Exhibit No.:
Issue(s): *Retail Rate Revenue*
Witness: *Kim Cox*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Direct Testimony*
Case No.: *ER-2024-0319*
Date Testimony Prepared: *December 3, 2024*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

DIRECT TESTIMONY

OF

KIM COX

UNION ELECTRIC COMPANY,
d/b/a Ameren Missouri

CASE NO. ER-2024-0319

Jefferson City, Missouri
December 2024

TABLE OF CONTENTS OF

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KIM COX

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CASE NO. ER-2024-0319

DIRECT TESTIMONY

OF

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d/b/a Ameren Missouri

CASE NO. ER-2024-0319

Q. Please state your name and business address.

A. My name is Kim Cox, 200 Madison Street, Jefferson City, MO 65101.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Public Service Commission ("Commission") as a Senior Research/Data Analyst for the Tariff/Rate Design Department, in the Industry Analysis Division.

Q. Please describe your educational and work background.

A. Please see Schedule KC-d1.

Q. Have you previously filed testimony before this Commission?

A. Yes. Please refer to Schedule KC-d1.

EXECUTIVE SUMMARY

Q. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to provide the billed rate revenue adjustments for Ameren Missouri, which are applied to the test year actual revenues experienced by Ameren Missouri in the respective Staff accounting schedules. These adjustments are also applied to the test year billing determinants of Ameren Missouri that

underlie the Staff's fuel and production cost modeling, and will be the basis of Staff's recommended rate designs.

Q. Through this testimony, do you provide any recommendations that should be specifically reflected in the Commission's Report and Order in this case?

A. Yes, I recommend that the Commission Order reflect Staff's adjusted rate revenue as provided in my testimony and as updated in my true-up direct testimony along with the billing determinants which were used to calculate the adjusted rate revenue.

RATE REVENUES AND BILLING DETERMINANTS

Q. What are rate revenues?

A. Rate revenues are defined as the revenue a utility collects from its customers based on its Commission approved base rates.

Q. What are base rates?

A. Base rates are made up of a fixed monthly customer charge and variable rates that are dependent on usage (demand, energy, etc.) and the season (summer vs. winter). Rate revenues are the largest component of operating revenues.

Q. What are billing determinants?

A. Billing determinants are what a revenue requirement is divided by to produce rates. Billing determinants are the combination of components to which rates are applied to calculate the customer's bill. Examples of billing determinant components are customer charge, usage, peaks, and demand.

Q. How does Staff use billing determinants?

A. Staff uses billing determinants in two ways. First, billing determinants are used to establish normalized revenues. Second, billing determinants are used to calculate the new base rates.

As an example, every month an Ameren Missouri residential ("RES") anytime customer[1] is billed a fixed monthly customer charge and an energy charge based on the season[2] and the block[3] in which the usage occurred. For Staff to calculate the RES monthly rate revenue, Staff multiplies the billing determinant components, the number of RES customer charges, and the usage per month by the applicable tariff rate. Also, once a revenue requirement has been established, the revenue requirement is divided by billing determinants to produce new rates.

Q. What are operating revenues?

A. Operating revenues are composed of three components: (1) Rate Revenue, (2) Other Operating Revenue, and (3) Off System Sales. This testimony will address rate revenues for Ameren Missouri.

Q. What is the purpose of calculating operating revenues?

A. It is a test of the adequacy of the currently effective retail electricity rates[4] and the cost of service.

One of the major tasks in a rate case is to determine the magnitude of any deficiency (or excess) between cost of service and operating revenues. Once determined, the deficiency

[1] RES anytime customers do not receive service either through an advanced meter or under an optional residential rate.
[2] Ameren Missouri summer season consists of the monthly billing periods of June through September. The winter season consists of the monthly billing periods of October through May.
[3] Ameren Missouri residential anytime customers' summer usage is billed at the same rate regardless of use while the winter usage is billed different rates for the first 750 kWh and over 750 kWh.
[4] The fixed monthly customer charge and variable rates that are dependent on usage and the season.

(or excess) can only be corrected (or otherwise addressed) by adjusting retail rates (i.e., rate revenue) prospectively.

Q. How did Staff determine the retail rate revenue for Ameren Missouri rate classes?

A. Staff adjusted Ameren Missouri jurisdictional billing units and rate revenues based upon information that is "known and measurable" as of the end of the update period. In this particular case, the test year is the 12 months ending March 31, 2024, updated for known and measurable changes through December 31, 2024. The two major categories of revenue adjustments are known as "normalization" and "annualization."

Q. What is normalization?

A. Normalization is adjustments to the company's billing determinants that account for unusual and unlikely events that would not be repeated in the years when the new rates from this case are in effect, such as unusual weather events during the update period.

Q. What is annualization?

A. In this instance, annualization is adjustments to a company's billing determinants to reflect known conditions at the end of the update period. Adjustments for customer growth are an example of an annualization.

Q. What rate classes did Staff normalize and annualize?

A Staff normalized and annualized billing determinants for the RES, small general service ("SGS"), large general service ("LGS"), small primary service ("SPS"), Metropolitan Sewer District ("MSD"), and the Lighting service classes.[5]

Q. What rate revenue adjustments did Staff make to these classes?

[5] Staff witness Marina Sever discusses the large primary service ("LPS") rate class in her direct testimony.

A. Staff made the following adjustments; however not all of these adjustments affect both sales and rate revenue dollars, and not all rate classes are subject to all adjustments.

a. Update period adjustment;
b. Rate switcher adjustment;
c. Weather normalization and 365 days adjustment;
d. Missouri Energy Efficiency Investment Act ("MEEIA") adjustment; and,
e. Customer growth and inter-class switching adjustment.

UPDATE PERIOD ADJUSTMENT

Q. What is the update period adjustment?

A. The update period adjustment is the difference of billed usage and revenue through March 31, 2024, compared to the billed usage and revenue through June 30, 2024.

Q. How did Staff calculate its update period adjustment?

A. Staff first calculated the test year revenue[6] based on Ameren Missouri's billing determinants provided by Ameren Missouri. Staff requested and Ameren Missouri provided the billing determinants for April 1, 2024 through March 31, 2024.

Q. Did Staff include the revenue from the community solar program[7] in the test year and update period?

A. Yes. Staff accounted for the revenues,[8] but Staff did not make an adjustment to the community solar block charge since it is fully subscribed.

Q. What classes did Staff adjust for the update period?

[6] Twelve months ending March 31, 2024.
[7] Ameren Missouri currently has a community solar pilot program and a permanent community solar program ("CSP"). The pilot program is the only one that impacts billing determinants and revenues as part of this rate proceeding. The pilot program is offered to RES and SGS customers. If available, a customer can subscribe to a solar block that is equivalent to 100 kWh. The customers' billed kWh is reduced by the applicable solar blocks subscribed to and, in return, the customer is billed the solar block charge.
[8] The community solar revenues were included in the test year revenues and the update period revenues.

A. Staff adjusted RES, SGS, LGS, SPS, MDS, and the lighting rate classes.[9]

RATE SWITCHERS ADJUSTMENT

Q. What rate switcher adjustment did Staff make?

A. During the update period one SPS customer switched to LPS and one LPS customer switched to SPS. Staff removed and added the customer billing units and revenue from the SPS and LPS rate classes.[10]

WEATHER NORMALIZATION AND 365 DAYS ADJUSTMENT

Q. How did Staff calculate the weather normalization and 365 days adjustment?

A. Staff witness Michael L. Stahlman provided the monthly weather normalization factor and the 365 days adjustment for each rate class. Mr. Stahlman discusses the data he provided in his direct testimony for this case.

Staff applied the combined weather normalization and 365 days factor to each month for each rate class. For example, if the normalized and annualized kWh factor is 0.97 for the month of September in the RES rate class, then the total actual usage for that month and for that rate class is decreased by 0.03. Staff witness Michael L. Stahlman also provided the normalized first block percentage and the peak percentage[11] that was applied to distribute normalized and annualized monthly kWh to the rate blocks and peaks.[12] The total normalized and annualized rate block and peak usage was multiplied by the appropriate rates.

[9] Staff witness Marina Sever discusses LPS in her direct testimony. During the test year, Ameren Missouri had a rate change that occurred on July 9, 2023. Staff applied the new rates to the entire month of July when calculating the test year revenues and the update period revenues. The community solar revenues are also included in the test year revenues and the update period revenues.
[10] Staff witness Marina Sever provides testimony on the LPS rate switchers.
[11] The RES and SGS rate classes have rates codes that are billed by the time of the day. Mr. Stahlman provided the normalized peaks for the residential evening and morning rate schedule and the SGS TOD rate schedule.
[12] Mr. Stahlman discusses the normalized usage by rate block and peaks in his direct testimony.

MEEIA ADJUSTMENT

Q. What MEEIA adjustment did Staff make?

A. Staff witness Hari K. Poudel, Ph.D., provided the total kWh MEEIA adjustment[13] for the RES, SGS, LGS and SPS classes.[14] Staff developed and applied a monthly MEEIA factor equally to all rate blocks for each tariff rate class.[15] The total normalized and annualized usage was multiplied by the appropriate rates.

GROWTH ADJUSTMENT AND INTRA-CLASS SWITCHING

Q. What is intra-class switching?

A. Intra-class switching is when a customer switches from one rate schedule to another within the same class.

Q. Why did Staff make an adjustment for the residential intra-class switching?

A. Ameren Missouri updated the default residential rate policy following the conclusion of Case No. ER-2021-0240. After a customer receives an advanced meter and has had service for six months, the customer is automatically switched from the Anytime rate to the Evening Morning Savers[16] rate unless they choose a different rate.

Q. How did Staff account for customers switching from the Anytime rate to the Evening Morning Savers rate?

[13] Dr. Poudel discusses MEEIA and the calculation of the MEEIA kWh adjustment in his direct testimony.
[14] Dr. Poudel provided LPS total kWh MEEIA adjustment to Staff witness Marina Stever. She discusses it in her direct testimony.
[15] The factor developed is the weather normalized and 365 days adjusted usage minus the MEEIA kWh divided by the weather normalized and 365 day adjusted usage.
[16] This rate schedule is available to residential customers being served through an advanced meter. The rate consists of a basic service charge and an energy charge that varies by the time of day that energy is used.

A. Staff calculated the difference of customer counts for June 2024 from each month of the update period.[17]

Q. What is customer growth and why did Staff make a growth adjustment?

A. Staff made a growth adjustment to reflect the impact in the change of customer levels (for each rate) for the update period kWh sales, kW demand, and revenues that would have occurred if the number of customers taking service had existed throughout the update period.

Q. What customer classes did Staff adjust for customer growth?

A. Staff calculated customer growth for the following customer classes: RES, SGS, LGS, and SPS.

Q. Did Staff apply customer growth the same for all classes?

A. No. Staff applied customer growth differently for the RES class because of the intraclass switching that occurred during the 12 months.

Q. How did Staff apply the growth adjustment for the RES class?

A. Staff calculated the use per customer ("UPC") for the class by dividing the monthly class kWh usage by the monthly class customer count. Staff then calculated the kWh growth of each month and rate by multiplying the monthly UPC by the number of rate switchers each month.

Q. How did Staff apply the customer growth adjustment to the SGS, LGS and SPS rate classes?

[17] 12 months ending June 2024.

A. For each rate, Staff applied the June 2024 customer counts to all 12 months. Staff developed a growth factor[18] and applied it to kWh sales and kW demand. The total normalized and annualized usage for each rate and class was multiplied by the appropriate rates.

Q. Will Staff update its growth adjustment in its true-up direct filing?

A. Staff will review customer growth through the December 31, 2024, true-up cut-off and make adjustments as necessary to reflect the change in customer levels.

Q. Once Staff completed its analysis of the rate revenue adjustments as discussed above, what did Staff do with its results?

A. Staff provided the normalized and annualized usage for Ameren to Staff witness Michael L. Stahlman for inclusion in his calculation of Net System Input ("NSI") and to Staff witness Shawn E. Lange for variable fuel expense. These witnesses provide more detail in their direct testimony. Staff also provided each revenue adjustment discussed above to Staff witness Lisa M. Ferguson to include in the overall revenue requirement.

CONCLUSION

Q. What are your recommended rate revenue adjustments?

A. The Commission should base its awarded revenue requirement and billing determinants on Staff's rate revenue adjustments and billing determinants as attached and as updated in true up direct.[19]

Q. Does this conclude your direct testimony?

A. Yes, it does.

[18] The growth factor is customer count for June 2024 divided by each of the 12 months customer counts.
[19] Staff will update growth to reflect the most current customer charge counts and may update community solar.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust Its Revenues for Electric Service	)))	Case No. ER-2024-0319

AFFIDAVIT OF KIM COX

STATE OF MISSOURI	)	
	)	ss.
COUNTY OF COLE	)	

COMES NOW KIM COX and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Direct Testimony of Kim Cox*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Kim Cox

KIM COX

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 22nd day of November 2024.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

D Suzie Mankin

Notary Public

KIM COX

Education and Employment Background and Credentials

I attended Central Missouri State University at Warrensburg, Missouri. In May 1996, I received a Bachelor of Science degree.

I am currently employed as a Senior Research/Data Analyst with the Tariff/Rate Design Department within the Industry Analysis Division of the Missouri Public Service Commission (Commission). I have been employed by the Commission since July, 2009. From July 2009 to June 2013, I worked in the Tariffs/Rate Design Section of the Energy Unit as a Rate and Tariff Examiner III, where my duties consisted of analyzing applications, reviewing tariffs and making recommendations based upon those evaluations. On June 16, 2013, I assumed the position of a Utility Policy Analyst II (which is now reclassified as a Senior Research/Data Analyst) within the same Section, where my duties consist of coordinating highly complex activities, analyzing applications, reviewing tariffs, and making recommendations based upon my evaluations. I currently serve on the NARUC Staff Subcommittee on Rate Design. Prior to joining the Commission, I held the position of a Quality Assurance Analyst in the regulatory field for ten years.

KIM COX

Summary of Case Involvement

	Company	Issue	Type of Filing
GR-2009-0434	The Empire District Gas Company	Weather Normalized Sales and Coincident-Peak Day Demand	Staff Report
GR-2010-0171	Laclede Gas Company	Weather Normalized Sales, Blocks and Coincident-Peak Day Demand	Staff Report
GR-2010-0171	Laclede Gas Company	Weather Normalized Sales	Rebuttal
GR-2010-0363	Union Electric d/b/a AmerenUE	Weather Normalized Sales, Blocks and Coincident-Peak Day Demand	Staff Report
GR-2010-0347	Southern Missouri Natural Gas	Weather Normalized Sales	Staff Report
GR-2010-0192	Atmos	Weather Normalized Sales and Coincident-Peak Day Demand	Staff Report
HR-2011-0241	Veolia	Weather Normalized Sales	Staff Report
ER-2012-0175	KCP&L and GMO	L&P Normalization and Annualization	Staff Report
GR-2014-0007 Coordinated	Missouri Gas Energy	Direct COS sponsor of Weather, Weather Normalization and Large Volume Customer Revenue Adjustment	Direct Testimony
GR-2014-0007 Coordinated	Missouri Gas Energy	Direct CCOS sponsor of Rate Design, Miscellaneous Tariff Issues, School Transportation Capacity, Gas Supply Incentive Plan and Staff's CCOS	Direct Testimony
GR-2014-0086	Summit Natural Gas	Lake Ozark Transportation	Staff Report
GR-2014-0152	Liberty Utilities	Special Contract, Large and Industrial Customers	Staff Report, Rebuttal and Surrebuttal
ER-2016-0023	Empire	Large Power Feed Mill Annualization	Staff Report

	Company	Issue	Type of Filing
GR-2017-0215 and GR-2017-0216	Spire Missouri Inc.	Executive Summary, Background, Test Year/True-Up Period and Staff's Revenue Requirement Recommendation	Staff Report
ER-2018-0145 and ER-2018-0146	Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company	Rate Revenues Introduction, The Development of Rate Revenue, Regulatory Adjustments to Test Year Sales and Rate Revenue, Customer Growth, and Adjustment for Non-Missouri classes	Staff Report
GR-2019-0077	Union Electric Company, d/b/a Ameren Missouri	Class Cost of Service, Rate Design and Bill Format Recommendation	Staff Report
ER-2019-0335	Union Electric Company, d/b/a Ameren Missouri	Cost of Service, Update Period Adjustments, Large Customer Annualization, MEEIA Revenue Adjustment, Weather Normalization of Revenue and 365 Day Adjustment	Staff Report
GR-2021-0108	Spire Missouri Inc.	Cost of Service, Large Customer Annualization, Weather Normalization of Revenue and 365 Day Adjustment, Rate Switching Adjustment and Growth Adjustment	Staff Report and Surrebuttal
ER-2021-0240	Union Electric Company, d/b/a Ameren Missouri	Cost of Service, Update Period Adjustments, Community Solar, Rate Switching, MEEIA Revenue Adjustment, Weather Normalization of Revenue and 365 Day Adjustment, and Growth Adjustment	Staff Report and Rebuttal Testimony

	Company	Issue	Type of Filing
ER-2021-0312	The Empire District Electric Company, d/b/a Liberty	Cost of Service, Update Period Adjustments, Weather Normalization of Revenue and 365 Day Adjustment, Rate Switching, Customer Growth, Adjustments for Non-Missouri classes	Staff Report and Rebuttal Testimony
ER-2022-0129 & 0130	Evergy Metro, Inc. d/b/a Evergy Missouri Metro & Evergy Missouri West, Inc. d/b/a Evergy Missouri West	Test year revenues, Update Period Adjustment, Rate Switchers, Weather Normalization, 365 days adjustment, MEEIA Revenue Adjustment, and Customer Growth	Direct Testimony, Rebuttal and Surrebuttal/True-up
ER-2022-0337	Union Electric Company, d/b/a Ameren Missouri	Cost of Service, Update Period Adjustments, Community Solar, Rate Switching, MEEIA Revenue Adjustment, Weather Normalization of Revenue and 365 Day Adjustment, and Growth Adjustment	Direct Testimony, Rebuttal and Surrebuttal/True-up
EO-2024-0002	Evergy Metro, Inc. d/b/a Evergy Missouri Metro & Evergy Missouri West, Inc. d/b/a Evergy Missouri West	Request for Customer Account Data	Rebuttal testimony
ER-2024-0189	Evergy Missouri West, Inc. d/b/a Evergy Missouri West	Test Year Revenues, Update Period Adjustment, Rate Switcher, Weather Normalization, 365 Days, MEEIA Revenue Adjustment, Customer Growth, Net Metering and Parallel Generation Annualization, and Opt Out Adjustment	Direct Testimony, Rebuttal and Surrebuttal/True-up

ATTACHMENT

Ameren Missouri ER-2024-0319

Residential Service Billing Components			
Summer (June - September)	Rate	Staff Units	$ Amount
Customer Charge 1M	$9.00	1,137,208	$10,234,872
Customer Charge 1MTOD	$9.00	16	$144
Customer Charge EVEMORN	$9.00	3,218,644	$28,967,796
Customer Charge OVERNIGHT	$9.00	8,576	$77,184
Customer Charge SMART	$9.00	5,776	$51,984
Customer Charge ULTIMATE	$9.00	4,840	$43,560
Energy Charge:			
1M Energy Charge	$0.1372	1,275,507,573	$174,999,639
EveMorn Energy Charge	$0.1340	3,393,378,192	$454,712,678
TOD off peak	$ 0.0828	19,875	$1,646
TOD on peak	$ 0.3530	4,370	$1,543
Overnight off peak	$ 0.0644	2,942,826	$189,518
Overnight on peak	$ 0.1617	6,259,796	$1,012,209
Smart off peak	$ 0.0674	1,912,916	$128,931
Smart mid peak	$ 0.1069	3,221,000	$344,325
Smart on peak	$ 0.3562	711,059	$253,279
Ultimate off peak	$ 0.0508	5,346,882	$271,622
Ultimate on peak	$ 0.3001	753,848	$226,230
EveMorn On peak adj	$ 0.0050	2,032,888,619	$10,164,443
Demand	$ 8.16	28,199	$230,102
Winter (October - May)			
Customer Charge 1M	$9.00	2,274,416	$20,469,744
Customer Charge 1MTOD	$9.00	32	$288
Customer Charge EVEMORN	$9.00	6,437,288	$57,935,592
Customer Charge OVERNIGHT	$9.00	17,152	$154,368
Customer Charge SMART	$9.00	11,552	$103,968
Customer Charge ULTIMATE	$9.00	9,680	$87,120
Energy Charge:			
1M, TOD, Overnight & Smart KWH Block 1	$0.0934	1,378,724,266	$128,772,846
1M, TOD, Ovrnight & Smart KWH Block 2	$0.0627	1,129,846,931	$70,841,403
EveMorn KWH Block 1	$0.0919	3,685,933,249	$338,737,266
EveMorn KWH Block 2	$0.0616	2,310,741,623	$142,341,684

Overnight Off pk kwh	$ 0.0555	5,219,624	$289,689
Overnight On pk kwh	$ 0.0910	9,733,978	$885,792
Smart off peak	$ 0.0558	2,722,871	$151,936
Smart mid peak	$ 0.0684	4,653,117	$318,273
Smart on peak	$ 0.1907	937,103	$178,705
Ultimate off peak	$ 0.0449	9,758,702	$438,166
Ultimate on peak	$ 0.1632	1,185,204	$193,425
EveMorn Off peak adj	0.0025	3,031,000,784	$7,577,502
Demand	3.37	55,354	$186,542
Low Income Charge	0.14	13,125,180	$1,837,525
Community solar			$ 1,552,062
Total			$1,454,965,600
total excluding low income			$1,453,128,074

Small General Service

Billing Components

Summer (June - September)	Rate	Staff Units	$ Amount
Customer Charge:			
Single Phase	$11.96	389,194	$4,654,759
Three Phase	$22.87	156,250	$3,573,436
Single Phase TOD	$22.91	5,845	$133,919
Three Phase TOD	$44.74	689	$30,822
Lighting Cust Chrg (6M)	$6.34	6,401	$40,581
Single Phase Overnight	$11.96	40	$478
Three Phase Overnight	$22.87	16	$366
TOU unmetered	$6.34	22,821	$144,685
Energy Charge:			
Summer	$0.1197	1,086,638,391	$130,070,615
Seasonal	$0.0516	29,545,762	$1,524,561
Summer TOD On Peak	$0.1779	16,647,079	$2,961,515
Summer TOD Off Peak	$0.0726	19,096,790	$1,386,427
Winter TOD On Peak	$0.1172	3,377,884	$395,888
Winter TOD Off Peak	$0.0535	4,299,955	$230,048
Opt Out EE	$0.0000	7,677,276	$0
6m energy	$0.0517	747,832	$38,663
Overnight off peak	$0.0791	15,847	$1,253
Overnight on peak	$0.1324	40,682	$5,386

Winter (October - May)			
Customer Charge:			
Single Phase	$11.96	777,975	$9,304,577
Three Phase	$22.87	312,762	$7,152,862
Single Phase TOD	$22.91	11,665	$267,256
Three Phase TOD	$44.74	1,389	$62,163
Lighting Cust Chrg	$6.34	12,913	$81,866
Single Phase Overnight	$11.96	178	$2,131
Three Phase Overnight	$22.87	44	$1,007
TOU unmetered	$6.34	45,586	$289,015
Energy Charge:			
Base Use	$0.0894	1,526,459,523	$136,465,481
Seasonal Use	$0.0516	464,577,209	$23,972,184
Winter TOD On Peak	$0.1172	32,269,503	$3,781,986
Winter TOD Off Peak	$0.0535	46,853,566	$2,506,666
Summer TOD On Peak	$0.1779	4,016,037	$714,453
Summer TOD Off Peak	$0.0726	4,669,218	$338,985
Energy Efficiency	$0.0000		
Opt Out EE	$0.0000	1,450,234	$0
6m energy (cell)	$0.0517	1,450,234	$74,977
W Overnight off peak	$0.0563	186,896	$10,522
W Overnight on peak	$0.0883	429,334	$37,910
S Overnight off peak	$0.0563	27,840	$1,567
S Overnight on peak	$0.0883	67,028	$5,919
Low Income Charge	$0.2000	1,743,768	$348,754
Community Solar			$70,053
Total			$330,683,737
Total excluding Low Income Charge			$330,334,983

Large General Service

Billing Components

Summer (June - September)	Rate	Staff Units	$ Amount
Customer Charge	$108.44	42,564	$4,615,640
Customer Charge TOD	$129.52	244	$31,603
Energy Charge (cents per kWh):			
First 150 kWh per KW	$0.1112	854,265,871	$94,994,365
Next 200 kWh per KW	$0.0836	926,010,479	$77,414,476
All over 350 kWh per KW	$0.0563	374,445,872	$21,081,303
Seasonal	$0.0408	38,117,633	$1,555,199
Base 1 kwh	$0.0698	154,503,436	$10,784,340

Base 2 kWh	$0.0519	164,248,456	$8,524,495
Base 3 kWh	$0.0409	71,396,660	$2,920,123
Off_Peak_KWH summer	-$0.0065	12,461,993	-$81,003
On_Peak_KWH summer	$0.0114	6,847,662	$78,063
Off Peak KWH WINTER	-$0.0019	1,976,394	-$3,755
On PEAK KWH WINTER	$0.0035	1,228,098	$4,298
Energy Efficiency per kWh			
Opt Out EE per kWh			
Demand summer: per kwh of Billing Demand	$6.1900	6,569,267	$40,663,763
Demand winter: per kwh of Billing Demand	2.3	1,379,424	$3,172,676
Winter (October - May)			
Customer Charge	$108.44	85,128	$9,231,280
Customer Charge TOD	$129.52	488	$63,206
Energy Charge (cents per kWh):			
First 150 kWh per KW	$0.1112	179,420,111	$19,951,516
Next 200 kWh per KW	$0.0836	188,797,992	$15,783,512
All Over 350 kWh per KW	$0.0563	74,640,662	$4,202,269
Seasonal Energy Charge	$0.0408	332,792,600	$13,577,938
Base 1 kwh	$0.0698	1,537,635,217	$107,326,938
Base 2 kWh	$0.0519	1,643,992,402	$85,323,206
Base 3 kWh	$0.0409	719,888,624	$29,443,445
Off_Peak_KWH summer	-$0.0065	1,914,530	-$12,444
On_Peak_KWH summer	$0.0114	1,240,695	$14,144
Off Peak KWH WINTER	-$0.0019	23,808,028	-$45,235
On PEAK KWH WINTER	$0.0035	12,874,289	$45,060
Energy Efficiency per kWh			
Opt Out EE per kWh			
Demand summer: per kwh of Billing Demand	$6.1900	1,428,920	$8,845,015
Demand winter: per kwh of Billing Demand	$2.3000	13,233,189	$30,436,335
Low Income Charge	$2.1100	128,424	$270,975
edi			$ (1,373,376)
Total			$588,839,371
Total excluding Low Income Charge			$588,568,396

Small Primary Service

Billing Components

Summer (June - September)	Rate	Staff Units	$ Amount
Customer Charge	$371.3900	2,560	$950,758

Customer Charge TOD	$392.4700	88	$34,537
Energy Charge (cents per kWh):			
First 150 kWh per KW	$0.1079	340,635,417	$36,754,561
Next 200 kWh per KW	$0.0811	411,933,061	$33,407,771
All over 350 kWh per KW	$0.0545	287,688,776	$15,679,038
Seasonal	$0.0395	19,414,107	$766,857
Base 1 kWh	$0.0679	55,477,357	$3,766,913
Base 2 kWh	$0.0505	67,116,851	$3,389,401
Base 3 kWh	$0.0394	49,374,739	$1,945,365
On SUMMER Peak Adjust per kWh	$0.0084	13,340,401	$112,059
Off SummerPeak Adjust per kWh	-$0.0048	27,937,109	-$134,098
On Winter Peak	$0.0031	1,557,763	$4,829
Off Winter Peak	-$0.0018	2,559,163	-$4,606
Energy Efficiency per kWh	$0.0000	277,668,168	$0
Opt Out EE per kWh	$0.0000		
Summer Demand: per kW of Billing Demand	$5.3400	2,356,027	$12,581,185
Winter Demand	$1.9400	446,425	$866,064
Billing Kvars	$0.4000	454,874	$181,950
Rider B 34kv: per kW	-$1.2400	256,695	-$318,302
Rider B 138kv: per kW	-$1.4700	1,650	-$2,426
Winter (October - May)			
Customer Charge	$371.3900	5,120	$1,901,517
Customer Charge TOD	$392.47	176	$69,075
Energy Charge (cents per kWh):			
First 150 kWh per KW	$0.1079	65,066,795	$7,020,707
Next 200 kWh per KW	$0.0811	78,224,568	$6,344,012
All over 350 kWh per KW	$0.0545	54,013,881	$2,943,757
Seasonal Energy Charge	$0.0395	161,154,215	$6,365,591
Base 1 kwh	$0.0679	601,754,733	$40,859,146
Base 2 kWh	$0.0505	720,391,531	$36,379,772
Base 3 kWh	$0.0394	526,292,209	$20,735,913
On SUMMER Peak Adjust per kWh	$0.0084	1,591,575	$13,369
Off SummerPeak Adjust per kWh	-$0.0048	2,593,034	-$12,447

On Winter Peak	$0.0031	26,801,312	$83,084
Off Winter Peak	-$0.0018	50,310,296	-$90,559
Energy Efficiency per kWh	$0.0000	468,663,695	$0
Opt Out EE per kWh	$0.0000		
Summer Demand: per kW of Billing Demand	$5.3400	457,675	$2,443,984
Winter Demand	$1.9400	4,568,274	$8,862,451
Rider B 34kv: per kW	-$1.2400	478,766	-$593,670
Rider B 138kv: per kW	-$1.4700	3,745	-$5,506
Billing Kvars	$0.4000	734,016	$293,606
Low Income Charge	2.11	7,944	$16,762
EDI			-$1,646,052
Totals			$ 241,966,371
Total excluding Low Income Charge			$241,949,610

Lighting			
Company Owned Lighting 5M			
	Units	Rate	$ Amount
100000 MH Direct	3918	$ 74.44	$ 291,656
11000 MV Open Btm	742	$ 10.59	$ 7,858
140000 HPS Direct	48	$ 75.06	$ 3,603
20000 MV Direct	2,076	$ 22.89	$ 47,520
20000 MV Enclosed	18,702	$ 17.43	$ 325,976
25500 HPS Direct	24,362	$ 23.81	$ 580,059
25500 HPS Enclosed	45,956	$ 18.33	$ 842,373
27500 HP Enclosed	1,945	$ 18.33	$ 35,652
3300 MV Open Btm	11,487	$ 10.57	$ 121,418
3300 MV Post Top	652	$ 23.45	$ 15,289
34000 MH Direct	6,043	$ 22.93	$ 138,566
34200 HPS Direct	40	$ 23.81	$ 952
36000 MH Direct	21,537	$ 22.93	$ 493,843
47000 HPS Direct	876	$ 37.67	$ 32,999
50000 HPS Direct	22,732	$ 37.67	$ 856,314
50000 HPS Enclosed	11,476	$ 33.12	$ 380,085
54000 MV Direct	141	$ 33.97	$ 4,790
54000 MV Enclosed	531	$ 29.42	$ 15,622
5800 HPS Open Btm	515	$ 10.92	$ 5,624
6800 MV Enclosed	34,313	$ 12.73	$ 436,804
6800 MV Open Btm	60,250	$ 11.11	$ 669,378
6800 MV Post Top	66,340	$ 24.36	$ 1,616,042

9500 HPS Enclosed	42,312	$ 13.26	$ 561,057
9500 HPS Open Btm	117,619	$ 11.64	$ 1,369,085
9500 HPS Post Top	346,192	$ 24.90	$ 8,620,181
LED 100 W EQ Bracket	996,647	$ 10.71	$ 10,674,089
LED 250 W EQ Bracket	151,013	$ 17.27	$ 2,607,995
LED 400 W EQ Bracket	25,588	$ 31.75	$ 812,419
LED Direct-Large	6,706	$ 71.89	$ 482,094
LED Direct-Medium	48,664	$ 36.06	$ 1,754,824
LED Direct-Small	40,548	$ 22.49	$ 911,925
LED Post Top - All	253,051	$ 23.77	$ 6,015,022
Municipal Discount			$ (1,534,683)
Total 5M Revenue			$ 39,196,432
Company Owned Lighting 6M			
	Units	Rate	$ Amount
100W LED Energy Only	549	$ 1.75	$ 961
11000 MV Energy Only	288	$ 4.93	$ 1,420
11000 MV Enrg&Maint	312	$ 7.49	$ 2,337
12900 MH Enrg&Maint	684	$ 7.45	$ 5,096
162W LED Energy Only	96	$ 2.84	$ 273
180W LED Energy Only	423	$ 3.15	$ 1,332
196W LED Energy Only	336	$ 3.43	$ 1,152
20000 MV Energy Only	1,056	$ 7.60	$ 8,026
20000 MV Enrg&Maint	456	$ 9.84	$ 4,487
23W LED Energy Only	300	$ 0.40	$ 120
25500 HPS Enrg&Maint	5,314	$ 7.38	$ 39,217
25500 HPS Enrgy Only	300	$ 5.14	$ 1,542
25W LED Energy Only	6	$ 0.44	$ 3
26W LED Energy Only	348	$ 0.46	$ 160
27W LED Energy Only	120	$ 0.47	$ 56
3300 MV Enrg&Maint	27	$ 4.30	$ 116
3300 MV Enrgy Only	1,008	$ 2.13	$ 2,147
36W LED Energy Only	533	$ 0.63	$ 336
40W LED Energy Only	300	$ 0.70	$ 210
44W LED Energy Only	12	$ 0.77	$ 9
45W LED Energy Only	564	$ 0.79	$ 446
48W LED Energy Only	576	$ 0.84	$ 484
50000 HPS Enrg&Maint	762	$ 10.59	$ 8,070
50000 HPS Enrgy Only	12	$ 8.07	$ 97
54000 MV Energy Only	138	$ 18.11	$ 2,499
54000 MV Enrg&Maint	48	$ 20.88	$ 1,002
54W LED Energy Only	396	$ 0.95	$ 376
5500 MH Enrg&Maint	1,779	$ 6.29	$ 11,190
57W LED Energy Only	84	$ 1.00	$ 84
60W LED Energy Only	48	$ 1.05	$ 50

6800 MV Enrg&Maint	14,406	$ 5.54	$ 79,809
6800 MV Enrgy Only	1,452	$ 3.46	$ 5,024
6M Ltd LED 100 W EQ	129,876	$ 3.24	$ 420,798
6M Ltd LED 250 W EQ	1,269	$ 4.20	$ 5,330
6M Ltd LED 400 W EQ	119	$ 7.41	$ 882
70W LED Energy Only	156	$ 1.23	$ 192
72W LED Energy Only	381	$ 1.26	$ 480
75W LED Energy Only	2,184	$ 1.31	$ 2,861
80W LED Energy Only	2,583	$ 1.40	$ 3,616
85W LED Energy Only	600	$ 1.49	$ 894
9500 HPS Enrg&Maint	88,747	$ 4.30	$ 381,612
9500 HPS Enrgy Only	1,383	$ 2.00	$ 2,766
96W LED Energy Only	60	$ 1.68	$ 101
Total 6M Revenue			$ 997,663

Customer Owned Lighting 6M

	Units	Rate	$ Amount
Bills	20,097	$ 8.15	$ 163,791
Energy (kWh)	36,987,436	$ 0.0517	$ 1,912,250
			$ 2,076,041
Municpal Disount		$ (0.0586)	$ (121,741.66)
Total Revenue			$ 1,954,299
Total Lighting			**$ 42,148,394**

MSD Horsepower Service	442800	$ 0.1942	$ 85,992

Total Revenue **$2,656,215,449**

LPS Billing Determinants and Revenues are provided by Staff witness, Marina Sever.