

**GRAIN BELT EXPRESS
Production Cost Modeling Report**

**Prepared on behalf of
GRAIN BELT EXPRESS CLEAN LINE LLC**

by



April 13, 2015

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INTRODUCTION 1
1 - DATA ASSUMPTIONS..... 2
2 - PRODUCTION COST MODELING 5
 2.1 - Methodology..... 5
 2.2 – Model Results 5
3 - ADDITIONAL ANALYSIS..... 8
APPENDIX A..... A-1
APPENDIX B..... B-1

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INTRODUCTION

Leidos Engineering, LLC (“Leidos”) was engaged by Grain Belt Express LLC (“Grain Belt Express”) to perform studies in response to Paragraph #12 of the Missouri Public Service Commission order dated February 11, 2015 directing filing of additional information. Leidos is a company formed from several leading technical consulting firms, including SAIC Energy, Environment & Infrastructure LLC and the R.W. Beck Group, Inc. (“R.W. Beck”). The Transmission Planning and Analysis group performing this study was formerly part of R. W. Beck and has a long history of assessing the economics, benefits, and risks of project in the electric power system. Leidos is routinely hired as an independent engineer to assess projects on behalf of lenders and investors.

Grain Belt Express initially filed an application for a certificate of convenience and necessity for their high voltage direct current transmission line project (“the Project”) on March 26, 2014. The Direct Testimony of Gary Moland and Surrebuttal Testimony of Robert Cleveland presented production cost modeling findings using PROMOD, a leading software for simulating wholesale power markets, and the software called for Paragraph #12 of the February 11 order. This report updates the findings in Mr. Cleveland’s testimony based on input from Missouri Public Service Commission Staff and other parties. In addition, this report presents additional analyses on potential transmission upgrades and the potential for exporting power that are called for by Paragraph #12 of the February 11 Order.

Paragraph #12 in the commission’s order can be split into three different topics, which will be addressed in the three sections of this report: 1) Data Assumptions: the Missouri Public Service Commission staff (“Staff”) and other parties had the opportunity to provide meaningful input regarding the quality of the data and the reasonableness of the inputs to the analysis; 2) Production Cost Modeling, and 3) Additional Analysis: production, transmission, and economic modeling to evaluate potential transmission upgrades and the hypothetical export of energy from Missouri to PJM.

1 - DATA ASSUMPTIONS

Paragraph #12 of the Commission's order states that studies should be designed after Staff and other parties have had the opportunity to provide meaningful input regarding the quality of the data and the reasonableness of the inputs used for (1) load assumptions for the year 2019, (2) generator capacities, efficiencies, dispatch stack, or bid amounts for the year 2019, (3) the wind delivery used for the year 2019, and (4) the level of precision used in modeling factors such as generator heat rate curve, transmission loading curves, or other inputs to the PROMOD model used for the studies. Leidos provided a spreadsheet with data inputs for review by Missouri commission staff and other parties. This spreadsheet contains production modeling assumptions from the PROMOD simulations used to produce benefit results in the previous Grain Belt Express filings with the Missouri commission.

An in-person workshop meeting was also held on March 5, 2015 in Jefferson City to discuss any questions and concerns regarding the assumptions. This meeting was attended by Leidos, Staff, Grain Belt Express, Missouri Landowners Association, United for Missouri, with Show Me Concerned Landowners ("Show Me") and Reicherts/Meyers attending by phone. Following this meeting, Staff and Show Me Concerned Landowners ("Show Me") provided written comments and suggested changes. These are "Staff comments to Grain Belt Express related to Paragraph #12 of the Commission's Order Directing Filing of Additional Information" circulated March 12, 2015 and "Comments Of The Show Me Concerned Landowners Regarding The Modeling For Studies—Paragraph #12 Of The Commission's February 11, 2015, Order" filed March 12, 2015.

Leidos reviewed all comments and suggestions presented by the Parties, as discussed below and incorporated those suggestions which, in our professional judgment, were both feasible and consistent with industry best practices.

1) Load assumptions for the year 2019

Show Me suggested that load growth assumptions should be reduced to be aligned with the latest assumptions in MISO's regional transmission plan. Leidos accepted and implemented this recommendation. Load growth was updated to be consistent with the MISO MTEP 2016 presentation filed in Show Me's comments. MISO projects three demand growth scenarios: 0.2% (which Leidos used for the Slow Growth Scenario, 0.9% (which Leidos used for the Business as Usual Scenario) and 1.6% (which Leidos used for the Robust Economy and Green Economy scenarios).

Staff also commented that the load shapes should take into account extreme weather events, energy efficiency and distributed generation. Leidos uses load shapes provided by Ventyx, which take into account all of these factors. Since Staff did not provide any specific changes, Leidos concluded that no further adjustments were appropriate.

2) Generator modeling for the year 2019

Commission Staff suggested a number of changes to the Missouri generators included in the PROMOD analysis.

- The addition of LaCygne, Jeffrey, and Asbury emission rates to reflect planned air quality control systems
- Riverton 12 conversion to combined cycle
- Sibley 1 & 2, Montrose 1,2, & 3, Lake Road 6, and Asbury retirement prior to 2019
- Addition of O'Fallon solar farm
- Separation of Taum Sauk into two separate units

Leidos accepted and implemented all of the above recommendations.

Staff commented that all plants owned by Missouri utilities should be included in the studies and the adjusted production cost metrics for Missouri utilities. All of the plants indicated by Staff, including Raccoon Creek, Jeffrey, and Plum Point, were already included in Mr. Cleveland’s testimony in the proceeding.

3) The wind delivery profile used for the year 2019

Staff commented that the wind delivery profile should reflect plans to deliver the output of certain wind farms to MISO and other wind farms to PJM. It is still undetermined whether certain wind farms will dedicate all of their output to MISO, while others will dedicate all of their output to PJM. Alternatively, the same wind farms could deliver part of their output to MISO and part to PJM. Staff’s concern, as expressed at the workshop in Jefferson City, was that modeling a portfolio of wind farms delivering a portion of their output to MISO and a portion to PJM could understate the variability of the energy delivered to Missouri. Generally speaking, a portion of the output of a greater portfolio of wind farms has less variability than the entire output of a smaller portfolio of wind farms. Staff also commented that the wind delivery profile needed to reflect any minimum throughput requirements on the HVDC transmission line.

In order to respond to Staff’s concerns, Leidos elected to model two groups of wind farms that deliver to MISO and PJM. The group of wind farms that deliver to MISO contains wind farms that deliver 100% of their output and wind farms that deliver a portion of their output to Missouri while the rest is delivered to PJM. A separate group of wind farms deliver 100% of their output to PJM. This appears to be reasonable since many of the same wind generators requested service to MISO and PJM in Grain Belt Express’ recently completed open solicitation.

For this analysis, Leidos assumed a minimum throughput level of 9.2 MW. Converter stations in a bi-pole configuration (as is the Project), are able to utilize a round power operation, allowing power to be transmitted below the minimum threshold by effectively increasing current on one pole while reversing flow on the other, such that the net power delivered is unaffected while maintaining at least a minimum current on both poles. This allows the converter station to be fully operational from 0% to full load, allowing all wind generation to pass through. In order to do this, there must be enough power on the line to cover the electrical losses with no load (roughly 9.2 MW).

Compared to the original wind delivery profile, the new profile had fewer hours at maximum (1.9% of all hours) and more hours with zero throughput (0.8% of all hours).

4) Level of precision in modeling

Staff commented that PROMOD should use “representative (if estimated) heat rate curves instead of average heat rates across all capacity stages¹.” The modeling presented in Mr. Cleveland’s surrebuttal testimony in Grain Belt Express’ original case already included Staff’s suggestion. Leidos uses heat rate assumptions supplied by Ventyx and based on historical operation of power plants, derived from the Environmental Protection Agency’s Constant Emission Monitoring System (CEMS) data. These assumptions do not, as Staff suggests in its comments, use average heat rates across all capacity states. The table below illustrates this point with a few examples, showing the heat rates for generators with more than two capacity states, sorted from highest capacity to lowest capacity.

¹ Leidos uses the term “capacity state” in the place of “capacity stage”

Table 1-1: Heat Rate by Capacity State for Missouri Generators (MMBtu/MWh)

Generator	Average at Minimum	Heat Rate @ Capacity State 1	Heat Rate @ Capacity State 2	Heat Rate @ Capacity State 3	Heat Rate @ Capacity State 4	Maximum Capacity (MW)
Iatan:2	8.94	8.39	8.47	8.67	8.87	881
La Cygne:1	12.56	7.90	7.91	7.93	7.94	736
Iatan:1	12.15	9.79	9.79	9.99	10.68	705
La Cygne:2	12.17	9.52	9.55	9.65	9.74	682
Thomas Hill:3	11.04	8.89	8.89	9.08	9.70	670
Labadie:1	10.71	8.62	8.62	8.81	9.41	617
Labadie:4	12.16	8.66	8.67	8.68	8.70	617
Labadie:3	10.41	9.57	9.60	9.67	9.73	616
Rush Island:1	11.66	9.25	9.25	9.27	9.28	609
Rush Island:2	12.14	8.76	8.76	8.78	8.79	603
Labadie:2	10.00	9.83	9.89	10.03	10.17	597
New Madrid:1	10.39	9.75	9.81	9.95	10.10	580
New Madrid:2	10.70	8.75	8.78	8.85	8.93	580
Hawthorn:5	9.94	9.73	9.78	9.91	10.04	559
Sioux:1	10.36	8.58	8.61	8.68	8.76	503
Sioux:2	11.71	7.73	7.78	7.91	8.04	503
Sibley:3	10.51	10.24	10.26	10.30	10.34	335
Southwest:ST2	12.68	7.48	7.48	7.49	7.49	282
Thomas Hill:2	12.18	8.62	8.63	8.63	8.64	275

Show Me commented that PROMOD assumptions on the price of natural gas should align with the MTEP 2016 assumptions. However, the natural gas price forecast used by Leidos is almost identical to MISO's. The nominal gas price used by Leidos for the year 2019 was \$4.74/MMBtu in 2019 dollars, or \$4.29/MMBtu in 2015 dollars (assuming 2.5% inflation). The MTEP 2016 uses an assumed natural gas of \$4.30/MMBtu in 2015 dollars. The prices are already very similar and the study assumptions were not adjusted.

Show Me also suggested that the carbon dioxide price in the Green Economy scenario should be reduced to \$40 per ton to match MTEP 2016 assumptions. Leidos accepted and implemented this change.

2 - PRODUCTION COST MODELING

2.1 - Methodology

Paragraph #12 states that Grain Belt Express' studies should use production modeling that incorporates day-ahead market prices, real-time market prices, and ancillary market prices impacting both Missouri load and generation, specifically:

- day-ahead market prices to serve load;
- real-time market prices to serve load;
- ancillary services prices to serve load;
- day ahead market prices realized by Missouri-owned or located generation;
- real-time market prices realized by Missouri-owned or located generation;
- ancillary services prices realized by Missouri-owned or located generation; and
- an estimate of the impact of Grain Belt Express' transmission project on the operational efficiency of Missouri-owned or located generation.

The PROMOD software and modeling used in this analysis incorporates aspects of all of these items. The PROMOD algorithm includes a security-constrained unit commitment ("SCUC") phase that mimics the day-ahead market, a security-constrained economic dispatch ("SCED") phase that mimics the real-time market, and ancillary services requirements that are included in both phases. The benefit results produced by this additional analysis are based on market prices that reflect both day-ahead and real-time market aspects.

PROMOD does not have the capability to model sub-hourly time periods, therefore intra-hour changes in the real-time market cannot be evaluated directly. This is a standard limitation of PROMOD that affect the analyses performed by SPP, MISO, PJM and other users of the software. During the workshop in Jefferson City, Staff was unable to provide any examples of any studies that modeled wholesale power market effects of a transmission line using PROMOD on a sub-hourly basis.

However, Leidos addressed Staff's concern about the variability of wind power to the maximum extent possible in the PROMOD software. Specifically, Leidos incorporated a forecast error from the Project's wind energy delivery into the PROMOD analysis. The unit commitment process develops the day-ahead unit commitment schedule based on forecasted Project MW injection in each hour, while the unit dispatch process utilizes the actual Project MW injection in each hour. This modeling creates a less efficient unit commitment schedule, where the unit dispatch process must react to being over- or under-committed for resources and adjust the unit commitment to meet load.

2.2 – Model Results

The same four scenarios representing different future assumptions were modeled in this additional study as in Mr. Moland's Direct Testimony in March 2014 and Mr. Cleveland's Surrebuttal Testimony in October 2014. These scenarios are: Business as Usual, Slow Growth, Robust Economy, and Green Economy. Assumptions were modified in response to comments by Staff and other parties, as discussed above. Results were calculated for these four scenarios to match the same benefit metrics in previous filings, including Missouri Demand Cost, Missouri Locational Marginal Price (LMP), system production cost reduction, system emissions and water use reduction, and Missouri adjusted production cost.

Comparison of the benefit results from this additional study to the results from the October 2014 filing show small changes in benefits, indicating no significant impact of the assumption changes on benefits. The primary economic benefit results specific to Missouri are shown below.

Table 2-1: Demand Cost Benefit to Missouri Attributed to the Project (\$M)

April 2015 – Additional Study				
	Business as Usual	Slow Growth	Robust Economy	Green Economy
Without Project	3,197	2,105	4,795	7,451
With Project	3,171	2,087	4,720	7,410
Savings	27	17	76	42

October 2014 Filing				
	Business as Usual	Slow Growth	Robust Economy	Green Economy
Without Project	3,221	2,239	5,324	9,067
With Project	3,199	2,228	5,255	9,035
Savings	22	11	69	32

Table 2-2: Project Impact on Average Missouri LMP (\$/MWh)

April 2015 – Additional Study				
	Business as Usual	Slow Growth	Robust Economy	Green Economy
Without Project	33.40	22.91	47.08	75.22
With Project	33.13	22.72	46.33	74.79
Savings	-0.27	-0.19	-0.75	-0.43

October 2014 Filing				
	Business as Usual	Slow Growth	Robust Economy	Green Economy
Without Project	33.35	23.62	50.03	87.28
With Project	33.13	23.51	49.36	86.98
Savings	-0.22	-0.11	-0.67	-0.30

The impact of the Project on Missouri benefits in this study is very similar to the October 2014 filing results across all scenarios and actually shows slightly more benefit. The Missouri Demand cost and LMP results show a lower volume of energy and cost than in the October 2014 filing for each scenario, reflecting the change in assumption to a lower demand level. The full set of LMP benefit results is included in Appendix A.

System production cost and emissions and water usage reduction benefits were calculated for this analysis, and were also very comparable to benefits in the previous filings. The system production cost across the Eastern United States decreased by an average of 0.8% across scenarios, in both this study and the October 2014 filing. These results are shown in Appendix A.

Adjusted Production Cost (APC) benefits were presented in Mr. Cleveland’s Surrebuttal Testimony and calculated in this study. This metric combines the cost of operating utility-owned generation to meet load along with the cost of purchasing generation from the market and the revenue of selling excess generation to the market. The APC

benefits in this additional study are comparable to the results in the October 2014 filing, with state-wide Missouri APC and Ameren Missouri APC lower in the “With Project” case across all scenarios. The full APC results are presented in the Appendix A.

Paragraph #12 also states that studies should incorporate an estimate of the impact of the Project on the operational efficiency of Missouri-owned or located generation. Operational efficiency is measured by the average heat rate for power plant operations. This result was calculated from the additional studies for all power plants operated by or owned by Missouri utilities, and is provided in the table below. Over the 2019 year, results show that the operational efficiency of Missouri generators change very little with the Project in service.

Table 2-3: Project Impact on Average Heat Rate of Missouri Generators Over Study Scenarios

Company	Without Project	With Project	Change	% change
AECI	8.650	8.655	0.005	0.05%
AMMO	9.702	9.700	-0.002	-0.02%
EMPIRE	9.227	9.226	-0.001	-0.01%
GMO	9.583	9.580	-0.003	-0.03%
KCPL	9.995	9.994	0.000	0.00%
Other	10.738	10.741	0.003	0.03%

In their comments, Staff also requested some specific cost and revenue results for Missouri generators and Missouri utilities. These specific results are, for the most part, components of the benefit calculations already shown in this report. The requested results are presented in Appendix B.

3 - ADDITIONAL ANALYSIS

Paragraph #12 states that studies should evaluate the cost of transmission upgrades that may be necessary to resolve any transmission constraints that the Project will cause or exacerbate by injecting power into northwestern Missouri. The PROMOD analyses produce detailed congestion results, including flowgate-specific reports on number of congested hours and other congestion metrics. Flowgate results were reported from the Business As Usual scenario results to assess the impact of the Project on increasing congestion. A flowgate that, with the Project in service, is congested in significantly more hours and drives expensive re-dispatch of generation to relieve the congestion may indicate the potential need for an upgrade.

After reviewing the results for all Missouri flowgates, only one was impacted by the Missouri injection at a level worth noting. The flowgate constraint “Palmyra Tap to Spencer 345kV for the loss of McCredie to Montgomery 345kV” (“PalmTap-Spencer”) was congested in 9 hours during the year in the case without the Project and in 25 hours with the Project. Therefore, the Project introduced 16 additional hours of congestion. The total value of relieving the congestion caused by the Missouri injection over the 16 hours was estimated at \$17,500. Additionally, it was determined that the 16 hours of incremental congestion with the Project was driven by specific, infrequent system events, such as when two units of the Labadie Power Station were offline on maintenance. From these observations, it is concluded that the PalmTap-Spencer flowgate is not significantly impacted by the Project and would not likely be considered a candidate for upgrade.

The low level of congestion driven by the Missouri injection is somewhat expected, given that after MISO Multi Value Project transmission upgrades are in place, the Maywood 345kV high voltage bus will be connected to five separate 345kV lines. The total thermal line flow capacity out of the Maywood bus will be nearly 7000 MVA under normal conditions, and 7500 MVA under emergency conditions.

Another request in Paragraph #12 was that Grain Belt Express evaluate the net impact to Missouri of picking up Missouri energy for export to PJM or SPP through the Project. The Project as designed and as modeled in the PROMOD simulations cannot receive energy at the Maywood bus for export to the PJM delivery point. Additionally, there is no potential for delivery to SPP since Grain Belt Express is not requesting any injection rights in SPP. In response to the request, the hypothetical potential capacity for the Missouri to PJM export was calculated along with the maximum potential revenue.

In each hour, available capacity on the Project was calculated between the Maywood bus and the PJM delivery bus. An injection at the PJM delivery bus less than 3500 MW was considered a potential export opportunity for Missouri generation. Next the LMP differential between the Ameren Missouri generation hub and the PJM AEP load hub was calculated. In hours when the Missouri hub was lower, it indicates that exports from Missouri to PJM is economic.

The results show that there is additional capacity on the Project for Missouri export in over 8,460 hours during the year (over 96% of annual hours). In over 6,450 hours, the LMP differential between Ameren Missouri generation and PJM AEP load makes it economical to export power from Missouri to Indiana.

The maximum revenue potential was calculated as \$33.3 million, based on an assumption that in each hour the full LMP differential is maintained across all of the export energy. The true amount of economical export energy and revenue cannot be precisely determined from the simulation results, because the LMP differential, which represents the \$/MWh revenue potential, between the two locations becomes smaller as more power is exported. Stated another way, for example, the \$/MWh revenue rate for the 1st MWh of power exported to PJM would be higher than the \$/MWh revenue rate for the 1000th MWh of power exported to PJM.

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APPENDIX A

Appendix A includes detailed benefit results from this study, as well as results from the previous filing from Grain Belt Express. The results labelled “April 2015 – Additional Study” are from this study, results labelled “October 2014 filing” are from the Surrebuttal testimony filed by Mr. Cleveland in October 2014.

Note that energy and cost values for generation are derived from hourly calculations that first take into account the ownership percentage of the asset by Missouri utilities, and then prorate the total owned generation by the percentage of Missouri load served by the utility.

Table A-1: Project Impact on Missouri LMP (\$/MWh)

April 2015 – Additional Study						
	Result	Area	Business as Usual	Slow Growth	Robust Economy	Green Economy
Without Project	LMP OnPeak Avg	Missouri	38.84	25.92	60.25	85.37
Without Project	LMP OffPeak Avg	Missouri	28.44	20.16	35.10	65.96
Without Project	LMP Average	Missouri	33.40	22.91	47.08	75.22
With Project	LMP OnPeak Avg	Missouri	38.45	25.73	59.26	84.91
With Project	LMP OffPeak Avg	Missouri	28.28	19.98	34.55	65.57
With Project	LMP Average	Missouri	33.13	22.72	46.33	74.79
LMP Change	LMP OnPeak Delta	Missouri	-0.39	-0.19	-0.99	-0.46
LMP Change	LMP OffPeak Delta	Missouri	-0.15	-0.19	-0.54	-0.39
LMP Change	LMP Average Delta	Missouri	-0.27	-0.19	-0.75	-0.43
October 2014 Filing						
	Result	Area	Business as Usual	Slow Growth	Robust Economy	Green Economy
Without Project	LMP OnPeak Avg	Missouri	38.77	26.66	64.65	98.56
Without Project	LMP OffPeak Avg	Missouri	28.41	20.85	37.62	77.00
Without Project	LMP Average	Missouri	33.35	23.62	50.03	87.28
With Project	LMP OnPeak Avg	Missouri	38.45	26.53	62.87	98.11
With Project	LMP OffPeak Avg	Missouri	28.27	20.76	37.06	76.84
With Project	LMP Average	Missouri	33.13	23.51	49.36	86.98
LMP Change	LMP OnPeak Delta	Missouri	-0.32	-0.13	-0.78	-0.45
LMP Change	LMP OffPeak Delta	Missouri	-0.14	-0.09	-0.56	-0.16
LMP Change	LMP Average Delta	Missouri	-0.22	-0.11	-0.67	-0.30

Table A-2: Project Impact on System Production Cost (\$M)

April 2015 – Additional Study					
	Area	Business as Usual	Slow Growth	Robust Economy	Green Economy
Without Project	Eastern US	74,298	50,858	92,083	128,141
With Project	Eastern US	73,734	50,481	91,282	127,038
Savings	Eastern US	564	377	801	1,103

October 2014 Filing					
	Area	Business as Usual	Slow Growth	Robust Economy	Green Economy
Without Project	Eastern US	75,906	52,959	100,798	150,015
With Project	Eastern US	75,331	52,572	99,931	148,780
Savings	Eastern US	574	387	867	1,236

Table A-3: Project Impact on System Emissions and Water Usage

April 15 – Additional Study					
Emissions Production (Eastern US)	Type (Units)	Business As Usual	Slow Growth	Robust Economy	Green Economy
Without Project	NOX (tons)	1,037,013	665,514	1,216,678	689,983
Without Project	SOX (tons)	2,159,860	904,293	2,561,915	1,483,071
Without Project	CO2 (tons)	1,515,704,242	1,108,512,127	1,696,849,242	1,115,294,578
Without Project	Hg (lbs)	27,028	12,162	31,194	18,739
Without Project	Water (MGal)	417,674	262,527	470,402	329,377
With Project	NOX (tons)	1,029,285	658,083	1,210,638	683,527
With Project	SOX (tons)	2,140,227	889,078	2,548,885	1,465,307
With Project	CO2 (tons)	1,505,406,469	1,097,271,625	1,687,998,820	1,105,236,520
With Project	Hg (lbs)	26,893	12,027	31,094	18,599
With Project	Water (MGal)	414,516	259,896	467,642	326,006
Reduction	NOX (tons)	7,728	7,431	6,040	6,457
Reduction	SOX (tons)	19,633	15,215	13,030	17,764
Reduction	CO2 (tons)	10,297,773	11,240,502	8,850,421	10,058,057
Reduction	Hg (lbs)	135	134	99	140
Reduction	Water (MGal)	3,158	2,631	2,760	3,370

October 2014 filing

Emissions Production (Eastern US)	Type	Business As Usual		Robust Economy	Green Economy
		Usual	Slow Growth	Economy	Green Economy
Without Project	NOX (tons)	902,580	596,858	1,084,855	615,122
Without Project	SOX (tons)	2,196,005	971,702	2,618,321	1,426,626
Without Project	CO2 (tons)	1,541,471,608	1,171,768,238	1,768,831,993	1,140,810,137
Without Project	Hg (lbs)	28,091	13,352	32,614	18,238
Without Project	Water (MGal)	424,612	502,802	457,766	478,173
With Project	NOX (tons)	895,469	588,908	1,080,168	609,014
With Project	SOX (tons)	2,176,216	955,125	2,608,824	1,405,774
With Project	CO2 (tons)	1,531,458,478	1,160,202,768	1,761,300,314	1,130,027,471
With Project	Hg (lbs)	27,955	13,235	32,545	18,095
With Project	Water (MGal)	420,331	500,018	452,873	474,222
Reduction	NOX (tons)	7,111	7,950	4,687	6,109
Reduction	SOX (tons)	19,788	16,578	9,497	20,852
Reduction	CO2 (tons)	10,013,130	11,565,469	7,531,679	10,782,667
Reduction	Hg (lbs)	135	117	69	143
Reduction	Water (MGal)	4,281	2,783	4,893	3,952

Table A-4: Adjusted Production Cost Benefits for the State of Missouri with Project

April 2015 - Additional Study

		Business as Usual			Slow Growth				
		Without Grain Belt	With Grain Belt	Difference			Without Grain Belt	With Grain Belt	Difference
Energy (GWh)	Generation	86,162	85,927	-235	Energy (GWh)	Generation	77,998	76,852	-1,146
	Purchases	9,819	10,017	198		Purchases	14,664	15,778	1,113
	Sales	-690	-653	37		Sales	-181	-148	33
	Net	95,291	95,291	0		Net	92,482	92,482	0
Cost (M\$)	Generation	2,037.0	2,028.9	-8.1	Cost (M\$)	Generation	1,508.0	1,480.1	-27.9
	Purchases	372.2	375.4	3.2		Purchases	315.5	336.9	21.4
	Sales	-17.5	-16.5	1.0		Sales	-5.1	-4.2	0.9
	Net	2,391.7	2,387.8	-3.9		Net	1,818.4	1,812.8	-5.6
		Robust Economy			Green Economy				
		Without Grain Belt	With Grain Belt	Difference			Without Grain Belt	With Grain Belt	Difference
Energy (GWh)	Generation	90,302	89,935	-367	Energy (GWh)	Generation	61,830	61,575	-256
	Purchases	9,694	10,011	317		Purchases	37,295	37,551	256
	Sales	-870	-820	50		Sales	0	0	0
	Net	99,126	99,126	0		Net	99,126	99,126	0
Cost (M\$)	Generation	2,332.8	2,314.6	-18.2	Cost (M\$)	Generation	3,532.8	3,512.2	-20.6
	Purchases	552.6	559.6	7.0		Purchases	2,868.5	2,871.4	2.9
	Sales	-24.4	-22.8	1.6		Sales	0.0	0.0	0.0
	Net	2,861.0	2,851.4	-9.6		Net	6,401.3	6,383.6	-17.7

October 2014 Filing

Business as Usual					Slow Growth				
		Without Grain Belt	With Grain Belt	Difference		Without Grain Belt	With Grain Belt	Difference	
Energy (GWh)	Generation	87,889	87,653	-235	Generation	77,545	76,618	-927	
	Purchases	9,074	9,268	195	Purchases	17,733	18,651	918	
	Sales	-891	-850	41	Sales	-31	-22	9	
	Net	96,071	96,071	0	Net	95,247	95,247	0	
Cost (M\$)	Generation	2,082.9	2,074.7	-8.1	Generation	1,565.0	1,541.3	-23.7	
	Purchases	349.0	353.5	4.3	Purchases	405.2	423.5	18.3	
	Sales	-23.2	-22.1	0.9	Sales	-0.9	-0.6	0.2	
	Net	2,408.7	2,406.1	-2.6	Net	1,969.3	1,964.1	-5.2	
Robust Economy					Green Economy				
		Without Grain Belt	With Grain Belt	Difference		Without Grain Belt	With Grain Belt	Difference	
Energy (GWh)	Generation	92,468	92,114	-354	Generation	68,207	68,052	-155	
	Purchases	11,655	11,979	324	Purchases	35,348	35,503	155	
	Sales	-569	-539	30	Sales	0	0	0	
	Net	103,554	103,554	0	Net	103,554	103,554	0	
Cost (M\$)	Generation	2,518.7	2,497.0	-21.7	Generation	4,458.3	4,445.1	-13.2	
	Purchases	700.8	709.5	8.6	Purchases	3,159.8	3,162.2	2.4	
	Sales	-17.1	-16.0	1.0	Sales	0.0	0.0	0.0	
	Net	3,202.5	3,190.5	-12.1	Net	7,618.0	7,607.3	-10.7	

Table A-4: Adjusted Production Cost Benefits for Ameren Missouri with Project

April 2015 - Additional Study

		Business as Usual			Slow Growth				
		Without Grain Belt	With Grain Belt	Difference			Without Grain Belt	With Grain Belt	Difference
Energy (GWh)	Generation	45,877	45,772	-105	Energy (GWh)	Generation	37,495	36,439	-1,055
	Purchases	4,023	4,062	39		Purchases	8,547	9,474	927
	Sales	-3,040	-2,975	65		Sales	-562	-434	128
	Net	46,859	46,859	0		Net	45,480	45,480	0
Cost (M\$)	Generation	995.6	992.4	-3.2	Cost (M\$)	Generation	779.1	753.9	-25.2
	Purchases	160.8	160.6	-0.2		Purchases	195.8	214.5	18.7
	Sales	-84.7	-82.4	2.3		Sales	-15.9	-12.3	3.6
	Net	1,071.7	1,070.6	-1.1		Net	959.0	956.1	-2.9
		Robust Economy			Green Economy				
		Without Grain Belt	With Grain Belt	Difference			Without Grain Belt	With Grain Belt	Difference
Energy (GWh)	Generation	49,050	48,965	-85	Energy (GWh)	Generation	24,782	24,642	-140
	Purchases	3,569	3,604	35		Purchases	23,965	24,106	140
	Sales	-3,871	-3,821	50		Sales	0	0	0
	Net	48,747	48,747	0		Net	48,747	48,747	0
Cost (M\$)	Generation	1,082.6	1,078.6	-4.0	Cost (M\$)	Generation	1,144.0	1,132.8	-11.2
	Purchases	214.1	212.7	-1.4		Purchases	2,000.8	1,998.1	-2.7
	Sales	-129.2	-125.5	3.7		Sales	0.0	0.0	0.0
	Net	1,167.5	1,165.8	-1.7		Net	3,144.8	3,130.9	-13.9

October 2014 filing

Business as Usual					Slow Growth				
		Without Grain Belt	With Grain Belt	Difference		Without Grain Belt	With Grain Belt	Difference	
Energy (GWh)	Generation	45,953	45,844	-109	Energy	38,689	37,931	-758	
	Purchases	4,108	4,160	51	Purchases	8,468	9,168	700	
	Sales	-2,954	-2,897	58	Sales	-297	-239	58	
	Net	47,107	47,107	0	Net	46,860	46,860	0	
Cost (M\$)	Generation	955.2	991.7	-3.5	Cost (M\$)	837.8	817.5	-20.2	
	Purchases	163.8	164.3	0.5	Purchases	206.6	221.5	14.9	
	Sales	-82.0	-79.9	2.0	Sales	-7.9	-6.4	1.5	
	Net	1,077.0	1,077.0	-1.0	Net	1,036.5	1,032.6	-3.9	

Robust Economy					Green Economy				
		Without Grain Belt	With Grain Belt	Difference		Without Grain Belt	With Grain Belt	Difference	
Energy (GWh)	Generation	46,697	46,658	-39	Energy	24,658	24,555	-104	
	Purchases	6,039	6,066	26	Purchases	26,288	26,392	104	
	Sales	-1,790	-1,778	12	Sales	0	0	0	
	Net	50,946	50,946	0	Net	50,946	50,946	0	
Cost (M\$)	Generation	1,093.9	1,088.7	-5.2	Cost (M\$)	1,295.7	1,285.7	-10.0	
	Purchases	368.3	365.1	-3.2	Purchases	2,458.7	2,481.4	-4.3	
	Sales	-57.3	-56.3	1.0	Sales	0.0	0.0	0.0	
	Net	1,404.8	1,397.5	-7.4	Net	3,781.5	3,767.1	-14.4	

APPENDIX B

Appendix B includes production, cost, revenue, and emissions results requested by Staff in their comments to the study assumptions. Note that values reported for generators reflect the Missouri ownership of the generator, but are not pro-rated to reflect the percentage of Missouri load served by specific utilities.

In note 5.a., Staff requested “a reasonable estimate of the generation and reserve operations of each generation facility located in Missouri, or owned by a Missouri-serving utility, or from which power is purchased to serve Missouri load by a Missouri-serving utility (with and without a Missouri converter station).” These results are shown in the table below.

Table B-1: Unit Generation – Missouri-owned Generators (MWh)

Generator	Business As Usual		Slow Growth		Robust Economy		Green Economy	
	Without Project	With Project	Without Project	With Project	Without Project	With Project	Without Project	With Project
Albany MO:6	0	0	0	0	0	0	15	17
Asbury:1	948,774	952,081	4,248	4,248	1,100,424	1,099,228	853,229	859,019
Audrain:1	45	0	36,413	34,176	1,515	1,436	9,395	7,013
Audrain:2	0	0	32,228	31,569	1,427	1,396	7,256	4,365
Audrain:3	385	298	47,834	41,862	1,959	1,807	15,253	14,150
Audrain:4	90	0	32,640	31,043	1,351	1,297	8,087	5,450
Audrain:5	309	135	45,575	40,917	1,769	1,534	10,520	11,309
Audrain:6	0	0	26,424	20,683	903	622	6,845	3,247
Audrain:7	0	0	22,159	18,555	667	250	5,506	2,697
Audrain:8	135	90	50,198	43,134	1,928	1,703	11,942	10,627
Blue Valley:3	142,746	145,903	0	0	198,891	197,518	32,174	30,744
Blue Valley:GT1	22,538	22,808	263,237	261,163	24,699	24,436	4,443	4,543
Callaway 1	8,822,643	8,822,643	8,822,643	8,822,643	8,822,643	8,822,643	8,822,643	8,822,643
Carrollton:11	0	0	0	0	0	0	0	0
Carthage:14	23,697	23,721	218,598	217,800	26,809	26,790	18,355	18,075
Chillicothe:GT1	1,446	1,224	73,996	71,473	3,734	3,541	2,824	2,518
Chillicothe:GT2	3,059	2,773	77,844	76,369	5,743	5,275	4,139	3,437
Chouteau:1	1,340,341	1,303,770	3,238,358	3,257,379	1,349,172	1,305,497	1,229,143	1,227,905
Chouteau:2	2,401,894	2,390,788	3,681,171	3,699,235	2,174,579	2,106,713	2,410,242	2,413,808
Columbia GT:1	918	740	13,617	13,161	1,271	1,117	4,770	4,415
Columbia GT:2	14,451	13,543	198,879	191,441	16,840	16,324	30,237	29,271
Columbia GT:3	6,157	5,440	83,257	78,107	8,415	7,681	14,536	14,040
Columbia GT:4	5,367	4,639	70,876	66,527	7,495	6,587	13,054	12,211
Columbia W&L Dept.:ST5	4,385	2,765	0	0	47,633	43,795	15,756	14,578
Columbia W&L Dept.:ST7	4,290	3,113	0	0	63,902	58,481	23,875	22,139
Columbia W&L Dept.:ST8	808	757	95,045	94,901	1,854	1,433	8,807	7,404
Columbia W&L Dept.:W2	0	0	0	0	0	0	0	0
Crossroads Energy:1	505	379	138,009	137,503	820	660	15,264	14,254
Crossroads Energy:2	275	72	112,174	103,336	593	688	12,723	11,509
Crossroads Energy:3	54	0	98,756	92,872	212	218	13,048	13,590
Crossroads Energy:4	614	502	93,213	91,146	265	201	16,123	17,500
Dell Power Stn:1	1,825,518	1,825,748	4,850,237	4,837,528	1,607,433	1,599,539	2,233,080	2,233,468

Dogwood EF:3	989,323	987,702	4,944,125	4,943,640	1,049,165	1,027,235	639,185	647,075
Empire EC:1	49,963	49,335	439,898	439,558	52,465	51,461	33,192	33,277
Empire EC:2	38,572	36,781	368,065	367,596	42,269	41,201	21,663	22,561
Empire EC:3	5,766	5,615	48,487	48,078	11,698	10,511	4,799	4,830
Empire EC:4	7,201	7,197	51,074	51,278	12,672	11,688	5,727	5,488
Essex MO:1	1,763	1,428	46,438	47,136	710	529	4,492	3,840
Fairgrounds:1	0	0	0	0	0	0	0	0
Fayette MO:4	0	0	0	0	0	0	0	0
Frdrcktown:1	2,960	2,641	66,300	64,128	4,942	5,453	8,034	7,866
Frdrcktown:2	2,857	2,549	67,459	65,482	4,816	5,175	8,066	7,876
Fulton:3	0	0	0	0	0	0	0	0
Fulton:4	1,015	908	38,760	37,682	1,562	1,173	3,618	3,510
Gallatin MO:6	0	0	0	0	178	212	0	0
Goose Creek:1	0	0	86,992	85,704	0	0	358	137
Goose Creek:2	0	0	95,167	93,732	0	0	358	51
Goose Creek:3	0	0	86,905	84,604	0	0	358	117
Goose Creek:4	0	0	97,711	95,983	0	0	358	117
Goose Creek:5	0	0	97,764	96,451	0	0	358	0
Goose Creek:6	0	0	93,624	92,208	0	0	358	0
Greenwood (MO):1	183	183	13,340	12,604	334	453	175	175
Greenwood (MO):2	690	515	40,469	40,013	1,489	1,348	286	286
Greenwood (MO):3	369	332	33,616	33,686	798	722	181	235
Greenwood (MO):4	209	209	24,897	24,140	522	451	159	159
Hawthorne (MO):5	3,825,655	3,825,606	1,909,822	1,899,800	3,968,921	3,962,889	2,683,883	2,693,124
Hawthorne (MO):7	1,972	1,959	26,358	25,881	4,795	4,445	475	520
Hawthorne (MO):8	3,190	3,099	41,494	41,364	8,323	7,921	1,110	1,205
Hawthorne (MO):9	319,013	317,931	2,045,931	2,046,018	329,772	328,330	113,882	111,623
Holden Power Plant:1	5,729	5,322	47,217	46,278	6,482	5,739	1,424	1,559
Holden Power Plant:2	12,065	11,424	92,980	93,431	18,486	17,431	6,337	6,296
Holden Power Plant:3	4,503	4,100	42,766	43,360	5,455	4,813	1,271	1,412
Holton:10	10,348	10,110	79,853	79,755	12,125	11,804	3,809	3,785
Howard Bend CT:1	0	0	0	0	0	0	0	0
Iatan:1	4,970,547	4,969,869	3,781,121	3,781,887	5,099,866	5,092,585	3,331,798	3,325,178
Iatan:2	6,019,394	6,016,408	2,815,918	2,849,283	6,198,642	6,187,715	4,808,142	4,818,286
Jackson MO:12	0	0	0	0	0	0	0	0
Jackson Square:1	0	0	0	0	0	0	0	0
Jackson Square:2	0	0	0	0	0	0	0	0
James River:GT1	6,987	5,877	205,604	203,539	9,544	8,509	14,346	13,636
James River:GT2	10,037	9,365	290,502	289,924	14,639	13,494	21,506	20,271
James River:ST5	300,043	293,408	0	0	434,340	431,266	229,292	224,152
Jeffrey EC:1	4,756,231	4,747,527	3,100,280	3,094,212	5,009,736	5,001,557	2,942,774	2,947,610
Jeffrey EC:2	4,622,286	4,615,474	2,937,972	2,933,377	4,880,485	4,876,233	2,873,499	2,882,132
Jeffrey EC:3	5,037,900	5,035,484	3,466,557	3,466,634	5,204,604	5,196,724	3,520,617	3,531,914
Kansas City Intl:1	0	0	397	372	8	8	29	29
Kansas City Intl:2	0	0	537	486	8	8	30	30
Kennett MO:13	17,516	17,630	214,281	215,011	18,422	18,110	37,620	37,131
Keokuk	930,400	930,400	930,400	930,400	930,400	930,400	930,400	930,400
Kinmundy:1	124	0	279,640	257,935	1,069	270	4,565	1,616

Kinmundy:2	903	124	285,665	276,671	2,587	1,921	4,329	2,275
La Cygne:1	5,633,632	5,633,937	4,741,053	4,737,324	5,706,841	5,704,380	5,176,590	5,178,289
La Cygne:2	4,189,435	4,204,696	2,398,846	2,390,228	4,554,233	4,538,973	3,583,573	3,572,382
Labadie:1	4,670,016	4,668,808	4,127,185	4,025,828	4,677,086	4,676,105	0	0
Labadie:2	4,473,670	4,455,107	3,231,262	3,202,865	4,527,397	4,520,893	0	0
Labadie:3	4,715,205	4,706,736	3,684,061	3,626,029	4,734,285	4,731,278	0	0
Labadie:4	4,726,739	4,724,024	3,862,874	3,670,053	4,732,589	4,732,038	4,722,813	4,708,039
Lake Road MO:3	60	60	1,368	1,361	240	201	30	30
Lake Road MO:5	2,846	2,758	94,601	93,896	5,984	5,467	222	151
Lake Road MO:6	0	0	0	0	0	0	0	0
Lake Road MO:7	0	0	0	0	0	0	0	0
Macon Egy Ctr:1	2,460	2,214	39,701	37,130	3,364	3,069	5,001	4,706
Malden MO:8	0	0	0	0	0	0	0	0
McCartney:1	13,191	12,607	137,690	134,106	17,727	16,987	24,373	24,541
McCartney:2	18,883	17,684	197,671	191,297	23,742	23,295	37,214	36,177
Meramec:4	0	0	0	0	2,639,612	2,620,958	0	0
Meramec:GT1	0	0	0	0	0	0	0	0
Meramec:GT2	2,052	1,405	123,494	116,785	2,630	2,270	13,017	12,705
Mexico:1	0	0	0	0	0	0	0	0
MJMEUC Gen:1	682	535	14,350	14,041	1,451	1,350	2,710	2,523
Moberly:1	0	0	0	0	0	0	0	0
Monroe MO:12	0	0	0	0	0	0	0	0
Monroe MO:7	1,855	1,741	28,790	27,572	2,393	2,207	3,703	3,295
Moreau:1	0	0	0	0	0	0	0	0
New Madrid:1	4,159,513	4,162,919	708,311	711,666	4,177,875	4,163,091	3,859,475	3,833,059
New Madrid:2	4,385,544	4,386,456	1,803,044	1,811,317	4,386,045	4,383,853	4,377,716	4,364,365
Nodaway County:1	2,350	2,256	20,396	20,752	3,093	2,764	43,415	37,382
Nodaway County:2	1,644	1,383	15,266	14,281	2,073	1,994	16,564	15,889
Northeast:11	0	0	0	0	0	0	0	0
Northeast:12	0	0	0	0	0	0	0	0
Northeast:13	0	0	0	0	0	0	0	0
Northeast:14	0	0	0	0	0	0	0	0
Northeast:15	0	0	0	0	0	0	0	0
Northeast:16	0	0	0	0	0	0	0	0
Northeast:17	0	0	0	0	0	0	0	0
Northeast:18	0	0	0	0	0	0	0	0
Osage (MO)	593,901	593,901	593,900	593,901	593,900	593,900	593,900	593,900
Osawatomie:1	3,133	2,930	38,693	37,716	7,637	7,007	724	879
Ottawa KS:7	10,509	10,302	107,291	107,245	11,519	11,234	2,971	2,947
Ozark Beach	62,800	62,800	62,800	62,800	62,800	62,800	62,800	62,800
Palmyra Muni 2:10	2,543	2,344	44,256	42,187	3,107	2,930	5,175	4,384
Peno Creek:1	8,406	5,999	190,523	167,501	11,846	10,355	20,955	20,122
Peno Creek:2	3,973	3,005	120,794	107,181	6,581	4,816	14,788	13,312
Peno Creek:3	8,047	5,752	188,502	166,053	11,811	9,915	20,038	18,740
Peno Creek:4	9,492	7,229	197,503	176,428	12,608	10,835	21,104	20,089
Pinckneyville:1	8,650	8,347	200,794	193,996	9,369	8,660	24,545	23,618
Pinckneyville:2	8,201	7,753	194,738	188,085	9,154	7,871	23,485	22,586
Pinckneyville:3	6,326	5,760	183,475	177,071	6,916	6,006	18,538	17,961

Pinckneyville:4	7,061	6,759	190,728	183,495	7,805	6,734	21,576	20,874
Pinckneyville:5	198	127	22,915	22,074	173	136	4,976	4,537
Pinckneyville:6	127	138	22,807	21,895	127	136	4,786	4,419
Pinckneyville:7	149	127	22,490	21,353	173	136	4,879	4,470
Pinckneyville:8	195	118	22,839	21,852	162	136	4,734	4,396
Plant 2 KS:4	15,174	15,080	93,395	92,876	17,416	17,192	5,191	5,055
Plum Point:1	4,597,459	4,607,699	0	0	4,962,842	4,983,293	4,576,882	4,578,643
Poplar Bluff:5	28,140	27,973	245,024	242,899	27,645	27,140	33,908	33,916
Raccoon Crk Egy:1	0	0	97,935	92,189	0	0	44	44
Raccoon Crk Egy:2	0	0	103,017	93,625	0	0	44	0
Raccoon Crk Egy:3	0	0	103,260	96,777	0	0	44	0
Raccoon Crk Egy:4	0	0	102,596	93,485	0	0	44	0
Ralph Green GT:3	455	404	43,678	43,154	1,094	937	240	240
Riverton:10	9,590	9,546	94,344	94,144	10,262	10,216	7,433	7,854
Riverton:11	10,732	10,692	94,667	94,808	11,469	11,404	8,873	9,222
Riverton:12	141,559	138,945	856,174	836,528	166,288	165,236	138,840	139,699
Rush Island:1	4,529,237	4,503,213	302,007	277,227	4,648,750	4,636,553	4,424,729	4,368,843
Rush Island:2	4,540,288	4,523,272	396,522	295,509	4,582,425	4,568,560	4,547,496	4,521,557
Sabetha:11	0	0	0	0	0	0	0	0
Salisbury:4	0	0	0	0	0	0	0	0
Sibley:3	1,475,298	1,466,259	68,016	68,020	1,648,411	1,628,222	717,720	752,936
Sikeston:1	1,731,839	1,731,687	1,546,358	1,539,940	1,738,669	1,734,983	1,603,877	1,597,771
Sioux:1	3,783,913	3,778,075	2,466,039	2,409,911	3,799,301	3,794,585	0	0
Sioux:2	3,792,991	3,790,478	2,646,321	2,463,247	3,800,158	3,798,456	0	0
South Harper Peaking:1	264	264	9,399	9,153	984	953	367	367
South Harper Peaking:2	247	247	9,344	8,563	891	848	371	371
South Harper Peaking:3	312	312	10,699	9,891	1,652	1,417	437	437
Southwest:GT1	202	206	55,411	54,240	1,380	1,216	1,349	1,318
Southwest:GT2	28	28	38,244	38,158	328	380	672	738
Southwest:ST1	744,870	736,278	598	1,197	875,268	865,082	619,494	597,125
Southwest:ST2	1,653,455	1,639,102	66,984	64,220	1,904,089	1,897,614	1,820,025	1,801,479
St Francis:1	975,377	961,953	1,847,598	1,846,079	684,646	657,120	1,248,912	1,222,895
St Francis:2	659,569	624,032	1,912,628	1,904,468	589,725	575,414	911,863	880,130
State Line MO:1	8,999	8,469	158,924	160,112	14,186	12,543	5,707	5,858
State Line MO:3	1,753,870	1,758,470	3,730,888	3,728,884	1,811,163	1,789,132	2,428,117	2,435,788
Station H:1	59	71	4,458	4,346	204	164	143	143
Station H:2	58	75	4,117	4,085	140	113	95	95
Station I:1	0	0	0	0	0	0	0	0
Station I:2	0	0	0	0	0	0	0	0
Taum Sauk	61,641	63,731	67,259	69,657	273,743	280,921	45,696	45,035
Thomas Hill:3	5,013,254	5,008,154	1,610,075	1,569,398	5,030,507	5,021,004	4,943,252	4,910,076
Trenton Peaker:5	0	0	0	0	0	0	0	0
Trigen-St Louis:3	7,878	7,327	124,113	121,696	7,679	7,344	15,980	15,275
Trigen-St Louis:CS1	34,928	34,487	51,318	51,268	33,606	33,180	39,683	39,163
Trigen-St Louis:CS2	35,352	34,897	52,861	52,811	34,048	33,605	40,447	39,921
Unionville GT:1	0	0	0	0	0	0	0	0
Unionville GT:2	0	0	0	0	0	0	0	0
Venice:GT2	5,030	4,061	224,411	214,348	6,924	5,723	25,100	24,350

Venice:GT3	41,898	36,875	992,048	964,935	47,277	41,805	119,541	117,513
Venice:GT4	32,232	29,132	907,983	875,308	42,882	35,679	107,477	104,419
Venice:GT5	5,626	4,478	332,563	319,777	7,674	6,420	41,488	39,076
West Gardner:1	2,934	3,115	27,420	26,781	6,291	6,204	475	520
West Gardner:2	2,809	2,890	30,611	30,389	6,229	5,958	526	526
West Gardner:3	2,545	2,396	23,149	23,259	5,269	4,878	474	474
West Gardner:4	2,691	2,569	26,373	26,292	5,693	5,414	523	523
Wolf Creek GS 1	10,020,742	10,020,742	10,020,742	10,020,742	10,020,742	10,020,742	10,020,742	10,020,742

In note 5.b., Staff requested “a reasonable estimate of the operating costs and market revenues of each generation facility located in Missouri, or owned by a Missouri-serving utility, or from which power is purchased to serve Missouri load by a Missouri-serving utility (with and without a Missouri converter station).” These results are shown in the tables below.

Table B-2: Unit Variable Cost – Missouri-owned Generators (\$K)

Generator	Business As Usual		Slow Growth		Robust Economy		Green Economy	
	Without Project	With Project	Without Project	With Project	Without Project	With Project	Without Project	With Project
Albany MO:6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$4.3	\$4.6
Asbury:1	\$27,606.5	\$27,718.8	\$163.1	\$163.1	\$31,474.5	\$31,442.8	\$64,840.7	\$65,287.0
Audrain:1	\$4.6	\$0.0	\$973.8	\$916.3	\$165.6	\$157.7	\$1,291.4	\$976.1
Audrain:2	\$0.0	\$0.0	\$862.5	\$848.0	\$156.9	\$153.8	\$1,004.3	\$608.5
Audrain:3	\$31.0	\$23.8	\$1,263.9	\$1,111.0	\$210.2	\$192.4	\$2,052.7	\$1,926.1
Audrain:4	\$9.2	\$0.0	\$872.4	\$834.3	\$146.3	\$140.9	\$1,114.5	\$766.2
Audrain:5	\$26.3	\$13.6	\$1,198.5	\$1,080.8	\$188.8	\$162.8	\$1,422.5	\$1,547.0
Audrain:6	\$0.0	\$0.0	\$723.6	\$570.9	\$102.9	\$74.3	\$959.9	\$466.0
Audrain:7	\$0.0	\$0.0	\$612.7	\$516.1	\$79.2	\$31.1	\$773.4	\$392.1
Audrain:8	\$13.6	\$9.1	\$1,323.3	\$1,139.2	\$207.7	\$182.6	\$1,618.8	\$1,449.9
Blue Valley:3	\$4,972.8	\$5,079.3	\$0.0	\$0.0	\$6,813.4	\$6,774.9	\$2,823.0	\$2,703.5
Blue Valley:GT1	\$1,155.9	\$1,167.6	\$5,016.6	\$4,973.8	\$2,063.3	\$2,043.4	\$533.1	\$543.8
Callaway 1	\$128,141.7	\$128,141.7	\$128,141.7	\$128,141.7	\$128,141.7	\$128,141.7	\$128,141.7	\$128,141.7
Carrollton:11	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Carthage:14	\$1,166.7	\$1,167.8	\$4,110.3	\$4,093.9	\$2,140.1	\$2,136.2	\$1,958.1	\$1,926.3
Chillicothe:GT1	\$91.0	\$76.7	\$1,580.1	\$1,529.4	\$372.1	\$352.3	\$370.3	\$332.6
Chillicothe:GT2	\$190.1	\$171.5	\$1,669.7	\$1,640.9	\$570.0	\$523.3	\$543.9	\$456.2
Chouteau:1	\$50,630.2	\$49,243.6	\$50,940.7	\$51,244.2	\$80,373.9	\$77,787.6	\$94,147.6	\$94,117.7
Chouteau:2	\$86,163.7	\$85,770.3	\$55,321.5	\$55,582.6	\$123,547.4	\$119,761.3	\$175,461.7	\$175,734.4
Columbia GT:1	\$62.4	\$50.3	\$382.4	\$369.3	\$136.7	\$120.1	\$660.7	\$612.2
Columbia GT:2	\$735.0	\$689.7	\$4,494.4	\$4,324.8	\$1,345.3	\$1,304.7	\$3,139.6	\$3,036.3
Columbia GT:3	\$362.6	\$320.5	\$2,072.6	\$1,945.0	\$780.8	\$713.6	\$1,742.4	\$1,682.1
Columbia GT:4	\$321.1	\$277.7	\$1,780.9	\$1,673.2	\$706.0	\$621.8	\$1,587.4	\$1,485.3
Columbia W&L Dept.:ST5	\$242.1	\$162.1	\$0.0	\$0.0	\$2,564.2	\$2,363.1	\$1,522.1	\$1,411.6
Columbia W&L Dept.:ST7	\$247.5	\$192.0	\$0.0	\$0.0	\$3,461.4	\$3,166.4	\$2,269.5	\$2,118.2
Columbia W&L Dept.:ST8	\$60.6	\$57.6	\$2,236.9	\$2,235.2	\$205.7	\$169.7	\$1,164.7	\$989.1
Columbia W&L Dept.:W2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

Crossroads Energy:1	\$33.7	\$25.9	\$3,569.0	\$3,566.5	\$92.5	\$70.6	\$2,050.1	\$1,909.1
Crossroads Energy:2	\$19.5	\$5.7	\$2,940.1	\$2,716.8	\$64.1	\$71.2	\$1,700.2	\$1,542.0
Crossroads Energy:3	\$4.6	\$0.0	\$2,553.4	\$2,421.5	\$22.7	\$25.4	\$1,748.8	\$1,825.4
Crossroads Energy:4	\$42.0	\$33.7	\$2,406.6	\$2,353.3	\$30.2	\$24.0	\$2,156.5	\$2,331.4
Dell Power Stn:1	\$68,087.1	\$68,078.3	\$75,973.5	\$75,780.1	\$95,656.4	\$95,160.3	\$168,138.9	\$168,007.3
Dogwood EF:3	\$37,407.6	\$37,321.6	\$76,708.3	\$76,699.3	\$64,118.4	\$62,708.3	\$50,816.2	\$51,412.1
Empire EC:1	\$2,525.5	\$2,490.4	\$8,426.0	\$8,417.5	\$4,309.8	\$4,238.5	\$3,621.3	\$3,625.5
Empire EC:2	\$1,986.7	\$1,897.8	\$7,140.6	\$7,128.5	\$3,562.7	\$3,467.6	\$2,477.9	\$2,561.7
Empire EC:3	\$330.5	\$321.0	\$1,082.9	\$1,071.5	\$1,071.8	\$963.0	\$593.9	\$595.4
Empire EC:4	\$406.8	\$405.5	\$1,137.9	\$1,142.8	\$1,152.9	\$1,068.9	\$710.1	\$682.6
Essex MO:1	\$125.3	\$101.0	\$1,286.6	\$1,304.9	\$87.9	\$65.6	\$655.5	\$558.1
Fairgrounds:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Fayette MO:4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Frdrcktown:1	\$159.8	\$142.9	\$1,557.2	\$1,505.0	\$436.2	\$479.4	\$868.4	\$851.3
Frdrcktown:2	\$154.4	\$138.0	\$1,579.6	\$1,533.3	\$423.6	\$455.0	\$872.4	\$853.0
Fulton:3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Fulton:4	\$66.6	\$59.4	\$957.8	\$930.8	\$165.1	\$124.3	\$489.6	\$474.0
Gallatin MO:6	\$0.0	\$0.0	\$0.0	\$0.0	\$44.0	\$52.2	\$0.0	\$0.0
Goose Creek:1	\$0.0	\$0.0	\$2,266.2	\$2,236.1	\$0.0	\$0.0	\$53.5	\$21.4
Goose Creek:2	\$0.0	\$0.0	\$2,473.1	\$2,439.3	\$0.0	\$0.0	\$53.5	\$10.6
Goose Creek:3	\$0.0	\$0.0	\$2,261.3	\$2,203.5	\$0.0	\$0.0	\$53.5	\$18.9
Goose Creek:4	\$0.0	\$0.0	\$2,541.3	\$2,496.6	\$0.0	\$0.0	\$53.5	\$18.9
Goose Creek:5	\$0.0	\$0.0	\$2,543.2	\$2,509.3	\$0.0	\$0.0	\$53.5	\$0.0
Goose Creek:6	\$0.0	\$0.0	\$2,436.7	\$2,400.1	\$0.0	\$0.0	\$53.5	\$0.0
Greenwood (MO):1	\$14.2	\$14.2	\$339.8	\$321.9	\$42.8	\$55.8	\$31.0	\$31.0
Greenwood (MO):2	\$48.7	\$37.6	\$954.2	\$942.8	\$165.2	\$150.6	\$46.8	\$46.8
Greenwood (MO):3	\$27.6	\$25.2	\$799.5	\$801.8	\$93.0	\$83.4	\$30.8	\$40.3
Greenwood (MO):4	\$16.5	\$16.5	\$600.1	\$581.9	\$63.1	\$55.6	\$28.0	\$28.0
Hawthorne (MO):5	\$82,280.1	\$82,278.6	\$41,423.2	\$41,213.1	\$85,289.8	\$85,162.6	\$170,431.7	\$170,884.4
Hawthorne (MO):7	\$130.3	\$130.9	\$661.2	\$649.5	\$506.6	\$469.6	\$72.8	\$81.6
Hawthorne (MO):8	\$204.0	\$198.6	\$1,010.6	\$1,007.7	\$855.5	\$818.8	\$169.1	\$178.1
Hawthorne (MO):9	\$13,254.7	\$13,212.4	\$34,216.8	\$34,217.2	\$22,041.0	\$21,974.9	\$10,193.7	\$10,012.3
Holden Power Plant:1	\$381.0	\$354.1	\$1,240.1	\$1,213.2	\$684.0	\$610.8	\$207.6	\$228.2
Holden Power Plant:2	\$710.5	\$675.7	\$2,241.5	\$2,250.2	\$1,734.5	\$1,633.0	\$808.0	\$800.0
Holden Power Plant:3	\$304.1	\$279.0	\$1,123.2	\$1,140.6	\$579.4	\$516.0	\$188.6	\$209.9
Holton:10	\$485.3	\$474.3	\$1,524.0	\$1,521.0	\$901.4	\$877.4	\$391.9	\$390.2
Howard Bend CT:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Iatan:1	\$110,246.0	\$110,233.4	\$86,495.2	\$86,509.2	\$112,839.6	\$112,693.5	\$237,130.9	\$236,725.3
Iatan:2	\$124,912.2	\$124,851.8	\$60,898.6	\$61,054.0	\$128,500.1	\$128,280.7	\$279,012.0	\$279,586.9
Jackson MO:12	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Jackson Square:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Jackson Square:2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
James River:GT1	\$423.2	\$359.2	\$4,372.6	\$4,328.2	\$943.7	\$847.1	\$1,913.3	\$1,824.7
James River:GT2	\$599.2	\$558.4	\$6,295.0	\$6,291.4	\$1,435.6	\$1,320.8	\$2,833.0	\$2,676.0
James River:ST5	\$10,975.4	\$10,715.8	\$0.0	\$0.0	\$15,533.3	\$15,424.0	\$18,760.5	\$18,342.2
Jeffrey EC:1	\$103,484.0	\$103,304.8	\$69,398.1	\$69,273.3	\$108,702.8	\$108,534.5	\$201,244.2	\$201,558.8
Jeffrey EC:2	\$101,518.7	\$101,377.8	\$66,591.3	\$66,495.2	\$106,882.1	\$106,794.1	\$201,550.6	\$202,112.8
Jeffrey EC:3	\$106,347.4	\$106,298.9	\$74,840.4	\$74,841.9	\$109,690.4	\$109,532.3	\$232,473.5	\$233,189.3

Kansas City Intl:1	\$0.0	\$0.0	\$14.5	\$13.6	\$1.6	\$1.6	\$6.5	\$6.5
Kansas City Intl:2	\$0.0	\$0.0	\$19.0	\$17.2	\$1.5	\$1.5	\$6.4	\$6.4
Kennett MO:13	\$844.1	\$848.2	\$4,441.1	\$4,459.4	\$1,398.6	\$1,379.3	\$3,668.2	\$3,622.7
Keokuk	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Kinmundy:1	\$9.5	\$0.0	\$6,894.9	\$6,340.4	\$113.1	\$28.5	\$585.2	\$211.1
Kinmundy:2	\$59.2	\$9.5	\$6,999.2	\$6,780.4	\$261.7	\$197.3	\$548.0	\$296.6
La Cygne:1	\$131,284.5	\$131,290.2	\$114,916.1	\$114,847.7	\$132,627.5	\$132,582.4	\$340,937.3	\$341,025.1
La Cygne:2	\$107,820.9	\$108,158.6	\$68,244.9	\$68,054.8	\$115,894.5	\$115,556.0	\$261,873.5	\$261,173.3
Labadie:1	\$104,290.6	\$104,265.7	\$93,284.4	\$91,238.7	\$104,434.4	\$104,414.2	\$0.0	\$0.0
Labadie:2	\$104,048.3	\$103,625.7	\$76,446.0	\$75,678.9	\$105,271.5	\$105,123.5	\$0.0	\$0.0
Labadie:3	\$107,176.7	\$106,990.5	\$84,648.1	\$83,374.3	\$107,595.6	\$107,529.6	\$0.0	\$0.0
Labadie:4	\$110,451.5	\$110,386.4	\$91,611.4	\$87,484.4	\$110,567.1	\$110,556.3	\$310,601.3	\$309,775.9
Lake Road MO:3	\$5.3	\$5.3	\$36.7	\$36.8	\$30.4	\$26.5	\$5.5	\$5.5
Lake Road MO:5	\$177.9	\$174.1	\$2,020.4	\$2,002.9	\$612.1	\$562.7	\$36.5	\$24.6
Lake Road MO:6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Lake Road MO:7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Macon Egy Ctr:1	\$133.0	\$119.8	\$931.2	\$871.1	\$285.5	\$260.6	\$547.6	\$515.3
Malden MO:8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
McCartney:1	\$747.7	\$715.1	\$3,076.5	\$3,001.3	\$1,604.1	\$1,538.0	\$2,882.7	\$2,902.8
McCartney:2	\$1,046.5	\$980.4	\$4,400.7	\$4,258.1	\$2,101.5	\$2,062.0	\$4,310.7	\$4,190.1
Meramec:4	\$0.0	\$0.0	\$0.0	\$0.0	\$69,087.1	\$68,620.1	\$0.0	\$0.0
Meramec:GT1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Meramec:GT2	\$129.2	\$88.7	\$3,093.2	\$2,922.0	\$260.0	\$226.1	\$1,636.0	\$1,600.3
Mexico:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
MJMEUC Gen:1	\$42.6	\$33.5	\$365.3	\$357.6	\$142.6	\$133.1	\$341.6	\$317.0
Moberly:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Monroe MO:12	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Monroe MO:7	\$94.1	\$88.5	\$572.7	\$549.8	\$193.9	\$179.6	\$391.3	\$347.3
Moreau:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
New Madrid:1	\$99,970.6	\$100,049.0	\$18,180.6	\$18,258.6	\$100,376.6	\$100,031.4	\$257,325.4	\$255,609.8
New Madrid:2	\$100,355.2	\$100,374.2	\$43,492.5	\$43,643.5	\$100,370.3	\$100,324.8	\$276,765.8	\$275,992.4
Nodaway County:1	\$168.6	\$160.2	\$583.9	\$593.0	\$353.3	\$313.6	\$6,457.1	\$5,571.9
Nodaway County:2	\$117.5	\$100.2	\$442.3	\$416.8	\$240.8	\$226.6	\$2,571.7	\$2,443.9
Northeast:11	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:12	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:13	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:14	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:15	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:16	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:17	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:18	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Osage (MO)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Osawatomic:1	\$200.3	\$186.8	\$936.4	\$915.3	\$788.5	\$727.9	\$112.4	\$134.9
Ottawa KS:7	\$516.8	\$506.2	\$2,001.5	\$2,001.2	\$918.1	\$896.2	\$329.8	\$328.3
Ozark Beach	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Palmyra Muni 2:10	\$131.1	\$121.0	\$944.7	\$901.8	\$255.8	\$241.4	\$556.9	\$470.3
Peno Creek:1	\$482.1	\$347.2	\$4,564.9	\$3,982.3	\$1,063.6	\$931.6	\$2,389.9	\$2,299.5
Peno Creek:2	\$236.9	\$179.9	\$2,931.2	\$2,593.0	\$620.6	\$450.9	\$1,772.2	\$1,603.9

Peno Creek:3	\$463.1	\$333.8	\$4,535.3	\$3,960.3	\$1,061.1	\$896.8	\$2,294.0	\$2,149.2
Peno Creek:4	\$542.7	\$416.7	\$4,733.8	\$4,207.6	\$1,127.7	\$976.3	\$2,408.5	\$2,297.8
Pinckneyville:1	\$471.3	\$455.4	\$4,809.4	\$4,643.1	\$803.5	\$743.5	\$2,708.9	\$2,606.4
Pinckneyville:2	\$449.3	\$425.3	\$4,665.5	\$4,504.6	\$789.6	\$679.7	\$2,605.8	\$2,504.6
Pinckneyville:3	\$349.5	\$318.7	\$4,435.1	\$4,277.9	\$602.4	\$523.6	\$2,076.7	\$2,010.9
Pinckneyville:4	\$388.5	\$372.3	\$4,596.8	\$4,419.5	\$676.5	\$584.4	\$2,404.1	\$2,324.3
Pinckneyville:5	\$13.8	\$8.7	\$630.5	\$607.1	\$18.8	\$15.3	\$671.1	\$612.1
Pinckneyville:6	\$8.9	\$9.4	\$628.5	\$602.3	\$13.8	\$15.0	\$645.0	\$595.4
Pinckneyville:7	\$10.5	\$8.7	\$620.1	\$587.0	\$18.8	\$15.3	\$659.0	\$603.3
Pinckneyville:8	\$13.5	\$8.2	\$628.6	\$600.6	\$17.6	\$15.3	\$639.5	\$593.5
Plant 2 KS:4	\$709.0	\$704.7	\$1,789.8	\$1,779.5	\$1,289.6	\$1,273.0	\$526.4	\$510.9
Plum Point:1	\$149,226.3	\$149,519.9	\$0.0	\$0.0	\$159,743.2	\$160,331.5	\$346,329.0	\$346,465.2
Poplar Bluff:5	\$1,296.6	\$1,289.1	\$4,685.7	\$4,646.1	\$2,028.2	\$1,992.8	\$3,247.8	\$3,248.6
Raccoon Crk Egy:1	\$0.0	\$0.0	\$2,541.4	\$2,394.3	\$0.0	\$0.0	\$9.6	\$9.6
Raccoon Crk Egy:2	\$0.0	\$0.0	\$2,675.5	\$2,433.6	\$0.0	\$0.0	\$9.6	\$0.0
Raccoon Crk Egy:3	\$0.0	\$0.0	\$2,681.8	\$2,515.6	\$0.0	\$0.0	\$9.6	\$0.0
Raccoon Crk Egy:4	\$0.0	\$0.0	\$2,664.5	\$2,430.1	\$0.0	\$0.0	\$9.6	\$0.0
Ralph Green GT:3	\$35.5	\$30.9	\$1,043.9	\$1,030.3	\$127.3	\$110.8	\$40.5	\$40.5
Riverton:10	\$464.0	\$462.4	\$1,710.7	\$1,706.0	\$815.3	\$811.4	\$793.8	\$837.7
Riverton:11	\$519.1	\$517.4	\$1,724.0	\$1,725.9	\$909.8	\$903.9	\$940.7	\$978.1
Riverton:12	\$7,169.8	\$7,042.2	\$16,545.6	\$16,134.7	\$13,477.0	\$13,378.6	\$14,764.8	\$14,876.5
Rush Island:1	\$122,420.5	\$121,797.8	\$8,991.9	\$8,227.3	\$125,290.7	\$124,988.5	\$311,367.0	\$307,842.7
Rush Island:2	\$122,089.8	\$121,703.5	\$12,738.6	\$9,865.9	\$123,060.6	\$122,745.8	\$316,332.0	\$314,786.9
Sabetha:11	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Salisbury:4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Sibley:3	\$37,926.9	\$37,707.2	\$2,316.3	\$2,317.4	\$42,227.7	\$41,738.0	\$51,260.6	\$53,513.5
Sikeston:1	\$35,395.8	\$35,393.0	\$31,821.9	\$31,702.5	\$35,522.5	\$35,491.0	\$107,766.6	\$107,392.8
Sioux:1	\$92,051.5	\$91,921.5	\$61,336.8	\$59,830.8	\$92,394.2	\$92,289.4	\$0.0	\$0.0
Sioux:2	\$93,052.8	\$92,996.0	\$66,950.1	\$62,935.5	\$93,206.5	\$93,172.0	\$0.0	\$0.0
South Harper Peaking:1	\$20.9	\$20.9	\$253.5	\$245.6	\$117.7	\$114.5	\$61.5	\$61.5
South Harper Peaking:2	\$19.8	\$19.8	\$252.8	\$231.2	\$111.2	\$106.7	\$62.0	\$62.0
South Harper Peaking:3	\$24.0	\$24.0	\$288.6	\$265.5	\$190.2	\$162.6	\$71.0	\$71.0
Southwest:GT1	\$15.3	\$17.5	\$1,345.7	\$1,317.9	\$167.4	\$146.3	\$211.7	\$207.0
Southwest:GT2	\$2.8	\$2.8	\$977.5	\$976.0	\$43.0	\$50.4	\$112.7	\$122.6
Southwest:ST1	\$24,457.5	\$24,246.6	\$50.6	\$101.7	\$28,309.0	\$28,011.1	\$48,605.2	\$46,985.4
Southwest:ST2	\$53,506.8	\$53,154.3	\$3,067.1	\$2,849.3	\$59,871.7	\$59,713.3	\$131,789.4	\$130,251.4
St Francis:1	\$34,494.4	\$34,032.6	\$27,299.8	\$27,279.7	\$38,515.8	\$37,002.0	\$89,380.0	\$87,503.3
St Francis:2	\$24,352.0	\$23,029.4	\$29,420.1	\$29,299.2	\$34,475.1	\$33,647.3	\$68,196.0	\$65,797.8
State Line MO:1	\$504.3	\$477.4	\$3,194.2	\$3,219.4	\$1,297.3	\$1,145.6	\$739.8	\$752.9
State Line MO:3	\$64,756.5	\$64,888.2	\$56,137.8	\$56,106.5	\$106,959.3	\$105,660.4	\$184,064.4	\$184,644.3
Station H:1	\$4.7	\$5.5	\$116.6	\$113.8	\$25.3	\$20.8	\$24.4	\$24.4
Station H:2	\$4.5	\$6.0	\$108.5	\$107.4	\$18.0	\$14.0	\$16.8	\$16.8
Station I:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Station I:2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Taum Sauk	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Thomas Hill:3	\$115,525.3	\$115,417.2	\$39,937.4	\$38,871.3	\$115,890.5	\$115,686.5	\$320,002.2	\$318,015.6
Trenton Peaker:5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Trigen-St Louis:3	\$386.3	\$361.0	\$2,585.9	\$2,536.6	\$600.5	\$576.7	\$1,609.9	\$1,540.7

Trigen-St Louis:CS1	\$1,318.7	\$1,301.7	\$852.5	\$851.7	\$1,985.7	\$1,960.2	\$3,008.0	\$2,968.1
Trigen-St Louis:CS2	\$1,336.6	\$1,319.0	\$879.8	\$879.0	\$2,013.4	\$1,987.0	\$3,067.6	\$3,027.4
Unionville GT:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Unionville GT:2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Venice:GT2	\$289.2	\$233.0	\$5,446.1	\$5,194.0	\$627.7	\$522.4	\$2,875.4	\$2,785.6
Venice:GT3	\$2,285.1	\$2,023.3	\$23,553.8	\$22,909.0	\$4,043.8	\$3,600.4	\$13,062.8	\$12,859.7
Venice:GT4	\$1,790.5	\$1,628.0	\$21,724.0	\$20,923.7	\$3,738.5	\$3,121.1	\$11,910.2	\$11,578.5
Venice:GT5	\$345.8	\$277.0	\$8,164.1	\$7,845.4	\$736.8	\$622.0	\$5,090.7	\$4,801.7
West Gardner:1	\$188.0	\$197.5	\$668.6	\$653.9	\$640.5	\$632.1	\$71.8	\$80.6
West Gardner:2	\$180.5	\$185.5	\$743.7	\$738.7	\$639.5	\$608.5	\$81.4	\$81.4
West Gardner:3	\$165.9	\$155.6	\$570.7	\$572.8	\$546.9	\$506.6	\$72.3	\$72.3
West Gardner:4	\$173.3	\$166.2	\$643.6	\$642.6	\$585.5	\$556.4	\$80.9	\$80.9
Wolf Creek GS 1	\$137,313.1	\$137,313.1	\$137,313.1	\$137,313.1	\$137,313.1	\$137,313.1	\$137,313.1	\$137,313.1

Table B-3: Unit Revenue – Missouri-owned Generators (\$K)

Generator	Business As Usual		Green Economy		Robust Economy		Slow Growth	
	Without Project	With Project	Without Project	With Project	Without Project	With Project	Without Project	With Project
Albany MO:6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$5.0	\$5.2
Asbury:1	\$33,140.2	\$33,122.1	\$153.7	\$152.3	\$56,668.8	\$56,115.7	\$64,390.4	\$64,821.6
Audrain:1	\$3.1	\$0.0	\$1,125.4	\$1,033.2	\$173.2	\$160.5	\$1,355.0	\$973.9
Audrain:2	\$0.0	\$0.0	\$998.7	\$959.3	\$164.2	\$156.4	\$1,049.5	\$617.1
Audrain:3	\$27.8	\$21.5	\$1,425.6	\$1,220.1	\$218.3	\$198.5	\$2,123.2	\$1,909.2
Audrain:4	\$5.8	\$0.0	\$1,007.0	\$940.8	\$152.8	\$143.1	\$1,164.8	\$752.8
Audrain:5	\$22.4	\$9.5	\$1,338.9	\$1,187.9	\$194.9	\$167.3	\$1,475.6	\$1,486.8
Audrain:6	\$0.0	\$0.0	\$868.5	\$675.2	\$105.4	\$71.6	\$1,004.5	\$463.7
Audrain:7	\$0.0	\$0.0	\$747.7	\$616.7	\$79.3	\$29.5	\$814.5	\$389.9
Audrain:8	\$9.2	\$6.2	\$1,486.0	\$1,261.7	\$215.4	\$188.3	\$1,694.5	\$1,435.1
Blue Valley:3	\$5,331.8	\$5,393.2	\$0.0	\$0.0	\$10,477.6	\$10,336.5	\$2,822.7	\$2,712.6
Blue Valley:GT1	\$1,191.7	\$1,197.4	\$5,767.0	\$5,714.2	\$2,132.5	\$2,106.4	\$556.2	\$569.0
Callaway 1	\$293,090.7	\$289,498.3	\$209,268.1	\$206,380.5	\$404,099.9	\$395,757.7	\$686,621.3	\$679,950.9
Carrollton:11	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Carthage:14	\$1,244.9	\$1,238.5	\$4,664.3	\$4,648.0	\$2,267.2	\$2,245.8	\$2,100.1	\$2,067.9
Chillicothe:GT1	\$97.2	\$82.1	\$1,827.9	\$1,764.9	\$403.8	\$378.4	\$421.6	\$378.1
Chillicothe:GT2	\$206.3	\$185.4	\$1,984.2	\$1,942.5	\$618.6	\$562.7	\$609.2	\$507.4
Chouteau:1	\$52,831.2	\$51,365.1	\$65,487.4	\$66,063.4	\$85,656.0	\$82,795.6	\$97,561.2	\$97,445.8
Chouteau:2	\$89,101.3	\$88,469.3	\$72,376.5	\$72,880.2	\$129,802.9	\$125,696.2	\$182,629.4	\$182,718.1
Columbia GT:1	\$65.2	\$53.0	\$458.9	\$432.8	\$146.5	\$127.0	\$704.8	\$651.6
Columbia GT:2	\$836.1	\$775.7	\$5,073.1	\$4,853.7	\$1,555.6	\$1,490.9	\$3,690.3	\$3,560.1
Columbia GT:3	\$388.5	\$340.9	\$2,254.5	\$2,101.4	\$842.3	\$762.7	\$1,960.6	\$1,886.1
Columbia GT:4	\$343.0	\$294.9	\$1,942.2	\$1,812.3	\$759.0	\$663.1	\$1,781.7	\$1,666.9
Columbia W&L Dept.:ST5	\$200.2	\$122.1	\$0.0	\$0.0	\$2,792.5	\$2,573.7	\$1,657.0	\$1,539.4
Columbia W&L Dept.:ST7	\$197.6	\$138.9	\$0.0	\$0.0	\$3,807.7	\$3,483.4	\$2,441.1	\$2,276.9
Columbia W&L Dept.:ST8	\$55.3	\$51.3	\$2,407.9	\$2,373.1	\$190.0	\$155.6	\$1,161.5	\$987.8
Columbia W&L Dept.:W2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Crossroads Energy:1	\$34.5	\$25.3	\$3,595.8	\$3,557.8	\$83.1	\$65.0	\$2,112.1	\$1,972.9

B-9

Crossroads Energy:2	\$19.5	\$5.3	\$2,942.1	\$2,699.5	\$60.7	\$70.0	\$1,747.3	\$1,582.1
Crossroads Energy:3	\$4.1	\$0.0	\$2,568.7	\$2,436.1	\$22.7	\$22.0	\$1,818.1	\$1,899.5
Crossroads Energy:4	\$41.3	\$33.1	\$2,417.7	\$2,354.7	\$26.9	\$19.6	\$2,225.0	\$2,415.3
Dell Power Stn:1	\$70,927.9	\$70,784.1	\$104,380.3	\$104,121.1	\$101,797.2	\$100,409.6	\$189,239.0	\$188,648.0
Dogwood EF:3	\$42,081.1	\$41,785.3	\$100,455.0	\$100,259.3	\$72,361.6	\$70,798.3	\$53,384.8	\$53,895.4
Empire EC:1	\$2,508.0	\$2,461.1	\$9,481.8	\$9,478.2	\$4,248.2	\$4,151.3	\$3,658.4	\$3,661.1
Empire EC:2	\$1,952.4	\$1,849.1	\$7,977.6	\$7,970.2	\$3,458.2	\$3,358.6	\$2,470.5	\$2,558.8
Empire EC:3	\$333.7	\$317.8	\$1,269.3	\$1,263.7	\$1,052.4	\$942.1	\$615.0	\$618.0
Empire EC:4	\$397.8	\$392.6	\$1,335.1	\$1,344.3	\$1,115.2	\$1,025.1	\$734.0	\$700.0
Essex MO:1	\$125.0	\$100.4	\$1,569.6	\$1,567.0	\$79.4	\$56.9	\$665.0	\$564.5
Fairgrounds:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Fayette MO:4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Frdrcktown:1	\$172.3	\$152.5	\$1,751.0	\$1,684.9	\$424.5	\$493.2	\$1,001.3	\$978.4
Frdrcktown:2	\$166.4	\$147.2	\$1,776.6	\$1,716.1	\$441.7	\$491.2	\$1,004.3	\$978.4
Fulton:3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Fulton:4	\$69.7	\$62.2	\$1,034.9	\$996.1	\$172.6	\$129.8	\$533.4	\$514.9
Gallatin MO:6	\$0.0	\$0.0	\$0.0	\$0.0	\$37.2	\$47.1	\$0.0	\$0.0
Goose Creek:1	\$0.0	\$0.0	\$2,548.8	\$2,456.7	\$0.0	\$0.0	\$51.1	\$20.5
Goose Creek:2	\$0.0	\$0.0	\$2,779.7	\$2,683.2	\$0.0	\$0.0	\$51.1	\$7.6
Goose Creek:3	\$0.0	\$0.0	\$2,531.2	\$2,429.4	\$0.0	\$0.0	\$51.1	\$17.2
Goose Creek:4	\$0.0	\$0.0	\$2,851.8	\$2,739.6	\$0.0	\$0.0	\$51.1	\$17.2
Goose Creek:5	\$0.0	\$0.0	\$2,853.9	\$2,752.7	\$0.0	\$0.0	\$51.1	\$0.0
Goose Creek:6	\$0.0	\$0.0	\$2,732.6	\$2,630.6	\$0.0	\$0.0	\$51.1	\$0.0
Greenwood (MO):1	\$12.9	\$13.2	\$400.5	\$373.1	\$39.6	\$51.7	\$31.7	\$32.0
Greenwood (MO):2	\$48.8	\$36.9	\$1,054.1	\$1,035.0	\$169.0	\$151.8	\$53.1	\$53.4
Greenwood (MO):3	\$26.7	\$23.7	\$882.7	\$877.0	\$92.6	\$82.8	\$33.6	\$42.6
Greenwood (MO):4	\$14.6	\$15.0	\$665.2	\$641.4	\$61.3	\$50.9	\$28.8	\$29.0
Hawthorne (MO):5	\$121,474.7	\$120,921.3	\$43,042.2	\$42,720.6	\$184,419.3	\$182,699.6	\$181,415.5	\$181,524.4
Hawthorne (MO):7	\$136.6	\$136.2	\$781.6	\$758.4	\$532.8	\$487.7	\$84.2	\$90.6
Hawthorne (MO):8	\$211.9	\$206.7	\$1,139.3	\$1,122.8	\$894.9	\$847.2	\$173.7	\$186.1
Hawthorne (MO):9	\$14,569.2	\$14,469.2	\$42,900.3	\$42,807.0	\$24,521.0	\$24,334.9	\$11,230.8	\$11,058.0
Holden Power Plant:1	\$384.0	\$353.6	\$1,433.1	\$1,392.1	\$708.0	\$617.5	\$215.1	\$235.2
Holden Power Plant:2	\$761.0	\$719.7	\$2,562.8	\$2,565.8	\$1,772.7	\$1,652.2	\$838.3	\$836.7
Holden Power Plant:3	\$303.3	\$274.4	\$1,309.3	\$1,318.1	\$595.1	\$517.2	\$195.0	\$214.4
Holton:10	\$545.2	\$530.8	\$1,698.2	\$1,694.6	\$1,018.2	\$990.4	\$427.9	\$427.1
Howard Bend CT:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Iatan:1	\$151,668.2	\$150,949.7	\$80,027.2	\$79,966.1	\$227,115.3	\$224,839.9	\$209,960.1	\$209,742.7
Iatan:2	\$178,682.3	\$177,742.1	\$60,446.5	\$61,030.0	\$267,496.1	\$264,823.6	\$293,621.9	\$294,605.1
Jackson MO:12	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Jackson Square:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Jackson Square:2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
James River:GT1	\$419.2	\$347.6	\$5,291.4	\$5,215.6	\$898.9	\$808.1	\$2,247.0	\$2,140.3
James River:GT2	\$601.0	\$542.9	\$7,262.3	\$7,212.8	\$1,396.6	\$1,258.9	\$3,227.8	\$3,050.4
James River:ST5	\$11,919.2	\$11,642.1	\$0.0	\$0.0	\$24,476.6	\$24,061.8	\$20,957.0	\$20,500.3
Jeffrey EC:1	\$144,492.0	\$143,623.5	\$62,745.7	\$62,575.6	\$222,874.0	\$220,773.2	\$184,835.0	\$185,352.4
Jeffrey EC:2	\$142,272.5	\$141,488.1	\$58,925.6	\$58,763.4	\$220,834.5	\$218,737.1	\$179,541.9	\$180,287.2
Jeffrey EC:3	\$149,702.0	\$149,011.4	\$70,180.0	\$70,143.2	\$224,773.6	\$222,763.1	\$221,826.9	\$222,560.8
Kansas City Intl:1	\$0.0	\$0.0	\$19.1	\$17.8	\$1.0	\$1.0	\$6.5	\$6.5

Kansas City Intl:2	\$0.0	\$0.0	\$24.7	\$22.2	\$1.0	\$1.0	\$6.6	\$6.6
Kennett MO:13	\$887.6	\$883.4	\$5,230.1	\$5,223.8	\$1,485.5	\$1,444.6	\$4,322.7	\$4,262.1
Keokuk	\$31,308.0	\$30,679.3	\$23,300.3	\$22,621.1	\$45,202.3	\$43,784.7	\$79,316.0	\$76,131.2
Kinmundy:1	\$7.5	\$0.0	\$7,511.2	\$6,833.6	\$103.0	\$25.4	\$588.9	\$207.4
Kinmundy:2	\$55.1	\$7.5	\$7,628.3	\$7,288.9	\$252.4	\$185.6	\$543.4	\$287.4
La Cygne:1	\$171,121.4	\$170,270.9	\$97,019.6	\$96,825.7	\$252,428.1	\$250,253.2	\$326,874.6	\$326,686.0
La Cygne:2	\$133,288.1	\$133,157.3	\$48,835.5	\$48,560.2	\$211,671.7	\$209,256.2	\$232,845.2	\$231,921.5
Labadie:1	\$153,746.0	\$151,936.4	\$101,559.7	\$98,241.6	\$208,741.0	\$204,058.6	\$0.0	\$0.0
Labadie:2	\$147,058.8	\$144,946.6	\$81,229.9	\$79,603.6	\$200,647.6	\$195,943.0	\$0.0	\$0.0
Labadie:3	\$154,959.3	\$153,010.9	\$91,840.0	\$89,445.2	\$210,477.0	\$205,715.7	\$0.0	\$0.0
Labadie:4	\$155,663.3	\$153,838.4	\$95,470.0	\$90,164.0	\$211,709.6	\$206,971.4	\$375,556.2	\$372,193.7
Lake Road MO:3	\$4.2	\$4.2	\$42.1	\$41.0	\$27.7	\$23.3	\$3.5	\$3.5
Lake Road MO:5	\$180.5	\$175.6	\$2,209.8	\$2,188.5	\$610.7	\$553.1	\$39.4	\$27.3
Lake Road MO:6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Lake Road MO:7	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Macon Egy Ctr:1	\$152.1	\$135.5	\$973.8	\$909.9	\$333.1	\$302.7	\$644.8	\$602.2
Malden MO:8	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
McCartney:1	\$812.8	\$767.8	\$3,725.3	\$3,627.3	\$1,776.9	\$1,687.9	\$3,477.5	\$3,481.3
McCartney:2	\$1,148.1	\$1,063.4	\$5,160.3	\$4,983.3	\$2,348.3	\$2,282.7	\$5,074.6	\$4,929.0
Meramec:4	\$0.0	\$0.0	\$0.0	\$0.0	\$120,188.3	\$116,892.8	\$0.0	\$0.0
Meramec:GT1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Meramec:GT2	\$132.8	\$91.0	\$3,419.5	\$3,206.1	\$272.6	\$231.9	\$1,870.6	\$1,822.5
Mexico:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
MJMEUC Gen:1	\$45.5	\$35.3	\$409.7	\$396.5	\$156.8	\$144.3	\$382.8	\$353.5
Moberly:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Monroe MO:12	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Monroe MO:7	\$107.9	\$100.6	\$716.4	\$682.2	\$222.7	\$205.3	\$470.4	\$417.9
Moreau:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
New Madrid:1	\$142,555.0	\$142,273.7	\$17,762.0	\$17,826.2	\$207,795.7	\$204,381.5	\$296,116.9	\$293,623.2
New Madrid:2	\$149,167.8	\$148,975.1	\$43,119.9	\$43,344.5	\$216,895.1	\$213,716.7	\$332,123.8	\$330,389.2
Nodaway County:1	\$175.2	\$169.0	\$705.9	\$713.1	\$357.5	\$318.1	\$6,564.2	\$5,645.0
Nodaway County:2	\$125.0	\$105.6	\$536.4	\$492.3	\$241.6	\$234.0	\$2,765.9	\$2,613.3
Northeast:11	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:12	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:13	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:14	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:15	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:16	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:17	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Northeast:18	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Osage (MO)	\$22,410.9	\$22,202.6	\$15,226.7	\$15,023.9	\$32,508.6	\$31,854.0	\$50,801.1	\$50,454.0
Osawatomie:1	\$204.1	\$189.9	\$1,048.3	\$1,014.9	\$808.9	\$735.5	\$119.5	\$144.4
Ottawa KS:7	\$565.7	\$551.6	\$2,302.8	\$2,298.8	\$1,008.4	\$981.3	\$353.3	\$352.6
Ozark Beach	\$2,451.6	\$2,433.7	\$1,465.2	\$1,467.6	\$3,793.6	\$3,759.3	\$5,339.1	\$5,329.5
Palmyra Muni 2:10	\$151.2	\$138.0	\$1,050.4	\$997.3	\$305.8	\$287.1	\$654.8	\$556.0
Peno Creek:1	\$499.7	\$359.7	\$5,002.0	\$4,328.0	\$1,106.1	\$954.1	\$2,662.6	\$2,524.9
Peno Creek:2	\$244.6	\$184.1	\$3,210.7	\$2,813.0	\$648.3	\$471.3	\$1,994.3	\$1,793.0
Peno Creek:3	\$478.9	\$344.6	\$4,961.2	\$4,296.5	\$1,093.7	\$920.0	\$2,560.4	\$2,368.0

Peno Creek:4	\$555.4	\$425.7	\$5,172.2	\$4,552.1	\$1,165.4	\$1,001.9	\$2,681.7	\$2,521.2
Pinckneyville:1	\$503.4	\$482.5	\$5,365.2	\$5,152.5	\$860.1	\$782.3	\$3,062.1	\$2,936.3
Pinckneyville:2	\$479.4	\$450.2	\$5,200.2	\$4,990.7	\$842.0	\$715.7	\$2,946.4	\$2,821.1
Pinckneyville:3	\$371.1	\$337.8	\$4,920.7	\$4,720.5	\$641.4	\$549.8	\$2,343.6	\$2,254.3
Pinckneyville:4	\$413.1	\$392.8	\$5,109.2	\$4,887.7	\$719.9	\$613.7	\$2,704.8	\$2,607.4
Pinckneyville:5	\$13.7	\$8.9	\$765.6	\$727.1	\$18.9	\$14.4	\$714.7	\$653.6
Pinckneyville:6	\$9.0	\$9.6	\$757.8	\$716.0	\$14.2	\$14.4	\$687.3	\$636.2
Pinckneyville:7	\$10.3	\$8.9	\$753.1	\$704.9	\$18.9	\$14.4	\$701.5	\$644.0
Pinckneyville:8	\$13.5	\$8.2	\$763.2	\$719.7	\$17.7	\$14.4	\$681.9	\$634.1
Plant 2 KS:4	\$795.1	\$788.8	\$1,993.6	\$1,981.2	\$1,465.3	\$1,442.4	\$584.7	\$571.1
Plum Point:1	\$168,505.3	\$168,624.0	\$0.0	\$0.0	\$254,639.5	\$254,453.8	\$373,113.2	\$372,662.3
Poplar Bluff:5	\$1,484.5	\$1,470.4	\$5,880.9	\$5,810.2	\$2,319.0	\$2,270.0	\$4,023.2	\$4,005.2
Raccoon Crk Egy:1	\$0.0	\$0.0	\$2,842.1	\$2,629.9	\$0.0	\$0.0	\$6.3	\$5.1
Raccoon Crk Egy:2	\$0.0	\$0.0	\$2,976.7	\$2,669.6	\$0.0	\$0.0	\$6.3	\$0.0
Raccoon Crk Egy:3	\$0.0	\$0.0	\$2,983.4	\$2,752.4	\$0.0	\$0.0	\$6.3	\$0.0
Raccoon Crk Egy:4	\$0.0	\$0.0	\$2,965.6	\$2,666.1	\$0.0	\$0.0	\$6.3	\$0.0
Ralph Green GT:3	\$32.3	\$29.4	\$1,152.1	\$1,127.4	\$128.3	\$108.7	\$46.3	\$46.6
Riverton:10	\$484.5	\$483.2	\$1,942.2	\$1,935.5	\$850.3	\$840.8	\$799.9	\$844.8
Riverton:11	\$542.4	\$539.9	\$1,962.6	\$1,962.5	\$943.9	\$933.6	\$945.9	\$986.6
Riverton:12	\$7,228.7	\$7,104.4	\$17,995.5	\$17,595.4	\$13,292.9	\$13,158.6	\$13,833.3	\$13,984.4
Rush Island:1	\$150,781.5	\$148,549.2	\$9,022.3	\$8,085.9	\$207,467.9	\$202,539.8	\$351,201.6	\$345,080.3
Rush Island:2	\$149,886.2	\$147,920.3	\$11,211.1	\$8,295.5	\$204,314.9	\$199,426.5	\$356,393.5	\$352,517.3
Sabetha:11	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Salisbury:4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Sibley:3	\$49,051.7	\$48,509.5	\$1,821.8	\$1,799.4	\$81,187.6	\$79,593.5	\$52,408.3	\$54,591.1
Sikeston:1	\$56,225.9	\$55,971.6	\$37,016.0	\$36,704.8	\$80,162.4	\$79,048.6	\$124,112.3	\$123,243.0
Sioux:1	\$126,008.0	\$124,453.1	\$64,021.3	\$61,932.5	\$171,690.5	\$167,832.2	\$0.0	\$0.0
Sioux:2	\$124,696.3	\$123,140.0	\$67,319.1	\$62,336.2	\$168,818.9	\$164,909.0	\$0.0	\$0.0
South Harper Peaking:1	\$18.3	\$18.7	\$295.8	\$282.0	\$113.0	\$108.3	\$59.9	\$60.3
South Harper Peaking:2	\$17.0	\$17.3	\$295.9	\$265.5	\$101.9	\$96.4	\$60.4	\$60.8
South Harper Peaking:3	\$21.9	\$22.3	\$337.3	\$307.9	\$191.1	\$163.9	\$75.3	\$75.7
Southwest:GT1	\$14.0	\$14.2	\$1,700.6	\$1,683.3	\$158.4	\$135.7	\$241.9	\$235.6
Southwest:GT2	\$1.8	\$1.9	\$1,299.2	\$1,314.7	\$38.0	\$43.9	\$132.2	\$142.6
Southwest:ST1	\$27,552.2	\$27,139.2	\$15.2	\$38.8	\$48,227.1	\$47,205.4	\$50,815.1	\$49,122.3
Southwest:ST2	\$58,187.2	\$57,357.0	\$2,136.1	\$2,030.2	\$97,295.2	\$95,942.6	\$136,026.4	\$134,622.0
St Francis:1	\$35,657.1	\$35,129.4	\$34,684.4	\$34,648.2	\$41,495.1	\$39,822.6	\$98,179.2	\$96,108.1
St Francis:2	\$26,470.4	\$25,141.6	\$41,349.1	\$41,144.6	\$38,424.6	\$37,360.6	\$77,660.5	\$74,974.1
State Line MO:1	\$480.8	\$452.7	\$3,577.5	\$3,602.3	\$1,230.0	\$1,074.5	\$693.9	\$707.6
State Line MO:3	\$63,608.8	\$63,445.1	\$73,383.9	\$73,314.5	\$101,592.9	\$99,987.5	\$184,028.0	\$184,847.7
Station H:1	\$4.4	\$5.5	\$138.0	\$132.2	\$24.9	\$19.8	\$23.9	\$24.1
Station H:2	\$4.2	\$5.8	\$132.8	\$128.3	\$17.2	\$13.5	\$16.9	\$17.0
Station I:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Station I:2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Taum Sauk	\$3,102.8	\$3,130.6	\$2,173.7	\$2,167.5	\$15,959.2	\$15,984.6	\$5,871.3	\$5,749.5
Thomas Hill:3	\$171,246.9	\$170,123.0	\$39,102.9	\$37,894.3	\$254,798.2	\$250,809.2	\$380,079.9	\$373,913.7
Trenton Peaker:5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Trigen-St Louis:3	\$384.2	\$356.5	\$3,165.2	\$3,074.8	\$579.1	\$550.5	\$1,779.1	\$1,706.1
Trigen-St Louis:CS1	\$1,207.7	\$1,177.5	\$1,276.7	\$1,258.7	\$1,583.7	\$1,524.5	\$3,251.1	\$3,186.6

Trigen-St Louis:CS2	\$1,228.1	\$1,197.3	\$1,317.7	\$1,300.4	\$1,623.3	\$1,563.8	\$3,327.4	\$3,259.9
Unionville GT:1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Unionville GT:2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Venice:GT2	\$300.3	\$242.1	\$6,015.7	\$5,697.2	\$648.1	\$537.3	\$3,203.3	\$3,101.6
Venice:GT3	\$2,342.1	\$2,071.4	\$26,335.9	\$25,408.6	\$4,152.4	\$3,652.8	\$14,658.9	\$14,422.0
Venice:GT4	\$1,852.6	\$1,667.3	\$24,221.5	\$23,173.1	\$3,829.2	\$3,151.0	\$13,363.7	\$13,010.7
Venice:GT5	\$357.0	\$279.3	\$9,095.1	\$8,653.6	\$774.2	\$643.1	\$5,770.1	\$5,475.4
West Gardner:1	\$193.4	\$203.8	\$789.9	\$760.4	\$673.6	\$656.7	\$84.6	\$90.9
West Gardner:2	\$185.9	\$191.5	\$866.2	\$848.4	\$667.0	\$630.5	\$91.6	\$92.1
West Gardner:3	\$168.6	\$159.0	\$674.9	\$667.7	\$569.2	\$521.7	\$84.5	\$85.0
West Gardner:4	\$178.3	\$170.5	\$760.7	\$747.0	\$610.6	\$576.3	\$90.9	\$91.4
Wolf Creek GS 1	\$297,811.0	\$296,569.7	\$190,611.3	\$190,428.5	\$437,878.1	\$434,364.7	\$587,424.5	\$586,923.4

In note 5.c., Staff requested “A reasonable estimate of the emissions released by each generation facility located in Missouri, or owned by a Missouri-serving utility, or from which power is purchased to serve Missouri load by a Missouri-serving utility (with and without a Missouri converter station).” These results are shown in the tables below.

Table B-4: Unit Emissions – Missouri-owned Generators, Business As Usual Scenario

Generator	Without Project				With Project			
	NOx	SO2	CO2	Hg	NOx	SO2	CO2	Hg
Asbury:1	527,685	6,057,836	2,216,278,884	1.6	529,270	6,076,029	2,222,934,996	1.6
Audrain:1	54	0	107,519	0.0	0	0	0	0.0
Audrain:3	364	0	721,853	0.0	280	0	554,624	0.0
Audrain:4	108	0	214,974	0.0	0	0	0	0.0
Audrain:5	309	0	613,151	0.0	161	0	320,068	0.0
Audrain:8	162	0	320,405	0.0	108	0	213,603	0.0
Blue Valley:3	487,795	4,543,729	379,555,532	21.0	499,421	4,652,019	388,601,497	21.5
Blue Valley:GT1	31,426	0	28,407,599	0.0	31,742	0	28,693,317	0.0
Carthage:14	169,682	0	28,361,170	0.0	169,850	0	28,389,269	0.0
Chillicothe:GT1	7,801	0	2,237,819	0.0	6,579	0	1,887,121	0.0
Chillicothe:GT2	16,235	0	4,657,122	0.0	14,651	0	4,202,624	0.0
Chouteau:1	214,507	0	1,159,759,894	0.0	208,792	0	1,128,861,323	0.0
Chouteau:2	165,875	0	1,940,735,936	0.0	165,092	0	1,931,578,992	0.0
Columbia GT:1	726	0	1,440,568	0.0	586	0	1,161,423	0.0
Columbia GT:2	8,410	0	16,679,453	0.0	7,891	0	15,649,555	0.0
Columbia GT:3	4,186	0	8,302,655	0.0	3,700	0	7,339,173	0.0
Columbia GT:4	3,711	0	7,360,634	0.0	3,209	0	6,364,364	0.0
Columbia W&L Dept.:ST5	23,516	62,760	9,125,069	0.0	14,829	39,574	5,753,938	0.0
Columbia W&L Dept.:ST7	21,952	78,034	8,926,909	0.0	15,930	56,629	6,478,199	0.0
Columbia W&L Dept.:ST8	2,738	0	1,443,022	0.0	2,601	0	1,371,155	0.0
Crossroads Energy:1	395	0	784,397	0.0	305	0	604,252	0.0
Crossroads Energy:2	230	0	455,390	0.0	68	0	134,319	0.0
Crossroads Energy:3	55	0	109,105	0.0	0	0	0	0.0
Crossroads Energy:4	494	0	978,974	0.0	397	0	786,458	0.0

Dell Power Stn:1	299,823	0	1,554,638,401	0.0	299,909	0	1,555,082,254	0.0
Dogwood EF:3	88,868	0	896,209,296	0.0	88,671	0	894,226,409	0.0
Empire EC:1	68,651	0	62,058,051	0.0	67,683	0	61,182,586	0.0
Empire EC:2	53,996	0	48,810,248	0.0	51,567	0	46,614,692	0.0
Empire EC:3	5,021	0	7,829,383	0.0	4,877	0	7,604,849	0.0
Empire EC:4	6,031	0	9,626,844	0.0	6,012	0	9,596,193	0.0
Essex MO:1	2,857	0	2,926,278	0.0	2,303	0	2,359,357	0.0
Frdrcktown:1	1,835	0	3,578,555	0.0	1,640	0	3,198,090	0.0
Frdrcktown:2	1,773	0	3,457,716	0.0	1,585	0	3,089,802	0.0
Fulton:4	5,487	0	1,574,068	0.0	4,893	0	1,403,496	0.0
Greenwood (MO):1	386	0	348,723	0.0	386	0	348,723	0.0
Greenwood (MO):2	1,322	0	1,194,743	0.0	1,022	0	923,734	0.0
Greenwood (MO):3	750	0	677,873	0.0	684	0	618,582	0.0
Greenwood (MO):4	448	0	405,329	0.0	448	0	405,329	0.0
Hawthorne (MO):5	2,847,721	5,258,178	7,956,644,288	200.8	2,847,667	5,258,078	7,956,493,568	200.8
Hawthorne (MO):7	626	0	3,116,340	0.0	629	0	3,132,463	0.0
Hawthorne (MO):8	964	0	4,873,561	0.0	938	0	4,741,682	0.0
Hawthorne (MO):9	40,449	0	319,189,906	0.0	40,314	0	318,130,123	0.0
Holden Power Plant:1	1,429	0	8,893,643	0.0	1,328	0	8,268,254	0.0
Holden Power Plant:2	4,814	0	16,470,684	0.0	4,580	0	15,669,535	0.0
Holden Power Plant:3	1,383	0	7,103,459	0.0	1,269	0	6,518,904	0.0
Holton:10	2,868	0	11,185,685	0.0	2,803	0	10,930,460	0.0
Iatan:1	4,651,509	2,974,626	11,440,861,600	70.8	4,650,968	2,974,280	11,439,531,904	70.8
Iatan:2	2,427,508	2,878,851	11,072,486,464	0.0	2,426,298	2,877,416	11,066,967,104	0.0
James River:GT1	11,531	0	10,423,681	0.0	9,791	0	8,850,283	0.0
James River:GT2	26,183	0	14,997,168	0.0	24,402	0	13,976,754	0.0
James River:ST5	638,279	1,962,743	706,992,627	7.4	623,445	1,917,127	690,561,669	7.2
Jeffrey EC:1	2,569,056	2,064,494	10,790,041,024	7.6	2,564,443	2,060,788	10,770,667,968	7.5
Jeffrey EC:2	2,564,574	2,060,893	10,719,916,352	7.5	2,560,945	2,057,977	10,704,746,656	7.5
Jeffrey EC:3	2,646,065	2,126,374	11,113,436,800	7.8	2,644,818	2,125,372	11,108,198,592	7.8
Kennett MO:13	4,886	0	19,053,547	0.0	4,908	0	19,141,509	0.0
Kinmundy:1	111	0	221,073	0.0	0	0	0	0.0
Kinmundy:2	686	0	1,361,345	0.0	111	0	219,627	0.0
La Cygne:1	2,776,775	2,231,412	11,662,408,064	8.1	2,776,897	2,231,510	11,662,920,320	8.1
La Cygne:2	2,285,068	16,395,363	9,597,277,120	6.7	2,292,420	16,448,113	9,628,154,432	6.8
Labadie:1	4,945,387	28,162,110	9,419,769,216	147.1	4,944,182	28,155,248	9,417,473,984	147.1
Labadie:2	4,928,403	28,429,106	9,393,465,408	146.7	4,907,874	28,310,688	9,354,338,048	146.1
Labadie:3	5,315,712	30,368,756	9,862,192,512	154.1	5,306,428	30,315,715	9,844,967,872	153.8
Labadie:4	5,358,861	30,777,518	10,017,431,232	156.5	5,355,634	30,758,985	10,011,398,912	156.4
Lake Road MO:3	243	0	125,791	0.0	243	0	125,791	0.0
Lake Road MO:5	4,829	0	4,364,991	0.0	4,726	0	4,272,543	0.0
Macon Egy Ctr:1	1,528	0	2,978,940	0.0	1,376	0	2,682,685	0.0
McCartney:1	19,971	0	17,828,196	0.0	19,097	0	17,048,683	0.0
McCartney:2	24,107	0	24,906,795	0.0	22,587	0	23,336,171	0.0
Meramec:GT2	1,497	0	2,919,578	0.0	1,028	0	2,003,724	0.0
MJMEUC Gen:1	494	0	963,290	0.0	388	0	756,781	0.0
Monroe MO:7	13,356	0	2,232,379	0.0	12,559	0	2,099,107	0.0
New Madrid:1	4,261,320	24,419,730	8,840,026,976	138.1	4,264,724	24,439,235	8,847,087,808	138.2

New Madrid:2	3,981,244	24,229,252	8,842,505,408	138.1	3,982,010	24,233,914	8,844,206,784	138.1
Nodaway County:1	3,130	0	3,933,847	0.0	2,981	0	3,746,216	0.0
Nodaway County:2	2,207	0	2,756,349	0.0	1,884	0	2,352,408	0.0
Osawatomie:1	2,413	0	4,785,526	0.0	2,248	0	4,457,817	0.0
Palmyra Muni 2:10	3,932	0	3,067,294	0.0	3,629	0	2,830,241	0.0
Peno Creek:1	8,009	0	11,022,586	0.0	5,769	0	7,940,519	0.0
Peno Creek:2	3,851	0	5,428,666	0.0	2,925	0	4,122,810	0.0
Peno Creek:3	8,071	0	10,588,125	0.0	5,820	0	7,634,901	0.0
Peno Creek:4	9,351	0	12,403,894	0.0	7,182	0	9,527,299	0.0
Pinckneyville:1	7,321	0	10,739,980	0.0	7,073	0	10,376,319	0.0
Pinckneyville:2	7,027	0	10,243,101	0.0	6,650	0	9,693,377	0.0
Pinckneyville:3	5,471	0	7,968,983	0.0	4,990	0	7,268,423	0.0
Pinckneyville:4	6,007	0	8,859,448	0.0	5,755	0	8,489,016	0.0
Pinckneyville:5	161	0	319,735	0.0	102	0	201,416	0.0
Pinckneyville:6	104	0	205,581	0.0	110	0	217,779	0.0
Pinckneyville:7	122	0	242,471	0.0	102	0	201,416	0.0
Pinckneyville:8	157	0	311,492	0.0	95	0	188,295	0.0
Plum Point:1	3,333,804	4,860,949	9,931,921,408	221.8	3,340,382	4,870,540	9,951,517,696	222.3
Poplar Bluff:5	7,714	0	30,085,800	0.0	7,669	0	29,910,517	0.0
Ralph Green GT:3	967	0	874,440	0.0	844	0	762,999	0.0
Riverton:10	71,103	0	11,420,569	0.0	70,864	0	11,382,087	0.0
Riverton:11	79,500	0	12,769,297	0.0	79,240	0	12,727,561	0.0
Riverton:12	14,611	0	170,945,885	0.0	14,349	0	167,887,261	0.0
Rush Island:1	4,039,845	27,660,715	9,762,544,448	152.5	4,018,889	27,517,222	9,711,901,504	151.7
Rush Island:2	4,318,729	27,429,979	9,681,224,064	151.2	4,304,737	27,341,110	9,649,858,240	150.7
Sibley:3	3,210,072	8,373,648	3,234,403,080	20.0	3,190,654	8,322,995	3,214,837,928	19.9
Sioux:1	10,284,287	1,646,058	7,437,017,344	117.6	10,269,532	1,643,697	7,426,347,584	117.4
Sioux:2	8,787,540	1,663,662	7,516,540,288	51.5	8,782,091	1,662,630	7,511,878,912	51.5
South Harper Peaking:1	195	0	505,176	0.0	195	0	505,176	0.0
South Harper Peaking:2	183	0	478,456	0.0	183	0	478,456	0.0
South Harper Peaking:3	240	0	579,457	0.0	240	0	579,457	0.0
Southwest:GT1	419	0	379,040	0.0	478	0	431,778	0.0
Southwest:GT2	77	0	69,503	0.0	77	0	69,503	0.0
Southwest:ST1	1,182,396	338,984	1,735,416,440	27.1	1,169,086	335,168	1,715,880,708	26.8
Southwest:ST2	1,775,154	493,522	3,469,794,288	0.0	1,763,772	490,358	3,447,546,640	0.0
St Francis:1	120,703	0	789,211,768	0.0	119,074	0	778,560,738	0.0
St Francis:2	105,618	0	557,859,133	0.0	99,919	0	527,757,005	0.0
State Line MO:1	6,264	0	12,498,043	0.0	5,930	0	11,833,060	0.0
State Line MO:3	186,539	0	1,530,903,116	0.0	186,901	0	1,533,878,546	0.0
Station H:1	722	0	115,940	0.0	847	0	135,979	0.0
Station H:2	386	0	110,838	0.0	514	0	147,319	0.0
Thomas Hill:3	6,982,614	2,309,820	10,435,940,928	163.0	6,975,988	2,307,628	10,426,038,912	162.8
Trigen-St Louis:3	17,263	0	8,945,908	0.0	16,134	0	8,360,846	0.0
Trigen-St Louis:CS1	2,485	0	29,074,860	0.0	2,454	0	28,708,591	0.0
Trigen-St Louis:CS2	2,515	0	29,427,001	0.0	2,483	0	29,048,848	0.0
Venice:GT2	4,635	0	6,611,415	0.0	3,734	0	5,325,905	0.0
Venice:GT3	18,235	0	52,062,112	0.0	16,150	0	46,109,294	0.0
Venice:GT4	14,417	0	40,837,828	0.0	13,112	0	37,143,068	0.0

B-15

Venice:GT5	2,082	0	7,936,875	0.0	1,668	0	6,360,497	0.0
West Gardner:1	741	0	4,490,500	0.0	778	0	4,711,154	0.0
West Gardner:2	654	0	4,311,882	0.0	671	0	4,427,624	0.0
West Gardner:3	688	0	3,968,109	0.0	644	0	3,715,718	0.0
West Gardner:4	770	0	4,142,967	0.0	738	0	3,969,800	0.0

Table B-5: Unit Emissions – Missouri-owned Generators, Slow Growth Scenario

Generator	Without Project				With Project			
	NOx	SO2	CO2	Hg	NOx	SO2	CO2	Hg
Asbury:1	2,548	29,254	10,702,560	0.0	2,548	29,254	10,702,560	0.0
Audrain:1	27,040	0	53,629,517	0.0	25,459	0	50,494,511	0.0
Audrain:2	23,978	0	47,556,007	0.0	23,599	0	46,804,872	0.0
Audrain:3	35,095	0	69,605,771	0.0	30,851	0	61,188,021	0.0
Audrain:4	24,255	0	48,105,824	0.0	23,251	0	46,115,219	0.0
Audrain:5	33,415	0	66,272,647	0.0	30,119	0	59,735,251	0.0
Audrain:6	20,133	0	39,930,120	0.0	15,914	0	31,562,267	0.0
Audrain:7	17,038	0	33,791,654	0.0	14,378	0	28,516,004	0.0
Audrain:8	36,833	0	73,051,907	0.0	31,655	0	62,782,978	0.0
Blue Valley:GT1	361,309	0	326,608,866	0.0	358,464	0	324,037,479	0.0
Carthage:14	1,533,304	0	256,280,718	0.0	1,528,027	0	255,398,692	0.0
Chillicothe:GT1	371,400	0	106,538,231	0.0	358,885	0	102,948,452	0.0
Chillicothe:GT2	390,589	0	112,042,904	0.0	383,452	0	109,995,472	0.0
Chouteau:1	514,592	0	2,782,207,952	0.0	517,609	0	2,798,520,896	0.0
Chouteau:2	253,384	0	2,964,575,632	0.0	254,625	0	2,979,097,152	0.0
Columbia GT:1	10,652	0	21,126,944	0.0	10,296	0	20,421,083	0.0
Columbia GT:2	114,612	0	227,314,387	0.0	110,366	0	218,892,726	0.0
Columbia GT:3	56,116	0	111,297,215	0.0	52,663	0	104,449,217	0.0
Columbia GT:4	48,534	0	96,259,463	0.0	45,574	0	90,388,388	0.0
Columbia W&L Dept.:ST8	251,866	0	132,754,684	0.0	251,586	0	132,607,089	0.0
Crossroads Energy:1	100,782	0	199,883,637	0.0	100,529	0	199,382,337	0.0
Crossroads Energy:2	82,371	0	163,369,528	0.0	76,024	0	150,780,118	0.0
Crossroads Energy:3	72,297	0	143,389,409	0.0	68,331	0	135,522,663	0.0
Crossroads Energy:4	68,641	0	136,137,617	0.0	67,155	0	133,190,365	0.0
Dell Power Stn:1	794,011	0	4,117,097,152	0.0	791,823	0	4,105,750,944	0.0
Dogwood EF:3	439,792	0	4,435,197,872	0.0	439,745	0	4,434,724,336	0.0
Empire EC:1	598,290	0	540,833,112	0.0	597,769	0	540,362,284	0.0
Empire EC:2	511,523	0	462,397,243	0.0	510,815	0	461,757,234	0.0
Empire EC:3	41,267	0	64,352,744	0.0	40,825	0	63,664,339	0.0
Empire EC:4	42,330	0	67,569,201	0.0	42,514	0	67,863,023	0.0
Essex MO:1	71,739	0	73,486,969	0.0	72,841	0	74,615,240	0.0
Frdrehtown:1	39,831	0	77,671,095	0.0	38,532	0	75,137,273	0.0
Frdrehtown:2	40,521	0	79,015,740	0.0	39,342	0	76,717,590	0.0
Fulton:4	200,558	0	57,531,305	0.0	194,942	0	55,920,346	0.0
Goose Creek:1	62,823	0	124,599,806	0.0	61,991	0	122,948,373	0.0
Goose Creek:2	68,662	0	136,179,794	0.0	67,723	0	134,318,145	0.0

Goose Creek:3	62,761	0	124,475,750	0.0	61,152	0	121,283,980	0.0
Goose Creek:4	70,517	0	139,859,314	0.0	69,273	0	137,391,757	0.0
Goose Creek:5	70,579	0	139,982,701	0.0	69,634	0	138,107,584	0.0
Goose Creek:6	67,551	0	133,976,249	0.0	66,532	0	131,954,588	0.0
Greenwood (MO):1	24,887	0	22,497,053	0.0	23,583	0	21,318,182	0.0
Greenwood (MO):2	70,068	0	63,339,137	0.0	69,258	0	62,606,492	0.0
Greenwood (MO):3	58,667	0	53,032,321	0.0	58,815	0	53,166,509	0.0
Greenwood (MO):4	43,961	0	39,738,779	0.0	42,634	0	38,539,765	0.0
Hawthorne (MO):5	1,422,873	2,627,276	3,975,570,378	100.3	1,415,429	2,613,531	3,954,771,034	99.8
Hawthorne (MO):7	7,983	0	39,730,804	0.0	7,835	0	38,992,403	0.0
Hawthorne (MO):8	11,958	0	60,476,499	0.0	11,928	0	60,324,673	0.0
Hawthorne (MO):9	254,195	0	2,005,918,016	0.0	254,206	0	2,006,002,872	0.0
Holden Power Plant:1	11,301	0	70,335,891	0.0	11,047	0	68,752,122	0.0
Holden Power Plant:2	36,716	0	125,624,430	0.0	36,834	0	126,026,646	0.0
Holden Power Plant:3	12,415	0	63,763,766	0.0	12,598	0	64,701,620	0.0
Holton:10	21,676	0	84,537,018	0.0	21,638	0	84,389,235	0.0
Iatan:1	3,630,662	2,321,795	8,929,979,312	55.3	3,631,262	2,322,179	8,931,454,016	55.3
Iatan:2	1,142,453	1,354,865	5,211,014,192	0.0	1,156,016	1,370,949	5,272,877,904	0.0
James River:GT1	331,818	0	299,950,863	0.0	328,113	0	296,601,292	0.0
James River:GT2	740,918	0	424,380,135	0.0	739,521	0	423,579,656	0.0
Jeffrey EC:1	1,691,701	1,359,452	7,105,137,856	5.0	1,688,487	1,356,869	7,091,638,528	5.0
Jeffrey EC:2	1,665,338	1,338,266	6,961,104,128	4.9	1,662,863	1,336,277	6,950,757,792	4.9
Jeffrey EC:3	1,835,894	1,475,325	7,710,736,512	5.4	1,835,933	1,475,356	7,710,898,912	5.4
Kansas City Intl:1	6,024	0	967,580	0.0	5,646	0	906,882	0.0
Kansas City Intl:2	7,926	0	1,273,053	0.0	7,177	0	1,152,734	0.0
Kennett MO:13	57,946	0	225,990,117	0.0	58,144	0	226,759,633	0.0
Kinmundy:1	188,759	0	374,370,665	0.0	173,985	0	345,069,481	0.0
Kinmundy:2	191,414	0	379,636,665	0.0	185,358	0	367,627,267	0.0
La Cygne:1	2,423,152	1,947,240	10,177,204,288	7.1	2,421,673	1,946,052	10,170,996,064	7.1
La Cygne:2	1,423,816	10,215,857	5,980,008,608	4.2	1,419,679	10,186,173	5,962,632,640	4.2
Labadie:1	4,407,327	25,098,090	8,394,896,224	131.1	4,308,160	24,533,377	8,206,007,968	128.2
Labadie:2	3,558,356	20,526,008	6,782,142,656	105.9	3,527,016	20,345,222	6,722,407,072	105.0
Labadie:3	4,185,769	23,913,323	7,765,815,872	121.3	4,122,245	23,550,407	7,647,958,752	119.5
Labadie:4	4,451,544	25,566,518	8,321,366,432	130.0	4,239,382	24,348,011	7,924,769,228	123.8
Lake Road MO:3	4,108	0	2,128,630	0.0	4,123	0	2,136,503	0.0
Lake Road MO:5	151,296	0	136,766,249	0.0	149,986	0	135,581,453	0.0
Macon Egy Ctr:1	23,996	0	46,792,118	0.0	22,464	0	43,804,086	0.0
McCartney:1	205,955	0	183,860,988	0.0	200,661	0	179,134,950	0.0
McCartney:2	249,771	0	258,055,479	0.0	241,785	0	249,804,269	0.0
Meramec:GT2	85,443	0	166,614,713	0.0	80,825	0	157,609,734	0.0
MJMEUC Gen:1	10,095	0	19,685,632	0.0	9,876	0	19,257,443	0.0
Monroe MO:7	200,212	0	33,464,087	0.0	191,896	0	32,073,986	0.0
New Madrid:1	736,964	4,223,219	1,528,820,979	23.9	740,354	4,242,646	1,535,853,507	24.0
New Madrid:2	1,707,340	10,390,616	3,792,080,016	59.2	1,713,388	10,427,421	3,805,512,248	59.4
Nodaway County:1	26,702	0	33,557,709	0.0	27,038	0	33,979,617	0.0
Nodaway County:2	20,412	0	25,493,077	0.0	19,226	0	24,012,643	0.0
Osawatomie:1	28,197	0	55,924,342	0.0	27,566	0	54,672,382	0.0
Palmyra Muni 2:10	66,546	0	51,905,612	0.0	63,488	0	49,520,407	0.0

Peno Creek:1	173,645	0	238,997,289	0.0	152,673	0	210,132,371	0.0
Peno Creek:2	111,802	0	157,598,097	0.0	99,145	0	139,756,366	0.0
Peno Creek:3	180,994	0	237,441,038	0.0	159,397	0	209,108,312	0.0
Peno Creek:4	186,598	0	247,521,429	0.0	166,728	0	221,163,633	0.0
Pinckneyville:1	168,235	0	246,794,865	0.0	162,588	0	238,510,673	0.0
Pinckneyville:2	165,165	0	240,747,148	0.0	159,568	0	232,589,649	0.0
Pinckneyville:3	157,184	0	228,946,703	0.0	151,739	0	221,015,544	0.0
Pinckneyville:4	160,512	0	236,748,756	0.0	154,470	0	227,837,092	0.0
Pinckneyville:5	17,430	0	34,568,725	0.0	16,787	0	33,293,588	0.0
Pinckneyville:6	17,353	0	34,417,113	0.0	16,657	0	33,035,810	0.0
Pinckneyville:7	17,128	0	33,970,155	0.0	16,245	0	32,220,164	0.0
Pinckneyville:8	17,379	0	34,468,121	0.0	16,622	0	32,967,535	0.0
Poplar Bluff:5	66,199	0	258,176,377	0.0	65,625	0	255,937,944	0.0
Ralph Green GT:3	77,492	0	70,049,817	0.0	76,503	0	69,155,821	0.0
Riverton:10	687,853	0	110,482,593	0.0	686,392	0	110,247,931	0.0
Riverton:11	690,175	0	110,855,569	0.0	691,204	0	111,020,854	0.0
Riverton:12	86,028	0	1,006,524,441	0.0	84,063	0	983,538,168	0.0
Rush Island:1	282,242	1,932,494	682,055,506	10.7	261,533	1,790,700	632,010,656	9.9
Rush Island:2	417,287	2,650,360	935,424,007	14.6	312,104	1,982,303	699,638,096	10.9
Sibley:3	148,404	387,120	149,528,796	0.9	148,507	387,388	149,632,312	0.9
Sioux:1	6,822,430	1,091,967	4,933,582,912	78.0	6,677,799	1,068,818	4,828,994,004	76.3
Sioux:2	6,294,539	1,191,686	5,384,118,624	36.9	5,896,937	1,116,411	5,044,024,189	34.6
South Harper Peaking:1	5,940	0	15,359,406	0.0	5,755	0	14,881,830	0.0
South Harper Peaking:2	5,847	0	15,323,050	0.0	5,349	0	14,017,296	0.0
South Harper Peaking:3	7,245	0	17,466,952	0.0	6,667	0	16,072,763	0.0
Southwest:GT1	101,578	0	91,822,284	0.0	99,418	0	89,869,681	0.0
Southwest:GT2	73,791	0	66,704,069	0.0	73,673	0	66,597,426	0.0
Southwest:ST1	979	281	1,436,792	0.0	1,958	561	2,873,584	0.0
Southwest:ST2	87,075	24,208	170,201,546	0.0	83,611	23,245	163,429,922	0.0
St Francis:1	227,362	0	1,486,591,840	0.0	227,175	0	1,485,372,136	0.0
St Francis:2	304,264	0	1,607,077,852	0.0	302,993	0	1,600,366,664	0.0
State Line MO:1	107,813	0	215,119,704	0.0	108,667	0	216,823,930	0.0
State Line MO:3	392,506	0	3,221,257,920	0.0	392,295	0	3,219,529,440	0.0
Station H:1	48,278	0	7,754,440	0.0	47,107	0	7,566,283	0.0
Station H:2	25,226	0	7,236,214	0.0	24,941	0	7,154,518	0.0
Thomas Hill:3	2,350,110	777,407	3,512,373,288	54.9	2,294,496	759,010	3,429,254,256	53.6
Trigen-St Louis:3	266,880	0	138,304,257	0.0	261,748	0	135,644,569	0.0
Trigen-St Louis:CS1	3,649	0	42,690,567	0.0	3,645	0	42,648,619	0.0
Trigen-St Louis:CS2	3,758	0	43,972,116	0.0	3,755	0	43,930,084	0.0
Venice:GT2	197,062	0	281,079,306	0.0	188,371	0	268,682,140	0.0
Venice:GT3	417,500	0	1,191,997,812	0.0	406,179	0	1,159,674,560	0.0
Venice:GT4	391,054	0	1,107,723,676	0.0	377,028	0	1,067,993,236	0.0
Venice:GT5	116,201	0	443,061,767	0.0	111,679	0	425,819,342	0.0
West Gardner:1	6,599	0	39,983,433	0.0	6,454	0	39,107,860	0.0
West Gardner:2	6,729	0	44,389,244	0.0	6,698	0	44,185,170	0.0
West Gardner:3	5,927	0	34,189,866	0.0	5,948	0	34,310,210	0.0
West Gardner:4	7,154	0	38,488,025	0.0	7,147	0	38,447,346	0.0

Table B-6: Unit Emissions – Missouri-owned Generators, Robust Economy Scenario

Generator	Without Project				With Project			
	NOx	SO2	CO2	Hg	NOx	SO2	CO2	Hg
Asbury:1	603,363	6,926,627	2,534,125,934	1.8	602,743	6,919,505	2,531,520,468	1.8
Audrain:1	1,219	0	2,418,289	0.0	1,161	0	2,303,351	0.0
Audrain:2	1,155	0	2,291,044	0.0	1,132	0	2,245,831	0.0
Audrain:3	1,547	0	3,067,688	0.0	1,415	0	2,807,263	0.0
Audrain:4	1,077	0	2,136,184	0.0	1,038	0	2,058,232	0.0
Audrain:5	1,390	0	2,756,165	0.0	1,198	0	2,375,628	0.0
Audrain:6	758	0	1,504,241	0.0	548	0	1,087,811	0.0
Audrain:7	585	0	1,159,552	0.0	230	0	456,342	0.0
Audrain:8	1,528	0	3,031,386	0.0	1,344	0	2,665,514	0.0
Blue Valley:3	684,025	6,371,571	532,242,567	29.4	679,929	6,333,419	529,055,591	29.3
Blue Valley:GT1	34,416	0	31,110,797	0.0	34,082	0	30,809,246	0.0
Carthage:14	191,773	0	32,053,406	0.0	191,412	0	31,993,083	0.0
Chillicothe:GT1	19,554	0	5,609,098	0.0	18,512	0	5,310,212	0.0
Chillicothe:GT2	29,913	0	8,580,632	0.0	27,460	0	7,877,163	0.0
Chouteau:1	216,898	0	1,172,686,668	0.0	209,927	0	1,134,996,876	0.0
Chouteau:2	151,039	0	1,767,148,920	0.0	146,434	0	1,713,277,476	0.0
Columbia GT:1	1,006	0	1,995,877	0.0	884	0	1,753,055	0.0
Columbia GT:2	9,796	0	19,428,531	0.0	9,500	0	18,842,278	0.0
Columbia GT:3	5,717	0	11,338,643	0.0	5,225	0	10,362,888	0.0
Columbia GT:4	5,172	0	10,258,260	0.0	4,555	0	9,034,975	0.0
Columbia W&L Dept.:ST5	255,423	681,669	99,111,777	0.0	234,846	626,754	91,127,360	0.0
Columbia W&L Dept.:ST7	326,969	1,162,302	132,964,229	0.0	299,230	1,063,693	121,683,628	0.0
Columbia W&L Dept.:ST8	5,802	0	3,058,153	0.0	4,791	0	2,525,144	0.0
Crossroads Energy:1	686	0	1,360,275	0.0	523	0	1,036,665	0.0
Crossroads Energy:2	474	0	941,037	0.0	527	0	1,045,225	0.0
Crossroads Energy:3	168	0	333,803	0.0	189	0	374,248	0.0
Crossroads Energy:4	224	0	444,675	0.0	178	0	352,919	0.0
Dell Power Stn:1	268,534	0	1,392,397,832	0.0	267,255	0	1,385,767,136	0.0
Dogwood EF:3	94,879	0	956,834,067	0.0	92,833	0	936,197,997	0.0
Empire EC:1	71,879	0	64,975,686	0.0	70,687	0	63,898,162	0.0
Empire EC:2	59,415	0	53,709,385	0.0	57,817	0	52,264,455	0.0
Empire EC:3	10,198	0	15,902,414	0.0	9,162	0	14,287,377	0.0
Empire EC:4	10,714	0	17,101,686	0.0	9,934	0	15,856,872	0.0
Essex MO:1	1,266	0	1,297,274	0.0	945	0	968,503	0.0
Frdrcctown:1	3,162	0	6,166,580	0.0	3,471	0	6,768,264	0.0
Frdrcctown:2	3,071	0	5,988,706	0.0	3,296	0	6,427,151	0.0
Fulton:4	8,472	0	2,430,238	0.0	6,382	0	1,830,858	0.0
Gallatin MO:6	1,454	0	338,577	0.0	1,739	0	404,898	0.0
Greenwood (MO):1	714	0	645,406	0.0	930	0	840,661	0.0
Greenwood (MO):2	2,750	0	2,486,210	0.0	2,507	0	2,266,236	0.0
Greenwood (MO):3	1,548	0	1,399,470	0.0	1,388	0	1,254,896	0.0
Greenwood (MO):4	1,051	0	950,264	0.0	927	0	837,829	0.0

Hawthorne (MO):5	2,954,353	5,455,066	8,254,576,064	208.3	2,949,844	5,446,740	8,241,977,600	208.0
Hawthorne (MO):7	1,519	0	7,558,695	0.0	1,408	0	7,007,603	0.0
Hawthorne (MO):8	2,522	0	12,752,993	0.0	2,414	0	12,208,871	0.0
Hawthorne (MO):9	41,851	0	330,260,518	0.0	41,723	0	329,249,983	0.0
Holden Power Plant:1	1,616	0	10,058,940	0.0	1,443	0	8,983,442	0.0
Holden Power Plant:2	7,424	0	25,402,749	0.0	6,988	0	23,907,939	0.0
Holden Power Plant:3	1,660	0	8,524,085	0.0	1,478	0	7,591,938	0.0
Holton:10	3,348	0	13,057,186	0.0	3,259	0	12,709,877	0.0
Iatan:1	4,763,093	3,045,984	11,715,313,024	72.5	4,756,807	3,041,964	11,699,852,352	72.4
Iatan:2	2,498,879	2,963,493	11,398,028,416	0.0	2,494,513	2,958,315	11,378,112,704	0.0
James River:GT1	15,771	0	14,256,222	0.0	14,150	0	12,791,388	0.0
James River:GT2	38,471	0	22,035,317	0.0	35,412	0	20,283,324	0.0
James River:ST5	921,063	2,832,318	1,020,219,272	10.6	915,456	2,815,075	1,014,008,100	10.6
Jeffrey EC:1	2,703,380	2,172,437	11,354,202,304	7.9	2,699,047	2,168,955	11,336,004,192	7.9
Jeffrey EC:2	2,702,664	2,171,862	11,297,131,008	7.9	2,700,396	2,170,040	11,287,654,400	7.9
Jeffrey EC:3	2,732,031	2,195,456	11,474,491,264	8.0	2,727,968	2,192,191	11,457,425,920	8.0
Kansas City Intl:1	147	0	23,574	0.0	147	0	23,574	0.0
Kansas City Intl:2	145	0	23,302	0.0	145	0	23,302	0.0
Kennett MO:13	5,127	0	19,996,689	0.0	5,057	0	19,722,438	0.0
Kinmundy:1	831	0	1,649,000	0.0	210	0	415,920	0.0
Kinmundy:2	1,922	0	3,811,463	0.0	1,449	0	2,874,822	0.0
La Cygne:1	2,805,789	2,254,728	11,784,265,600	8.3	2,804,814	2,253,945	11,780,171,840	8.3
La Cygne:2	2,460,780	17,656,095	10,335,270,528	7.2	2,453,412	17,603,229	10,304,324,736	7.2
Labadie:1	4,952,359	28,201,808	9,433,047,936	147.3	4,951,378	28,196,228	9,431,181,184	147.3
Labadie:2	4,987,817	28,771,839	9,506,709,632	148.5	4,980,630	28,730,382	9,493,011,904	148.3
Labadie:3	5,336,597	30,488,072	9,900,939,744	154.7	5,333,306	30,469,271	9,894,834,048	154.6
Labadie:4	5,364,568	30,810,294	10,028,099,200	156.6	5,364,031	30,807,212	10,027,096,128	156.6
Lake Road MO:3	862	0	446,918	0.0	752	0	389,733	0.0
Lake Road MO:5	10,197	0	9,217,648	0.0	9,375	0	8,474,773	0.0
Macon Egy Ctr:1	2,084	0	4,063,660	0.0	1,902	0	3,708,156	0.0
McCartney:1	26,759	0	23,888,172	0.0	25,652	0	22,899,852	0.0
McCartney:2	30,258	0	31,261,399	0.0	29,685	0	30,670,001	0.0
Meramec:4	5,417,660	12,447,194	6,026,979,744	94.1	5,380,474	12,361,758	5,985,611,584	93.5
Meramec:GT2	1,908	0	3,719,926	0.0	1,659	0	3,235,563	0.0
MJMEUC Gen:1	1,046	0	2,040,293	0.0	976	0	1,904,009	0.0
Monroe MO:7	17,120	0	2,861,535	0.0	15,851	0	2,649,408	0.0
New Madrid:1	4,278,901	24,520,486	8,876,499,744	138.6	4,263,904	24,434,545	8,845,389,952	138.2
New Madrid:2	3,981,861	24,233,005	8,843,875,488	138.1	3,980,023	24,221,821	8,839,793,632	138.0
Nodaway County:1	4,146	0	5,210,713	0.0	3,674	0	4,617,671	0.0
Nodaway County:2	2,841	0	3,548,082	0.0	2,675	0	3,340,450	0.0
Osawatomie:1	5,928	0	11,758,012	0.0	5,473	0	10,855,617	0.0
Palmyra Muni 2:10	4,797	0	3,741,471	0.0	4,526	0	3,530,643	0.0
Peno Creek:1	11,203	0	15,419,528	0.0	9,813	0	13,506,869	0.0
Peno Creek:2	6,393	0	9,011,093	0.0	4,644	0	6,546,699	0.0
Peno Creek:3	11,727	0	15,383,847	0.0	9,913	0	13,005,210	0.0
Peno Creek:4	12,323	0	16,346,732	0.0	10,672	0	14,156,145	0.0
Pinckneyville:1	7,927	0	11,629,176	0.0	7,335	0	10,759,863	0.0
Pinckneyville:2	7,842	0	11,430,590	0.0	6,750	0	9,839,261	0.0

B-20

Pinckneyville:3	5,989	0	8,723,255	0.0	5,206	0	7,582,593	0.0
Pinckneyville:4	6,641	0	9,795,660	0.0	5,737	0	8,462,018	0.0
Pinckneyville:5	138	0	274,009	0.0	113	0	223,131	0.0
Pinckneyville:6	102	0	201,416	0.0	110	0	218,966	0.0
Pinckneyville:7	138	0	274,009	0.0	113	0	223,131	0.0
Pinckneyville:8	130	0	257,250	0.0	113	0	223,131	0.0
Plum Point:1	3,569,449	5,204,532	10,633,940,672	237.5	3,582,630	5,223,750	10,673,207,360	238.4
Poplar Bluff:5	7,566	0	29,505,936	0.0	7,434	0	28,992,321	0.0
Ralph Green GT:3	2,124	0	1,920,400	0.0	1,848	0	1,670,512	0.0
Riverton:10	76,590	0	12,301,872	0.0	76,223	0	12,242,922	0.0
Riverton:11	85,440	0	13,723,302	0.0	84,876	0	13,632,764	0.0
Riverton:12	17,039	0	199,356,909	0.0	16,916	0	197,917,217	0.0
Rush Island:1	4,136,446	28,322,155	9,995,987,328	156.1	4,126,267	28,252,451	9,971,386,720	155.7
Rush Island:2	4,353,906	27,653,400	9,760,080,320	152.4	4,342,506	27,580,992	9,734,524,160	152.1
Sibley:3	3,581,718	9,343,112	3,608,868,720	22.3	3,538,455	9,230,257	3,565,277,344	22.1
Sioux:1	10,323,177	1,652,283	7,465,141,376	118.0	10,311,288	1,650,380	7,456,543,424	117.9
Sioux:2	8,802,397	1,666,474	7,529,248,064	51.6	8,799,095	1,665,849	7,526,424,064	51.6
South Harper Peaking:1	682	0	1,763,525	0.0	663	0	1,714,891	0.0
South Harper Peaking:2	636	0	1,667,504	0.0	611	0	1,600,201	0.0
South Harper Peaking:3	1,180	0	2,844,897	0.0	1,009	0	2,432,493	0.0
Southwest:GT1	2,796	0	2,527,887	0.0	2,447	0	2,211,781	0.0
Southwest:GT2	721	0	651,789	0.0	844	0	762,825	0.0
Southwest:ST1	1,373,306	393,716	2,015,616,200	31.5	1,358,668	389,520	1,994,132,408	31.1
Southwest:ST2	1,985,930	552,122	3,881,784,208	0.0	1,980,823	550,702	3,871,801,840	0.0
St Francis:1	85,788	0	560,922,697	0.0	82,407	0	538,815,530	0.0
St Francis:2	95,121	0	502,412,436	0.0	92,873	0	490,539,398	0.0
State Line MO:1	9,924	0	19,801,780	0.0	8,762	0	17,483,244	0.0
State Line MO:3	192,860	0	1,582,783,996	0.0	190,546	0	1,563,787,212	0.0
Station H:1	2,374	0	381,349	0.0	1,951	0	313,293	0.0
Station H:2	944	0	270,827	0.0	734	0	210,533	0.0
Thomas Hill:3	7,005,166	2,317,280	10,469,646,976	163.5	6,992,652	2,313,141	10,450,943,744	163.2
Trigen-St Louis:3	16,836	0	8,725,077	0.0	16,171	0	8,380,071	0.0
Trigen-St Louis:CS1	2,391	0	27,977,136	0.0	2,361	0	27,622,493	0.0
Trigen-St Louis:CS2	2,423	0	28,344,017	0.0	2,391	0	27,975,645	0.0
Venice:GT2	6,383	0	9,103,815	0.0	5,312	0	7,577,341	0.0
Venice:GT3	20,498	0	58,523,064	0.0	18,253	0	52,114,848	0.0
Venice:GT4	19,114	0	54,143,186	0.0	15,957	0	45,201,799	0.0
Venice:GT5	2,809	0	10,709,228	0.0	2,372	0	9,043,115	0.0
West Gardner:1	1,576	0	9,547,205	0.0	1,555	0	9,423,435	0.0
West Gardner:2	1,445	0	9,534,319	0.0	1,375	0	9,071,641	0.0
West Gardner:3	1,414	0	8,157,199	0.0	1,310	0	7,556,399	0.0
West Gardner:4	1,623	0	8,730,671	0.0	1,542	0	8,295,390	0.0

Table B-7: Unit Emissions – Missouri-owned Generators, Green Economy Scenario

Generator	Without Project				With Project			
	NOx	SO2	CO2	Hg	NOx	SO2	CO2	Hg
Albany MO:6	125	0	29,112	0.0	133	0	30,985	0.0
Asbury:1	473,409	5,434,740	1,988,316,340	1.4	476,964	5,475,551	2,003,247,478	1.4
Audrain:1	7,349	0	14,576,324	0.0	5,556	0	11,020,308	0.0
Audrain:2	5,717	0	11,338,311	0.0	3,464	0	6,870,526	0.0
Audrain:3	11,690	0	23,185,357	0.0	10,975	0	21,767,865	0.0
Audrain:4	6,343	0	12,580,908	0.0	4,364	0	8,654,643	0.0
Audrain:5	8,100	0	16,065,195	0.0	8,821	0	17,494,265	0.0
Audrain:6	5,465	0	10,839,484	0.0	2,655	0	5,265,022	0.0
Audrain:7	4,403	0	8,732,369	0.0	2,234	0	4,430,505	0.0
Audrain:8	9,210	0	18,267,269	0.0	8,254	0	16,370,618	0.0
Blue Valley:3	108,546	1,011,084	84,459,803	4.7	103,746	966,372	80,724,815	4.5
Blue Valley:GT1	6,830	0	6,174,407	0.0	6,967	0	6,298,071	0.0
Carthage:14	134,878	0	22,543,951	0.0	132,687	0	22,177,692	0.0
Chillicothe:GT1	14,943	0	4,286,477	0.0	13,419	0	3,849,343	0.0
Chillicothe:GT2	21,930	0	6,290,655	0.0	18,396	0	5,277,032	0.0
Chouteau:1	197,256	0	1,066,487,556	0.0	197,189	0	1,066,124,652	0.0
Chouteau:2	166,762	0	1,951,108,488	0.0	167,026	0	1,954,203,808	0.0
Columbia GT:1	3,762	0	7,461,040	0.0	3,485	0	6,912,628	0.0
Columbia GT:2	17,688	0	35,081,195	0.0	17,109	0	33,933,155	0.0
Columbia GT:3	9,877	0	19,589,624	0.0	9,536	0	18,913,365	0.0
Columbia GT:4	9,008	0	17,864,919	0.0	8,427	0	16,713,147	0.0
Columbia W&L Dept.:ST5	84,490	225,485	32,784,501	0.0	78,175	208,632	30,334,204	0.0
Columbia W&L Dept.:ST7	122,161	434,254	49,677,442	0.0	113,280	402,684	46,065,944	0.0
Columbia W&L Dept.:ST8	25,275	0	13,322,026	0.0	21,468	0	11,315,354	0.0
Crossroads Energy:1	11,738	0	23,279,405	0.0	10,931	0	21,679,295	0.0
Crossroads Energy:2	9,733	0	19,304,394	0.0	8,828	0	17,507,877	0.0
Crossroads Energy:3	10,015	0	19,862,617	0.0	10,453	0	20,731,355	0.0
Crossroads Energy:4	12,352	0	24,497,673	0.0	13,353	0	26,482,805	0.0
Dell Power Stn:1	365,907	0	1,897,298,420	0.0	365,661	0	1,896,020,304	0.0
Dogwood EF:3	57,954	0	584,451,841	0.0	58,627	0	591,237,989	0.0
Empire EC:1	46,379	0	41,924,932	0.0	46,437	0	41,976,908	0.0
Empire EC:2	31,742	0	28,693,181	0.0	32,814	0	29,662,830	0.0
Empire EC:3	4,363	0	6,803,168	0.0	4,373	0	6,819,664	0.0
Empire EC:4	5,097	0	8,135,347	0.0	4,899	0	7,820,365	0.0
Essex MO:1	7,271	0	7,447,783	0.0	6,189	0	6,339,958	0.0
Frdrcktown:1	4,935	0	9,622,752	0.0	4,838	0	9,433,602	0.0
Frdrcktown:2	4,958	0	9,667,252	0.0	4,848	0	9,453,196	0.0
Fulton:4	19,405	0	5,566,483	0.0	18,785	0	5,388,486	0.0
Goose Creek:1	305	0	605,078	0.0	122	0	242,078	0.0
Goose Creek:2	305	0	605,078	0.0	61	0	120,094	0.0
Goose Creek:3	305	0	605,078	0.0	108	0	214,009	0.0
Goose Creek:4	305	0	605,078	0.0	108	0	214,009	0.0
Goose Creek:5	305	0	605,078	0.0	0	0	0	0.0

Goose Creek:6	305	0	605,078	0.0	0	0	0	0.0
Greenwood (MO):1	399	0	360,512	0.0	399	0	360,512	0.0
Greenwood (MO):2	600	0	542,394	0.0	600	0	542,394	0.0
Greenwood (MO):3	396	0	357,873	0.0	518	0	467,913	0.0
Greenwood (MO):4	360	0	325,488	0.0	360	0	325,488	0.0
Hawthorne (MO):5	1,999,011	3,691,090	5,585,324,992	141.0	2,005,978	3,703,955	5,604,791,024	141.5
Hawthorne (MO):7	169	0	840,253	0.0	189	0	941,588	0.0
Hawthorne (MO):8	385	0	1,948,169	0.0	405	0	2,049,554	0.0
Hawthorne (MO):9	14,894	0	117,535,078	0.0	14,631	0	115,457,307	0.0
Holden Power Plant:1	379	0	2,361,859	0.0	417	0	2,595,395	0.0
Holden Power Plant:2	2,677	0	9,160,277	0.0	2,651	0	9,068,734	0.0
Holden Power Plant:3	418	0	2,146,294	0.0	465	0	2,388,843	0.0
Holton:10	1,129	0	4,403,498	0.0	1,124	0	4,383,540	0.0
Iatan:1	3,244,145	2,074,617	7,979,293,728	49.4	3,238,547	2,071,037	7,965,525,376	49.3
Iatan:2	1,945,345	2,307,036	8,873,208,512	0.0	1,949,411	2,311,858	8,891,753,728	0.0
James River:GT1	24,565	0	22,205,786	0.0	23,424	0	21,174,235	0.0
James River:GT2	58,124	0	33,292,215	0.0	54,910	0	31,451,345	0.0
James River:ST5	476,453	1,465,119	527,746,085	5.5	466,102	1,433,287	516,279,949	5.4
Jeffrey EC:1	1,608,214	1,292,362	6,754,492,960	4.7	1,610,775	1,294,420	6,765,248,096	4.7
Jeffrey EC:2	1,630,520	1,310,286	6,815,565,888	4.8	1,635,112	1,313,976	6,834,757,568	4.8
Jeffrey EC:3	1,863,712	1,497,680	7,827,571,328	5.5	1,869,536	1,502,361	7,852,034,688	5.5
Kansas City Intl:1	467	0	75,067	0.0	467	0	75,067	0.0
Kansas City Intl:2	461	0	74,113	0.0	461	0	74,113	0.0
Kennett MO:13	10,454	0	40,768,972	0.0	10,324	0	40,264,100	0.0
Kinmundy:1	3,324	0	6,592,531	0.0	1,199	0	2,378,451	0.0
Kinmundy:2	3,112	0	6,171,315	0.0	1,686	0	3,343,130	0.0
La Cygne:1	2,595,672	2,085,878	10,901,785,408	7.6	2,596,346	2,086,419	10,904,615,488	7.6
La Cygne:2	1,993,472	14,303,164	8,372,573,056	5.8	1,988,084	14,264,505	8,349,944,160	5.8
Labadie:4	5,354,935	30,754,973	10,010,092,928	156.4	5,340,618	30,672,747	9,983,330,592	155.9
Lake Road MO:3	121	0	62,896	0.0	121	0	62,896	0.0
Lake Road MO:5	468	0	422,665	0.0	316	0	285,640	0.0
Macon Egy Ctr:1	3,105	0	6,054,205	0.0	2,922	0	5,698,706	0.0
McCartney:1	37,014	0	33,042,924	0.0	37,270	0	33,272,038	0.0
McCartney:2	47,732	0	49,315,527	0.0	46,408	0	47,946,702	0.0
Meramec:GT2	9,330	0	18,194,032	0.0	9,127	0	17,796,904	0.0
MJMEUC Gen:1	1,948	0	3,798,691	0.0	1,807	0	3,523,848	0.0
Monroe MO:7	26,634	0	4,451,608	0.0	23,628	0	3,949,265	0.0
New Madrid:1	3,959,642	22,690,964	8,214,207,136	128.3	3,933,055	22,538,609	8,159,054,048	127.4
New Madrid:2	3,974,592	24,188,768	8,827,731,072	137.9	3,963,419	24,120,773	8,802,916,160	137.5
Nodaway County:1	57,957	0	72,836,768	0.0	50,055	0	62,906,224	0.0
Nodaway County:2	23,318	0	29,122,724	0.0	22,140	0	27,651,466	0.0
Osawatomie:1	654	0	1,297,109	0.0	785	0	1,556,455	0.0
Palmyra Muni 2:10	8,057	0	6,284,461	0.0	6,806	0	5,308,294	0.0
Peno Creek:1	19,508	0	26,849,863	0.0	18,770	0	25,834,726	0.0
Peno Creek:2	14,142	0	19,935,164	0.0	12,800	0	18,043,402	0.0
Peno Creek:3	19,650	0	25,777,704	0.0	18,408	0	24,149,191	0.0
Peno Creek:4	20,401	0	27,061,314	0.0	19,463	0	25,817,727	0.0
Pinckneyville:1	20,735	0	30,418,056	0.0	19,950	0	29,265,741	0.0

Pinckneyville:2	20,079	0	29,267,440	0.0	19,302	0	28,135,529	0.0
Pinckneyville:3	16,021	0	23,334,863	0.0	15,514	0	22,596,738	0.0
Pinckneyville:4	18,310	0	27,005,945	0.0	17,704	0	26,112,859	0.0
Pinckneyville:5	3,818	0	7,572,199	0.0	3,482	0	6,906,823	0.0
Pinckneyville:6	3,670	0	7,277,865	0.0	3,387	0	6,718,337	0.0
Pinckneyville:7	3,749	0	7,436,005	0.0	3,433	0	6,807,799	0.0
Pinckneyville:8	3,638	0	7,216,064	0.0	3,376	0	6,696,632	0.0
Plum Point:1	3,317,011	4,836,462	9,881,890,528	220.7	3,318,327	4,838,381	9,885,811,104	220.8
Poplar Bluff:5	9,379	0	36,578,944	0.0	9,384	0	36,599,447	0.0
Ralph Green GT:3	522	0	471,559	0.0	522	0	471,559	0.0
Riverton:10	57,165	0	9,181,829	0.0	60,322	0	9,688,860	0.0
Riverton:11	67,740	0	10,880,286	0.0	70,427	0	11,311,919	0.0
Riverton:12	14,383	0	168,285,363	0.0	14,487	0	169,500,123	0.0
Rush Island:1	3,954,576	27,076,871	9,556,486,144	149.3	3,909,419	26,767,676	9,447,361,600	147.6
Rush Island:2	4,327,021	27,482,642	9,699,811,072	151.5	4,305,693	27,347,181	9,652,000,768	150.8
Sibley:3	1,560,439	4,070,489	1,572,266,769	9.7	1,637,444	4,271,361	1,649,855,409	10.2
South Harper Peaking:1	276	0	712,769	0.0	276	0	712,769	0.0
South Harper Peaking:2	274	0	717,993	0.0	274	0	717,993	0.0
South Harper Peaking:3	341	0	821,124	0.0	341	0	821,124	0.0
Southwest:GT1	2,715	0	2,454,559	0.0	2,657	0	2,401,941	0.0
Southwest:GT2	1,449	0	1,310,185	0.0	1,577	0	1,425,130	0.0
Southwest:ST1	965,279	276,738	1,416,750,952	22.1	931,423	267,032	1,367,059,868	21.4
Southwest:ST2	1,897,207	527,455	3,708,361,824	0.0	1,874,750	521,212	3,664,466,560	0.0
St Francis:1	154,083	0	1,007,463,588	0.0	150,947	0	986,958,888	0.0
St Francis:2	145,709	0	769,611,020	0.0	140,771	0	743,529,898	0.0
State Line MO:1	4,342	0	8,663,206	0.0	4,418	0	8,816,236	0.0
State Line MO:3	255,689	0	2,098,408,936	0.0	256,495	0	2,105,023,352	0.0
Station H:1	1,759	0	282,604	0.0	1,759	0	282,604	0.0
Station H:2	680	0	195,011	0.0	680	0	195,011	0.0
Thomas Hill:3	6,890,006	2,279,185	10,297,533,056	160.8	6,847,017	2,264,965	10,233,284,544	159.8
Trigen-St Louis:3	35,005	0	18,140,552	0.0	33,493	0	17,357,054	0.0
Trigen-St Louis:CS1	2,823	0	33,024,751	0.0	2,786	0	32,592,636	0.0
Trigen-St Louis:CS2	2,877	0	33,659,382	0.0	2,840	0	33,222,500	0.0
Venice:GT2	22,657	0	32,316,316	0.0	21,947	0	31,303,942	0.0
Venice:GT3	51,365	0	146,651,803	0.0	50,569	0	144,380,123	0.0
Venice:GT4	47,219	0	133,754,912	0.0	45,903	0	130,028,391	0.0
Venice:GT5	15,035	0	57,325,497	0.0	14,181	0	54,070,193	0.0
West Gardner:1	137	0	828,696	0.0	154	0	930,548	0.0
West Gardner:2	142	0	939,094	0.0	142	0	939,094	0.0
West Gardner:3	145	0	834,192	0.0	145	0	834,192	0.0
West Gardner:4	174	0	934,082	0.0	174	0	934,082	0.0

In note 5.d., Staff requested “A reasonable estimate for each Missouri-serving utility of the cost of serving its load (with and without a Missouri converter station).” These results are shown in the table below.

Table B-8: Demand Cost by Missouri Utility (\$M)

Scenario	Case	AECI	AMMO	Empire	KCPL GMO	KCP&L	Other
Business As Usual	Without Project	629	1,636	194	336	264	260
Business As Usual	With Project	626	1,617	193	335	263	258
Slow Growth	Without Project	371	1,150	113	212	166	167
Slow Growth	With Project	337	1,135	112	212	165	166
Robust Economy	Without Project	983	2,360	307	525	413	402
Robust Economy	With Project	971	2,310	305	520	409	397
Green Economy	Without Project	1,412	4,040	434	698	546	591
Green Economy	With Project	1,404	4,008	434	697	546	588

In note 5.e., Staff requested “A reasonable estimate for each Missouri-serving utility of the gross value of its energy output of its associated generation fleet (with and without a Missouri converter station).” These results are shown in the table below.

Table B-9: Generator Revenue by Missouri Utility (\$M)

Scenario	Case	AECI	AMMO	Empire	KCPL GMO	KCP&L	Other
Business As Usual	Without Project	743	1,525	141	186	636	130
Business As Usual	With Project	737	1,504	141	185	633	127
Slow Growth	Without Project	442	945	113	162	350	59
Slow Growth	With Project	441	907	112	161	349	58
Robust Economy	Without Project	1,086	2,225	228	298	961	229
Robust Economy	With Project	1,063	2,172	225	293	952	224
Green Economy	Without Project	1,675	1,992	294	252	1,059	282
Green Economy	With Project	1,658	1,962	296	255	1,059	277

In note 5.f., Staff requested “A reasonable estimate for each Missouri-serving utility of the cost of producing its energy output from its associated generation fleet (with and without a Missouri converter station).” These results are shown in the table below.

Table B-10: Generator Cost by Missouri Utility (\$M)

Scenario	Case	AECI	AMMO	Empire	KCPL GMO	KCP&L	Other
Business As Usual	Without Project	584	996	121	143	428	113
Business As Usual	With Project	580	992	121	143	428	112
Slow Growth	Without Project	360	779	97	141	336	52
Slow Growth	With Project	360	754	96	140	336	51
Robust Economy	Without Project	697	1,083	165	178	453	142
Robust Economy	With Project	687	1,079	164	175	453	140
Green Economy	Without Project	1,469	1,144	290	254	868	265
Green Economy	With Project	1,459	1,133	291	257	868	260

In note 5.g., Staff requested “A reasonable estimate for each Missouri-serving utility of the level of emissions released by its associated generation fleet (with and without a Missouri converter station).” These results are shown in the table below.

Table B-11: Generator Emissions by Missouri Utility (in Tons for NOx, SO2, and CO2, in Lbs for Hg)

Scenario	Utility	Without Project				With Project			
		NOx	SO2	CO2	Hg	NOx	SO2	CO2	Hg
Business As Usual	AECI	8,099	25,479	17,110,515	439.2	8,088	25,490	17,067,665	439.2
	AMMO	24,052	88,069	36,679,955	1077.2	23,999	87,853	36,583,683	1074.6
	EMPIRE	1,107	3,562	3,472,818	26.7	1,106	3,572	3,473,812	26.7
	GMO	2,603	4,964	5,402,385	34.6	2,592	4,938	5,388,735	34.5
	KCPL	5,010	9,119	16,522,511	257.8	5,011	9,131	16,527,376	257.8
	OTHER	2,165	3,773	3,351,274	55.5	2,139	3,779	3,319,464	55.5
Slow Growth	AECI	4,077	7,696	11,459,649	138.0	4,040	7,715	11,429,766	137.0
	AMMO	17,190	50,985	25,387,785	628.5	16,551	49,368	24,460,501	608.2
	EMPIRE	2,555	235	3,237,396	6.6	2,551	236	3,228,808	6.6
	GMO	1,325	691	4,976,493	12.1	1,316	693	4,964,906	12.1
	KCPL	3,433	5,540	11,787,429	144.7	3,432	5,530	11,787,059	144.2
	OTHER	1,506	28	1,337,870	0.0	1,482	28	1,311,691	0.0
Robust Economy	AECI	8,091	25,535	16,853,263	440.3	8,064	25,485	16,756,945	439.4
	AMMO	26,919	95,007	39,993,135	1179.4	26,866	94,857	39,911,353	1177.5
	EMPIRE	1,196	4,019	3,741,935	28.3	1,191	4,016	3,729,608	28.3
	GMO	2,829	5,474	5,741,320	37.3	2,804	5,416	5,703,167	37.0
	KCPL	5,179	9,586	17,097,668	266.8	5,170	9,566	17,069,232	266.4
	OTHER	2,899	6,031	4,062,384	71.6	2,854	5,924	4,027,121	71.0
Green Economy	AECI	8,015	24,579	17,123,461	427.0	7,961	24,462	17,021,507	424.7
	AMMO	7,033	42,657	15,067,967	457.1	6,977	42,394	14,946,751	454.3
	EMPIRE	932	3,162	3,157,958	23.9	937	3,182	3,169,173	23.9
	GMO	1,505	2,594	3,496,934	19.8	1,544	2,695	3,541,443	20.3
	KCPL	3,826	7,303	12,908,917	182.3	3,828	7,300	12,913,215	182.7
	OTHER	1,987	1,997	3,140,553	32.3	1,938	1,926	3,077,949	31.2