	272	309	345	382	418	454	491	527
Subcritical Pulverized Coal, High Sulfur - 500 MW	173	207	242	276	310	345	379	414	448	482	517
Supercritical Pulverized Coal, High Sulfur - 750 MW	159	193	226	259	292	326	359	392	426	459	492
Circulating Fluidized Bed - 250 MW	215	253	291	329	367	404	442	480	518	556	594
Circulating Fluidized Bed - 500 MW	164	201	238	275	312	349	386	423	460	497	534
Ohio Falls 9 and 10	144	144	144	144	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	129	158	188	217	246	276	305	335	364	393	423
Minimum Levelized \$/kW	0	37	73	110	146	183	305	335	364	390	396

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	166	216	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	230	294	358	423	487	551	615	679	744	808
Simple Cycle GE 7EA CT - 73 MW	114	194	274	354	434	514	594	674	754	834	914
Simple Cycle GE 7FA CT - 148 MW	86	166	245	325	405	484	564	644	723	803	883
Combined Cycle GE 7EA CT - 119 MW	155	205	255	305	355	405	455	505	555	605	655
Combined Cycle GE 7FA CT - 235 MW	123	169	214	260	305	351	396	442	487	533	578
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	146	192	237	282	327	373	418	463	509	554
W 501F CC CT - 258 MW	116	163	210	257	304	351	398	445	492	539	586
Spark Ignition Engine - 5 MW	155	239	322	406	489	573	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	186	258	331	403	476	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	313	363	413	463	512	562	612	662	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	143	184	226	267	308	350	391	---	---	---
Kalina Cycle CC CT - 275 MW	131	174	216	258	301	343	386	428	---	---	---
Cheng Cycle CT - 140 MW	160	213	266	319	372	425	478	531	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	302	357	412	467	522	577	632	---	---	---
IGCC - 267 MW	273	309	346	383	419	456	492	529	566	---	---
IGCC - 534 MW	240	277	313	349	385	421	457	493	529	---	---
Fuel Cell - 0.2 MW	1526	1582	1638	1695	1751	1808	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	236	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	233	319	406	492	579	665	752	---	---	---
Supercritical Pulverized Coal - 500 MW	181	209	236	263	290	317	345	372	399	426	453
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	219	246	274	301	328	355	382	409	436	463
Supercritical Pulverized Coal - 750 MW	162	189	216	242	269	295	322	349	375	402	428
Subcritical Pulverized Coal - 250 MW	223	251	279	307	336	364	392	421	449	477	506
Subcritical Pulverized Coal - 500 MW	176	204	231	259	287	314	342	369	397	425	452
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	214	242	269	297	324	352	379	407	434	462
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	200	227	253	280	307	333	360	387	414	440
Circulating Fluidized Bed - 250 MW	232	261	290	319	348	376	405	434	463	492	521
Circulating Fluidized Bed - 500 MW	178	206	234	262	290	319	347	375	403	431	460
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	163	186	209	232	255	278	301	324	347	370
Minimum Levelized \$/kW	0	37	73	110	146	183	278	301	324	347	370

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	169	221	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	236	306	377	447	517	588	658	728	798	869
Simple Cycle GE 7EA CT - 73 MW	114	201	289	376	463	551	638	726	813	900	988
Simple Cycle GE 7FA CT - 148 MW	86	172	258	345	431	517	604	690	776	863	949
Combined Cycle GE 7EA CT - 119 MW	155	210	264	319	373	428	483	537	592	646	701
Combined Cycle GE 7FA CT - 235 MW	123	173	222	272	322	372	421	471	521	570	620
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	150	200	249	299	348	397	447	496	546	595
W 501F CC CT - 258 MW	116	167	219	270	321	373	424	476	527	578	630
Spark Ignition Engine - 5 MW	155	244	334	423	513	602	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	190	267	345	422	499	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	316	368	421	474	526	579	631	684	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	147	192	237	282	328	373	418	---	---	---
Kalina Cycle CC CT - 275 MW	131	178	224	270	317	363	410	456	---	---	---
Cheng Cycle CT - 140 MW	160	218	276	334	392	450	508	566	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	307	367	427	487	547	607	667	---	---	---
IGCC - 267 MW	273	312	351	390	429	468	507	546	585	---	---
IGCC - 534 MW	240	279	318	356	395	433	472	511	549	---	---
Fuel Cell - 0.2 MW	1526	1587	1648	1709	1770	1832	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	244	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	240	333	427	520	614	707	801	---	---	---
Supercritical Pulverized Coal - 500 MW	181	212	243	273	304	334	365	396	426	457	487
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	220	248	275	303	331	358	386	414	442	469
Supercritical Pulverized Coal - 750 MW	162	192	222	252	282	312	342	372	402	432	462
Subcritical Pulverized Coal - 250 MW	223	255	287	319	351	383	415	447	479	511	543
Subcritical Pulverized Coal - 500 MW	176	207	238	269	301	332	363	394	425	456	487
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	215	243	271	299	327	355	384	412	440	468
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	201	228	255	282	310	337	364	392	419	446
Circulating Fluidized Bed - 250 MW	232	264	297	329	362	394	427	459	492	524	557
Circulating Fluidized Bed - 500 MW	178	209	241	273	305	337	368	400	432	464	496
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	163	187	211	234	258	281	305	329	352	376
Minimum Levelized \$/kW	0	37	73	110	146	183	281	305	329	352	376

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	172	226	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	242	319	395	471	548	624	701	777	853	930
Simple Cycle GE 7EA CT - 73 MW	114	208	303	398	493	587	682	777	871	966	1061
Simple Cycle GE 7FA CT - 148 MW	86	179	272	365	457	550	643	736	829	922	1015
Combined Cycle GE 7EA CT - 119 MW	155	214	273	333	392	451	510	569	629	688	747
Combined Cycle GE 7FA CT - 235 MW	123	177	231	285	339	393	446	500	554	608	662
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	155	208	262	315	369	423	476	530	583	637
W 501F CC CT - 258 MW	116	172	227	283	339	394	450	506	561	617	673
Spark Ignition Engine - 5 MW	155	250	345	441	536	631	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	195	277	358	440	522	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	318	374	429	485	540	595	651	706	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - 085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	151	200	249	298	347	396	445	---	---	---
Kalina Cycle CC CT - 275 MW	131	182	232	282	333	383	434	484	---	---	---
Cheng Cycle CT - 140 MW	160	223	286	349	412	475	538	601	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	312	377	442	507	572	637	702	---	---	---
IGCC - 267 MW	273	314	356	397	439	480	521	563	604	---	---
IGCC - 534 MW	240	281	322	363	404	445	486	527	568	---	---
Fuel Cell - 0.2 MW	1526	1592	1658	1724	1790	1857	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	252	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	247	347	448	549	650	750	851	---	---	---
Supercritical Pulverized Coal - 500 MW	181	214	246	279	311	344	376	409	441	474	506
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	223	254	285	316	347	378	409	440	471	502
Supercritical Pulverized Coal - 750 MW	162	194	226	258	290	322	354	386	418	450	481
Subcritical Pulverized Coal - 250 MW	223	256	290	324	358	392	426	460	494	528	562
Subcritical Pulverized Coal - 500 MW	176	209	242	275	309	342	375	408	441	474	507
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	218	250	281	313	344	376	407	439	470	502
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	204	234	265	295	326	356	387	417	448	478
Circulating Fluidized Bed - 250 MW	232	266	301	335	370	404	439	473	508	542	577
Circulating Fluidized Bed - 500 MW	178	211	245	279	312	346	380	413	447	481	515
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	166	193	220	247	273	300	327	353	380	407
Minimum Levelized \$/kW	0	37	73	110	146	183	300	327	353	380	407

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	168	218	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	233	301	368	435	503	570	638	705	772	840
Simple Cycle GE 7EA CT - 73 MW	114	198	282	365	449	533	617	701	785	869	953
Simple Cycle GE 7FA CT - 148 MW	86	169	252	335	418	501	584	668	751	834	917
Combined Cycle GE 7EA CT - 119 MW	155	207	260	312	365	417	469	522	574	627	679
Combined Cycle GE 7FA CT - 235 MW	123	171	218	266	314	362	409	457	505	552	600
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	148	196	243	291	338	385	433	480	528	575
W 501F CC CT - 258 MW	116	165	214	264	313	362	412	461	510	560	609
Spark Ignition Engine - 5 MW	155	242	328	415	501	588	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	188	263	338	413	488	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	315	367	418	470	522	574	625	677	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - 085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	145	188	232	275	318	362	405	---	---	---
Kalina Cycle CC CT - 275 MW	131	176	220	264	309	353	398	442	---	---	---
Cheng Cycle CT - 140 MW	160	215	271	327	382	438	493	549	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	305	362	420	477	535	592	650	---	---	---
IGCC - 267 MW	273	311	349	388	426	464	502	541	579	---	---
IGCC - 534 MW	240	278	316	354	392	429	467	505	543	---	---
Fuel Cell - 0.2 MW	1526	1585	1644	1703	1762	1821	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	240	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	236	326	416	507	597	687	777	---	---	---
Supercritical Pulverized Coal - 500 MW	181	210	238	267	295	324	352	381	409	438	466
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	221	249	277	306	334	363	391	419	448	476
Supercritical Pulverized Coal - 750 MW	162	190	218	246	274	302	330	358	386	414	442
Subcritical Pulverized Coal - 250 MW	223	252	282	312	341	371	401	430	460	490	520
Subcritical Pulverized Coal - 500 MW	176	205	234	263	292	321	350	378	407	436	465
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	216	244	273	302	331	360	388	417	446	475
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	201	229	257	285	313	341	369	396	424	452
Circulating Fluidized Bed - 250 MW	232	262	292	323	353	383	413	443	474	504	534
Circulating Fluidized Bed - 500 MW	178	207	237	266	296	326	355	385	414	444	474
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	164	188	212	236	260	284	308	333	357	381
Minimum Levelized \$/kW	0	37	73	110	146	183	284	308	333	357	381

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	170	224	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	240	313	387	461	535	609	682	756	830	904
Simple Cycle GE 7EA CT - 73 MW	114	205	297	389	480	572	663	755	847	938	1030
Simple Cycle GE 7FA CT - 148 MW	86	176	266	356	446	536	626	717	807	897	987
Combined Cycle GE 7EA CT - 119 MW	155	212	269	327	384	441	498	555	613	670	727
Combined Cycle GE 7FA CT - 235 MW	123	175	227	279	331	384	436	488	540	592	644
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	153	205	256	308	360	412	464	515	567	619
W 501F CC CT - 258 MW	116	170	224	278	331	385	439	493	547	601	655
Spark Ignition Engine - 5 MW	155	248	341	433	526	619	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	193	273	352	432	512	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5 MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	318	372	427	482	536	591	645	700	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - 0.85 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	149	196	244	291	338	386	433	---	---	---
Kalina Cycle CC CT - 275 MW	131	180	229	277	326	375	423	472	---	---	---
Cheng Cycle CT - 140 MW	160	221	282	342	403	464	525	586	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	310	373	436	498	561	624	687	---	---	---
IGCC - 267 MW	273	314	354	395	436	476	517	558	599	---	---
IGCC - 534 MW	240	281	321	361	401	442	482	522	562	---	---
Fuel Cell - 0.2 MW	1526	1590	1654	1718	1782	1846	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	248	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	244	341	439	537	635	732	830	---	---	---
Supercritical Pulverized Coal - 500 MW	181	214	246	278	310	342	375	407	439	471	503
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	221	250	280	309	338	367	396	425	454	483
Supercritical Pulverized Coal - 750 MW	162	194	226	257	289	320	352	384	415	447	478
Subcritical Pulverized Coal - 250 MW	223	256	290	323	357	390	424	457	491	524	558
Subcritical Pulverized Coal - 500 MW	176	209	241	274	307	339	372	404	437	470	502
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	216	246	275	305	334	364	393	423	452	482
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	202	230	259	287	316	344	373	401	430	458
Circulating Fluidized Bed - 250 MW	232	266	300	334	368	402	437	471	505	539	573
Circulating Fluidized Bed - 500 MW	178	211	244	278	311	345	378	411	445	478	512
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	165	189	214	239	264	289	313	338	363	388
Minimum Levelized \$/kW	0	37	73	110	146	183	289	313	338	363	388

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	173	229	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	246	326	406	487	567	647	727	807	888	968
Simple Cycle GE 7EA CT - 73 MW	114	213	313	412	511	611	710	810	909	1008	1108
Simple Cycle GE 7FA CT - 148 MW	86	183	280	377	474	571	668	765	862	959	1056
Combined Cycle GE 7EA CT - 119 MW	155	217	279	341	403	465	528	590	652	714	776
Combined Cycle GE 7FA CT - 235 MW	123	180	236	293	349	406	462	519	575	632	688
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	157	213	269	325	381	438	494	550	606	662
W 501F CC CT - 258 MW	116	174	233	291	349	408	466	525	583	641	700
Spark Ignition Engine - 5 MW	155	254	353	451	550	649	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	198	282	367	451	536	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27 5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	320	378	435	493	550	607	665	722	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - .085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	153	205	256	308	359	410	462	---	---	---
Kalina Cycle CC CT - 275 MW	131	184	237	290	343	395	448	501	---	---	---
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Pressurized Fluidized Bed Combustion - 250 MW	248	316	384	452	520	588	656	724	---	---	---
IGCC - 267 MW	273	316	359	403	446	489	533	576	619	---	---
IGCC - 534 MW	240	283	326	369	412	455	497	540	583	---	---
Fuel Cell - 0.2 MW	1526	1595	1664	1733	1802	1872	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	256	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	251	356	461	567	672	777	882	---	---	---
Supercritical Pulverized Coal - 500 MW	181	216	250	284	318	352	387	421	455	489	523
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	225	257	290	322	355	387	420	452	485	517
Supercritical Pulverized Coal - 750 MW	162	196	229	263	296	330	363	397	430	464	497
Subcritical Pulverized Coal - 250 MW	223	258	294	329	365	401	436	472	507	543	579
Subcritical Pulverized Coal - 500 MW	176	211	246	280	315	350	384	419	454	488	523
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	220	253	286	319	352	385	418	451	484	517
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	205	237	269	301	333	365	397	428	460	492
Circulating Fluidized Bed - 250 MW	232	268	304	341	377	413	449	485	522	558	594
Circulating Fluidized Bed - 500 MW	178	213	248	284	319	355	390	425	461	496	532
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	168	196	224	252	280	308	336	364	392	420
Minimum Levelized \$/kW	0	37	73	110	146	183	308	336	364	392	420

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	169	221	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	236	307	377	448	518	589	659	730	800	871
Simple Cycle GE 7EA CT - 73 MW	114	201	289	377	465	552	640	728	815	903	991
Simple Cycle GE 7FA CT - 148 MW	86	172	259	345	432	518	605	691	778	864	951
Combined Cycle GE 7EA CT - 119 MW	155	210	265	319	374	429	484	539	593	648	703
Combined Cycle GE 7FA CT - 235 MW	123	173	223	273	323	373	422	472	522	572	622
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	151	200	250	299	349	399	448	498	547	597
W 501F CC CT - 258 MW	116	167	219	270	322	373	425	476	528	579	631
Spark Ignition Engine - 5 MW	155	245	334	424	513	603	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	190	268	345	423	500	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
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Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
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Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	317	370	424	477	531	584	638	691	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - 085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	147	192	238	283	328	374	419	---	---	---
Kalina Cycle CC CT - 275 MW	131	178	224	271	317	364	411	457	---	---	---
Cheng Cycle CT - 140 MW	160	218	276	335	393	451	510	568	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	308	368	428	488	548	608	669	---	---	---
IGCC - 267 MW	273	313	352	392	432	472	511	551	591	---	---
IGCC - 534 MW	240	280	319	358	398	437	476	516	555	---	---
Fuel Cell - 0.2 MW	1526	1587	1648	1710	1771	1833	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	244	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	240	334	428	521	615	709	803	---	---	---
Supercritical Pulverized Coal - 500 MW	181	211	241	271	301	330	360	390	420	450	479
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	222	251	281	311	340	370	399	429	459	488
Supercritical Pulverized Coal - 750 MW	162	192	221	250	279	308	338	367	396	425	454
Subcritical Pulverized Coal - 250 MW	223	254	285	316	347	378	409	440	471	502	533
Subcritical Pulverized Coal - 500 MW	176	206	237	267	297	328	358	388	419	449	479
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	217	247	277	307	337	367	397	427	457	487
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	202	231	260	289	318	347	376	405	434	463
Circulating Fluidized Bed - 250 MW	232	264	295	327	359	390	422	454	486	517	549
Circulating Fluidized Bed - 500 MW	178	209	240	271	302	333	364	395	426	457	488
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	165	190	216	241	266	292	317	342	367	393
Minimum Levelized \$/kW	0	37	73	110	146	183	292	317	342	367	393

Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	Capacity Factors										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	172	226	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	243	320	398	475	552	630	707	784	861	939
Simple Cycle GE 7EA CT - 73 MW	114	210	305	401	497	593	689	784	880	976	1072
Simple Cycle GE 7FA CT - 148 MW	86	180	273	367	461	555	649	742	836	930	1024
Combined Cycle GE 7EA CT - 119 MW	155	215	275	335	395	454	514	574	634	694	754
Combined Cycle GE 7FA CT - 235 MW	123	178	232	287	341	396	450	505	559	614	668
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	155	209	264	318	372	426	480	535	589	643
W 501F CC CT - 258 MW	116	172	229	285	341	398	454	511	567	623	680
Spark Ignition Engine - 5 MW	155	251	347	443	539	635	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	195	278	360	443	525	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	320	376	433	489	546	602	659	715	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - 085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	151	201	251	300	350	399	449	---	---	---
Kalina Cycle CC CT - 275 MW	131	182	233	284	335	386	437	488	---	---	---
Cheng Cycle CT - 140 MW	160	224	288	351	415	479	543	607	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	313	379	445	510	576	642	708	---	---	---
IGCC - 267 MW	273	315	358	400	443	485	528	570	613	---	---
IGCC - 534 MW	240	282	324	366	408	450	492	534	576	---	---
Fuel Cell - 0.2 MW	1526	1592	1659	1726	1793	1860	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	253	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	248	349	451	553	655	756	858	---	---	---
Supercritical Pulverized Coal - 500 MW	181	215	249	282	316	350	384	417	451	485	518
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	223	253	283	313	344	374	404	435	465	495
Supercritical Pulverized Coal - 750 MW	162	195	228	261	294	327	360	393	426	459	492
Subcritical Pulverized Coal - 250 MW	223	258	293	328	363	398	433	468	503	538	573
Subcritical Pulverized Coal - 500 MW	176	210	245	279	313	347	381	416	450	484	518
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	218	248	279	310	340	371	402	432	463	494
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	203	233	262	292	322	351	381	411	441	470
Circulating Fluidized Bed - 250 MW	232	268	303	339	375	410	446	482	518	553	589
Circulating Fluidized Bed - 500 MW	178	212	247	282	317	352	387	422	457	492	527
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	166	192	217	243	269	295	321	347	373	399
Minimum Levelized \$/kW	0	37	73	110	146	183	295	321	347	373	399

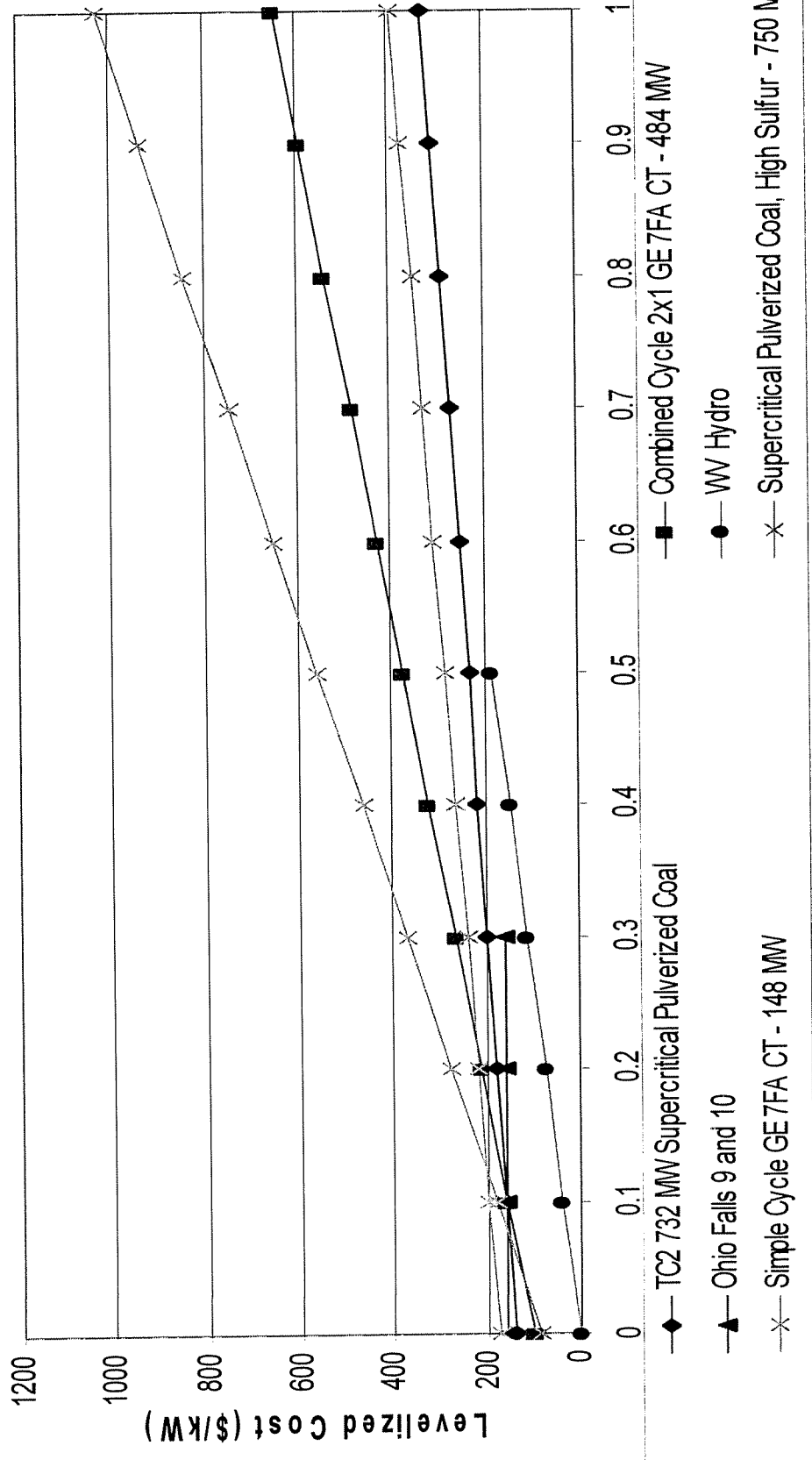
Levelized Dollars at Various Capacity Factors With SO2 Adders, with CO2 Adders, and with NOx Adders

Technology	2004 Dollars (\$/kW yr)										
	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Pumped Hydro Energy Storage - 500 MW	232	263	---	---	---	---	---	---	---	---	---
Lead-Acid Battery Energy Storage - 5 MW	187	300	412	---	---	---	---	---	---	---	---
Compressed Air Energy Storage - 500 MW	117	174	232	---	---	---	---	---	---	---	---
Simple Cycle GE LM6000 CT - 31 MW	166	250	334	418	502	586	670	754	839	923	1007
Simple Cycle GE 7EA CT - 73 MW	114	218	322	426	530	634	738	842	946	1050	1154
Simple Cycle GE 7FA CT - 148 MW	86	187	288	389	490	591	692	794	895	996	1097
Combined Cycle GE 7EA CT - 119 MW	155	220	285	350	415	480	545	610	675	740	805
Combined Cycle GE 7FA CT - 235 MW	123	182	241	300	359	419	478	537	596	655	714
Combined Cycle 2x1 GE 7FA CT - 484 MW	101	160	218	277	336	394	453	512	571	629	688
W 501F CC CT - 258 MW	116	177	238	299	361	422	483	544	605	667	728
Spark Ignition Engine - 5 MW	155	257	360	462	565	667	---	---	---	---	---
Compression Ignition Engine - 10 MW	113	201	288	376	463	551	---	---	---	---	---
Wind Energy Conversion - 50 MW	221	221	221	221	---	---	---	---	---	---	---
Solar Thermal, Parabolic Trough - 100 MW	593	622	652	681	711	---	---	---	---	---	---
Solar Thermal, Parabolic Dish - 1.2 MW	461	477	493	---	---	---	---	---	---	---	---
Solar Thermal, Central Receiver - 50 MW	790	806	822	838	855	871	887	903	---	---	---
Solar Thermal, Solar Chimney - 200 MW	527	543	559	575	592	608	624	640	---	---	---
Solar Photovoltaic - 50 kW	1144	1168	1193	---	---	---	---	---	---	---	---
Biomass (Co-Fire) - 27.5MW	370	378	387	395	404	413	421	430	439	---	---
Geothermal - 30 MW	735	735	735	735	735	735	735	735	735	---	---
Hydroelectric - New - 30 MW	440	445	450	454	459	463	---	---	---	---	---
WV Hydro	0	37	73	110	146	183	---	---	---	---	---
MSW Mass Burn - 7 MW	1158	1238	1319	1400	1480	1561	1641	1722	---	---	---
RDF Stoker-Fired - 7 MW	1666	1752	1838	1924	2010	2096	2182	2268	---	---	---
Landfill Gas IC Engine - 5 MW	263	323	382	442	501	561	620	680	739	---	---
TDF Multi-Fuel CFB (10% Co-fire) - 50 MW	400	405	410	415	420	425	430	435	440	445	451
Sewage Sludge & Anaerobic Digestion - 085 MW	402	418	434	450	467	483	499	515	531	---	---
Humid Air Turbine Cycle CT - 450 MW	102	156	209	263	317	370	424	478	---	---	---
Kalina Cycle CC CT - 275 MW	131	186	242	297	352	408	463	518	---	---	---
Cheng Cycle CT - 140 MW	160	229	299	368	438	507	576	646	---	---	---
Pressurized Fluidized Bed Combustion - 250 MW	248	319	390	461	533	604	675	747	---	---	---
IGCC - 267 MW	273	318	363	408	454	499	544	589	634	---	---
IGCC - 534 MW	240	285	330	375	419	464	509	553	598	---	---
Fuel Cell - 0.2 MW	1526	1598	1670	1742	1814	1887	---	---	---	---	---
Peaking Microturbine - 0.03 MW	146	261	---	---	---	---	---	---	---	---	---
Baseload Microturbine - 0.03 MW	146	256	365	475	584	694	803	913	---	---	---
Supercritical Pulverized Coal - 500 MW	181	217	253	289	325	360	396	432	468	504	539
Supercritical Pulverized Coal, High Sulfur - 500 MW	192	226	260	294	328	362	396	430	463	497	531
Supercritical Pulverized Coal - 750 MW	162	198	233	268	303	338	373	408	443	478	513
Subcritical Pulverized Coal - 250 MW	223	260	297	334	371	409	446	483	520	557	595
Subcritical Pulverized Coal - 500 MW	176	213	249	285	322	358	395	431	467	504	540
Subcritical Pulverized Coal, High Sulfur - 500 MW	187	221	256	290	324	359	393	428	462	496	531
Supercritical Pulverized Coal, High Sulfur - 750 MW	173	207	240	273	306	340	373	406	440	473	506
Circulating Fluidized Bed - 250 MW	232	270	308	346	384	421	459	497	535	573	611
Circulating Fluidized Bed - 500 MW	178	215	252	289	326	363	400	437	474	511	548
Ohio Falls 9 and 10	157	157	157	157	---	---	---	---	---	---	---
TC2 732 MW Supercritical Pulverized Coal	140	169	199	228	257	287	316	346	375	404	434
Minimum Levelized \$/kW	0	37	73	110	146	183	316	346	375	404	434

Exhibit 9

Least Cost Technologies Considered For Further Analysis

Base Capital, Base Heat rate, Base Fuel



**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

CASE NO. 2005-00162

**Response to the Attorney General's
Supplemental Request for Information
Dated: July 26, 2005**

Question No. 18

Responding Witness: Keith Yocum

Q-18. In Volume 3, SO₂ Compliance, page 22 of 91, states that the Companies will still need to purchase 690,000 SO₂ allowances.

a) Is the assumed price of these allowances based on the green line in the graph on page 15? If not please provide the assumed price.

b) Even at the prices assumed by the Companies, please explain why it wouldn't be cheaper to simply remove more SO₂ by, for example, upgrading the Cane Run scrubbers, as opposed to buying so many expensive allowances?

A-18. a) The evaluation assumes multiple forward prices for any purchased allowances. The graph on page 15 does reflect the Companies' base forecast for the SO₂ market. These prices are also listed in Tabular form in Appendix 6 (page 39 of 91). The cost ramifications of purchasing the 690,000+ SO₂ allowances are quantified in two ways. The table on page 14 of 91 quantifies the impact using the base forward forecast while the table on page 16 of 91 quantifies the impact using a higher forward SO₂ price forecast.

b) As stated in LG&E's response to question 10 of the PSC Staff's First Data Request in Case 2004-00421, the Companies are evaluating alternatives to improving the removal efficiency of existing scrubbers at locations other than Trimble County. Implementing the alternatives would only occur if the associated costs were lower than the Companies' next best alternative. Evaluations indicate increasing the FGD removal efficiency of all existing FGDs starting in 2006 by 5% would still require purchasing SO₂ allowances from the market.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

CASE NO. 2005-00162

**Response to the Attorney General's
Supplemental Request for Information
Dated: July 26, 2005**

Question No. 19

Responding Witness: Keith Yocum / Irv Hurst

Q-19. With respect to the evaluation of DSM options:

- a) Please provide the avoided cost of capacity used in this analysis.
- b) If the avoided cost used to evaluate DSM options was anything other than the cost of adding the TC2 plant, please provide an explanation of why a different avoided cost was used.

A-19. a) The levelized avoided capacity cost used in the DSM analysis is \$41.73/kw-yr

- b) Due to the lower capacity factor that can be derived from Exhibit DSM-5, it is not applicable for the avoided cost of a small DSM option to come from a higher-capacity base-loaded unit such as TC2. Therefore, the avoided cost was based upon the cost of a simple cycle combustion turbine as shown in the supply-side screening.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

CASE NO. 2005-00162

**Response to the Attorney General's
Supplemental Request for Information
Dated: July 26, 2005**

Question No. 20

Responding Witness: Keith Yocum

- Q-20. In Volume 3, Optimum Expansion Plan Analysis, a high fuel cost sensitivity analysis was run. With respect to that analysis please provide the following:
- a) Assumed price of coal.
 - b) Assumed price of natural gas.
 - c) Assumed price of oil.
- A-20. The data requested is located in Volume III's Optimal Expansion Plan Analysis, Appendix A page 36.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

CASE NO. 2005-00162

**Response to the Attorney General's
Supplemental Request for Information
Dated: July 26, 2005**

Question No. 21

Responding Witness: John Wolfram / Counsel

- Q-21. In Volume 3, PSC Recommendations, the Companies' answer to the seventh question, with respect to providing customers a Green Power alternative was non-responsive. Please describe the Companies' efforts to provide customers with a green power alternative. If the Companies have done nothing to develop this alternative, please provide an explanation of why the Companies have failed to act.
- A-21. As an initial matter, the Companies object to the premise of this request. Without waiver of that objection, the Companies state the following.

The Companies evaluated and analyzed several Green Power alternatives as requested by the KPSC in the 2002 IRP, Case No. 2002-00367. As outlined in Volume III, the Supply Side Analysis describes the evaluation process taken by the Companies to evaluate Renewable Resource Technologies. The Renewable Resource Technologies evaluated by the Companies included Wind Energy, Solar, Biomass, Geothermal, Hydroelectric, and Waste to Energy. Furthermore, the recommended resource acquisition plan includes the acquisition of a hydroelectric resource. Other green power alternatives are cost prohibitive in these analyses; barriers include economic ill-feasibility, insufficiency of resources available in the Companies add service territories, and environmental complications related to emissions permitting and ash disposal.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

CASE NO. 2005-00162

**Response to the Attorney General's
Supplemental Request for Information
Dated: July 26, 2005**

Question No. 22

Responding Witness: John Wolfram

- Q-22. In Volume 3, PSC Recommendations, the Companies' answer to the eighth question, the Companies discuss its policy with respect to avoided cost calculations.
- a) Please provide the Companies' current avoided costs, along with all supporting calculations, assumptions and workpapers.
 - b) Is a policy of not offering avoided capacity costs consistent with PURPA? Please explain.
 - c) Is the expressed current policy consistent with the Companies' policy on avoided costs in the past? Please explain.
- A-22. a) Avoided costs calculations and the Electric Tariffs were provided to the Commission for Louisville Gas and Electric Company and Kentucky Utilities Company in Case Nos. 2004-00200 and 2004-00201 respectively on May 14, 2004 as required under Title 807, Chapter 5, and Section 54 of the Kentucky Administrative Regulations ("KAR").
- b) 807 KAR 5:054, outlines the required rules as set forth under Title II of PURPA. The Companies have fully complied with the KAR requirements by (1) filing the two year avoided cost information as mentioned in the response to part (a) of this question and (2) by fulfilling the requirements for purchasing and selling from qualifying facilities inclusive of capacity costs as required by PURPA and KAR governing electric utilities.
 - c) Yes. The Companies maintain that as long as the qualifying facility provides (1) firm capacity (including liquidated damages for failure to deliver) and that (2) the sales and purchases by the Companies are just and reasonable, in the public interest, and are non discriminatory, the provisions and policies of the Companies are consistent and clearly satisfy all PURPA and KAR requirements. Additionally, see responses to parts (a) and (b) of this question.