BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION

In the Matter of the Rate Design Case of Evergy Metro, Inc. d/b/a Evergy Missouri Metro	)))	No. EO-2021-0349
In the Matter of the Rate Design Case of Evergy Missouri West, Inc. d/b/a Evergy Missouri West	)))	No. EO-2021-0350

EVERGY MISSOURI METRO AND EVERGY MISSOURI WEST
TIME OF USE RATE DESIGN REPORT

COMES NOW, Evergy Metro, Inc. d/b/a Evergy Missouri Metro ("Evergy Missouri Metro") and Evergy Missouri West, Inc. d/b/a Evergy Missouri West ("Evergy Missouri West") (collectively, the "Company" or "Evergy") and files this *Time of Use (TOU) Rate Design Report* ("Report") with the Missouri Public Service Commission ("Commission") and, in support of the filing, states as follows:

I. INTRODUCTION

Background

1. On September 25, 2018, Evergy Missouri Metro[1] filed a *Non-Unanimous Partial Stipulation and Agreement Concerning Rate Design Issues* in Case No. ER-2018-0145 ("0145 Stipulation"), which was approved by the Commission's *Order Approving Stipulations and Agreements* on October 31, 2018 ("0145 Order").

2. As part of the 0145 Stipulation, Evergy Missouri Metro agreed to:

> By June 30, 2020, KCP&L will file a rate design case limited to TOU issues. For GMO, signatories further agree the September 20, 2016 Non-Unanimous Stipulation and Agreement in ER-2016-0156

[1] Effective October 7, 2019, Evergy Missouri Metro adopted the service territory and tariffs of Kansas City Power & Light Company ("KCP&L").

will be expanded to include TOU, with the TOU rate design case to commence by June 30, 2020.

3. On June 15, 2020, Evergy Missouri Metro filed a *Motion for Extension of Time* ("Motion") seeking addition time, until June 15, 2021, to file the rate design case detailed above.[2]

4. On June 29, 2020, the Commission issued its *Order Granting Motion for Extension of Time*.

II. RATE DESIGN

5. Attached hereto as **Exhibit A** is the Report of Evergy Missouri Metro's and Evergy Missouri West. The Report confirms the reasonableness of the Company's TOU program that the Company began offering to customers on October 1, 2019. The Report describes in detail how the Company met all Stipulation commitments, as well as, presents a desire to offer an additional 2-period TOU rate to expand the Company's TOU rate options at Evergy in its next general rate case. The Report shares slight modifications to the current 3-period TOU rate offering that the Company will seek approval in its next general rate case. The Report communicates this TOU expansion, refinements, and important elements of the Company's Rate Modernization Plan. The cases are presented in a Report format, providing support for the Company's conclusions.

III. REQUEST FOR COMMISSION GUIDANCE

6. The Company shared a summary of its TOU Rate Design Plan contained in Exhibit A with Staff ("Staff") for the Commission and the Office of the Public Counsel ("OPC") on March 3, 2021 and made adjustments to that plan where possible in response to their feedback. The

[2] "The Company seeks additional time to file a rate design case so that the case is supported by 12 months of Time of Use "(TOU") information inclusive of the summer season. Staff for the Commission ("Staff") has requested, and the Company agrees, that it will include the TOU data in its rate design case and share that information with stakeholders. That data will include hourly Advanced Metering Infrastructure ("AMI") information for the TOU participants and their control group, as well as, any other data used in the evaluation of the rate and used in the Evaluation Measurement & Verification ("EM&V"). See, *Motion*, ¶3, pp. 3-4.

Company hopes that this docket will enable discussion and provide further understanding of stakeholder positions on the latest TOU proposals, as well as, result in Commission guidance concerning how TOU rates could be proposed in the Company's 2022 rate case filings.

IV. PROPOSED PROCEDURAL SCHEDULE

7. In adherence with Fuel Adjustment Clause ("FAC") requirements mandating a general rate case proceeding every four years, it is expected that the Company will make a general rate case filing sometime in 2022. The Company would like to include expected TOU stakeholder feedback and Commission TOU guidance in the general rate cases. The Company proposes the following procedural schedule.

- Report filing (June 15, 2021)
- Workshop meeting (July 15, 2021)
- Response from parties (August 15, 2021)
- Commissioner questions and comments (September 2021)

WHEREFORE, Evergy Missouri Metro and Evergy Missouri West respectfully submit this information for consideration by the Commission.

Respectfully submitted,

/s/ Roger W. Steiner

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CERTIFICATE OF SERVICE

I do hereby certify that a true and correct copy of the foregoing document has been hand-delivered, emailed or mailed, postage prepaid, to the Staff of the Commission and to the Office of the Public Counsel this 15h day of June 2021.

/s/ Roger W. Steiner

Attorney for Evergy Missouri Metro and Evergy Missouri West

VERIFICATION

COUNTY OF JACKSON)
) SS
STATE OF MISSOURI)

I, Darrin R. Ives, state that I am Vice President of Regulatory Affairs for Evergy Missouri West, that I have reviewed the foregoing pleading, that I am familiar with its contents, that the statements contained therein are true and correct to the best of my knowledge and belief, and that Evergy Missouri West has had no communication with the Office of the Commission within the prior 150 days regarding any substantive issues likely to arise in this case.

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.[3]

Evergy, Inc.

Darrin R. Ives, Declarant

[3] *See* Letter from the Commission, dated March 24, 2020: "[A]ny person may file an affidavit in any matter before the Commission without being notarized so long as the affidavit contains the following declaration: ['']Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.['] _____ Signature of Declarant[.] This guidance applies both to pleadings filed in cases before the Commission and to required annual reports and statements of income."

Evergy Missouri Metro & Evergy Missouri West

Time of Use Rate (TOU) Rate Design Case Report

June 15, 2021

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1 EXECUTIVE SUMMARY

The Company's filing and report are organized as follows:

Section 1 – Executive Summary (Witness: Kim Winslow)

Section 2 – History of Regulatory Orders Pertaining to Time of Use (Witness: Brad Lutz)

Section 3 – Overview of Evergy's Rate Modernizaton Plan (Witness: Brad Lutz)

Section 4 – Success of Evergy's TOU Rate (Witness: Brian File)

Section 5 – TOU Rate Design Plan (Witness: Ed Hedges)

Appendix A – Interim EM&V Key Findings

Appendix B – Future Rate Options

Appendix C – TOU Education Tools

Appendix D – Exemplar Rate Tariffs

This "Time of Use Rate Rate Design Case Report" ("Report") defines the Company's plans to further deploy Time of Use ("TOU") rate designs for its residential customers in its Missouri utility jurisdictions, specifically Evergy Missouri Metro and Evergy Missouri West (collectively, the "Company").[1] This Report fullfills commitments made by the Company in the Non-Unanimous Partial Stipulation and Agreement Concerning Rate Design Issues in Case No. ER-2018-0145 and Case No. ER-2018-0146 ("0145 Stipulation") to "file a rate design case limited to TOU issues. For GMO, signatories further agree the September 20, 2016 Non-Unanimous Stipulation and Agreement in ER-2016-0156 will be expanded to include TOU, with the TOU rate design case to commence by June 30, 2020." The 2016 GMO rate design case commitment was filed on June 30, 2020. On June 15, 2020, the Company filed a request for an extension of the Time of Use Rate Design Case referred to in Case No. ER-2018-0145, Section 2.i.. On June 29, 2020, the Commission granted the Company's request for extension and ordered the Company to file a TOU Rate Design Case by June 15, 2021. This Report fulfills that requirement. Further the Company intends that this Report and 0145 Stipulation will enable discussion and provide further understanding of stakeholder positions on the latest TOU proposals, as well as, result in Commission guidance concerning how TOU rates could be proposed in the Company's 2022 rate case filings.

[1] The Company anticipates the TOU plans discussed herein will be applicable to all of the Evergy jurisdictions as rate cases are filed; therefore there are references to Evergy Kansas Metro and Evergy Kansas Central jurisdictions.

Starting immediately after the rate cases in 2018, the Company began executing on its commitments and successfully launched the 3-period, opt-in TOU rate for its residential customers on October 1, 2019 as agreed upon in the 0145 Stipulation. The 0145 Stipulation identified a number of steps to guide the deployment. The guidance covered:

- Details to define the TOU rate design
- Develop a comprehensive customer research, education and marketing plan
- Evaluate leading practices on customer education and engagement on TOU deployment
- Develop a process to solicit feedback from customers
- Metrics to gauge changes in customer behavior
- Various opportunities for stakeholder engagement and update

To achieve this, Evergy formed a cross-functional project team of over 80 subject matter experts from almost every area of the Company and began the year-long initiative to research, develop and implement a cohesive TOU solution. The solution was built on a customer research plan that leveraged qualitative and quantitative customer feedback to inform critical product, marketing and customer education decisions. For implementation, the Company built momentum for the introduction of the new TOU plan by connecting with “Innovators and Early Adopters”, key demographic groups known to seek out new approaches, to ignite early awareness, enrollment and advocacy, moving the effort in a positive direction as greater awareness was built within the larger customer base.

Evergy continued to execute on its plans following the October 1, 2019 roll-out and deems that the deployment has been successful, particularly if measured against the initial goals, but also with respect to customer satisfaction. Within the 0145 Stipulation, each jurisdiction had a goal of reaching 1,750 customers by December 31, 2020. Those goals were surpassed. As of June 11, 2021, Evergy exceeds the enrollment target with a total of 5,538 active enrollments (2,917 enrollments in Missouri West and 2,621 enrollments in Missouri Metro). This equates to about 160% of the stipulated goal.

Additionally, Evergy retained Guidehouse Inc. (“Guidehouse”), to support the efforts to study residential TOU rates and provide independent evaluation services to verify the ex-post (historical) impacts of the TOU rates through an Evaluation, Measurement and Verification (“EM&V”). The results of the interim EM&V presented to stakeholders on December 17, 2020 included:

- Results indicate that the TOU rate and associated program design has had the desired effect of reducing consumption during the on-peak period (4-8 pm M-F) in both the summer and non-summer seasons and driving participant bill savings (on average).
- Peak System Impacts – TOU participants lowered their demand by 4-9% at system coincidence peak.

- Bill Impacts - On average, participants are saving annually. Summer bills see the greatest savings, approximately half of which are driven by behavioral changes while non-summer bills see an increase for those previously on the electric heating rate primarily driven by rate structure changes.
- Annual savings for residential general customer ranges from 5 to 10%.
- Annual savings for residential space heating customer ranges from 3 to 6%.
- Enrollments – the Company had exceeded stipulated enrollment targets within the evaluation year, which at the time was 142% of the overall Missouri enrollment target of 3,750 customers.
- Attrition – Approximately 50% of attrition (700 customers) that occurred during the evaluation year was from customers moving.

The Company will submit a final EM&V of the initial TOU deployment by December 31, 2021.

Moving forward, the Company anticipates a general rate case filing in early 2022. As a step in its preparedness, the Company developed a Rate Modernization Plan ("Rate Plan"). The Rate Plan is intended to guide the Company on several identified rate objectives over a period of time. The Rate Plan provides a framework for Evergy that is both responsive to its historical regulatory obligations in Missouri and Kansas, but also provides a framework for updating the Company's rate plans and to guide future general rate case filings. Continuing to offer opt-in TOU rate(s) is an important element of the Rate Plan. As part of its overall Rate Plan, the Company is considering expanding its residential rate portfolio to include to include a Low Income Community Solar Subscription rate, Subscription Pricing rates, and Prepay options, as well as a 2-period TOU rate option to complement the existing 3-period TOU rate option.

In addition to the Rate Plan, the Company conducted various internal studies and reviews to inform its TOU rate designs, information that will be used to enhance rates proposed in its 2022 Missouri rate cases. As an initial step, the Company reviewed industry best practices and benchmarked several types of residential rate offerings, including TOU, Subscription Pricing, and other Time Variant rates, as well as a Prepay programs. Evergy retained the services of the Brattle Group to assist with this effort. Led by Dr. Ahmad Faruqui and Ryan Hledick, Brattle's benchmarking efforts provided comprehensive information and detail concerning TOU rate design applied across the industry, including a view of international efforts. The analysis identified a few key points to inform Company plans, which include:

- Despite widespread availability across most states, enrollment in TOU rates is still very low nation-wide. Only a few utilities have substantial (i.e., >10%) participation in TOU rates.
- Analysis of dozens of TOU pilot programs worldwide indicate that customers do respond by shifting consumption and reducing peak demand. The design choice that most affects the impacts of TOU rates is the ratio of peak to off-peak prices, with stronger price signals yielding higher peak load reductions.

- Most TOU rates are offered on an opt-in basis, but a few are opt-out (default). Opt-out rates have higher enrollment rates relative to opt-in rates (e.g., 80% enrollment for opt-out versus 20% enrollment for opt-in), though opt-out offerings achieve lower impacts per participant.
- TOU rates can also be combined with other rate structures with stronger price signals during the most critical hours. The effect of these programs is increased by enabling technologies which help to inform customers of prices and automate customer response.

Evergy has a long history of listening to our customers and working to best understand what they want concerning energy and believes that approaches taken for a TOU rate should reflect customer preference in order to maximize results and customer engagement. The Company engaged with customers in numerous ways to understand their opinions. One common theme emerged in the results from these studies and that is the ongoing desire for customers to enjoy a choice of rates.

Customer input, industry perspective, learning from our experiences and data analytics create an important foundational perspective. The Company seeks to build on its success and offer an expanded portfolio of rate designs to engage customers and support our strategic direction. These inputs informed our planning and formation of principals to guide the planning of the next phase of TOU deployment.

Turning to analysis, Evergy examined the seasonal periods, time periods and price differentials to assess the current 3-period, opt-in TOU offer. For seasonal periods, daily peak loads and market day-ahead average daily energy price profiles support that peak loads occur in the four months of June, July, August, and September. For time periods, consideration was given to the actual seasonal and daily fluctuation in system and customer class loads along with the wholesale costs of energy to develop the optimum time periods for a residential TOU rate. Most analysis of historical data supports a 4-hour, Summer On-Peak period from 3–7 pm, which is slightly misaligned with the residential class 4-hour peak load period and Evergy's current TOU On-Peak period from 4-8 pm. Based on a desire to maintain consistency with the current TOU rate design and "future proof" the time period for the future anticipated impact of increased solar penetration and customer behavioral load shifts, Evergy determined to continue with the On-Peak period of 4-8 pm. For pricing, residential class's share of costs (generation, transmission, distribution and energy) from the Company's most recent class cost of service studies were allocated to the TOU time periods analysis to determine the target price differential for each time period by season. This analysis supports a rate design wilth a strong summer peak price and a significantly discounted super-off-peak price, with modest price differences in the other periods.

For its TOU Rate Design Plan, Evergy will seek approval of two primary proposals that will build on the success of its intial TOU rate design. First, we propose to to refine existing 3-period TOU rate design. This refinement will include:

- Align summer seasons to June 1-September 30
- Maintain the On-Peak period from 4 pm-8 pm
- Maintain summer pricing differentials, but reduce the non-summer price differentials to better reflect cost
- Continue to leverage market research to explore broadening customer education and marketing to achieve greater participation

Second, we propose to add a new optional 2-period TOU rate design. This option is designed to be attractive to customers with less ability to shift usage throughout the year and help address bill impact of TOU typically occurring for space heating customers. This new 2-period TOU rate will include:

- Summer On-Peak and Off-Peak periods with the On-Peak pricing aligned with the 3-period rate
- Non-Summer Off-Peak and Super Off-Peak periods with the Super Off-Peak period aligned with the 3-period rate

In addition to these rate design changes, the TOU Rate Design Plan includes ongoing plans for customer education. The benefit of customer education was clearly established in the Company review of the initial TOU rate. Evergy will continue an integrated education and outreach campaign to help increase customer awareness of all rate plan offerings, especially the TOU rate. This integrated strategy will focus on simplification, consistency, customer understanding and outreach. Evergy intends to deliver clear, concise and personalized, data-driven education, leveraging critical technology and infrastructure. Consistency will be reinforced through a centralized message on our website where customers can easily access additional information and education. It is expected these messages will help customers understand the important impacts of the TOU Rate Plan beyond saving money, particularly the community and grid benefits of the rate. Finally, the Company expects to connect with new customer segments under this plan. By using integrated mix of channels, such as social media, email and other digital forms, the Company expects to deploy messages that resonate with new and existing customers.

It is our intention that this Report and this docket will enable discussion and provide further understanding of stakeholder positions on the TOU proposals presented in this Report, as well as result in Commission guidance concerning how TOU rates could be proposed in the Company's 2022 rate case filings.

2 HISTORY OF REGULATORY ORDERS PERTAINING TO TIME OF USE

The following sections describe the history of Missouri Public Service Commission ("MPSC") regulatory orders pertaining to TOU and the Company's efforts to fulfill the agreements.

2.1 BACKGROUND OF S&A AND MPSC ORDERS

On September 25, 2018, parties to Dockets ER-2018-0145 and ER-2018-0146 entered into a non-unanimous partial stipulation and agreement concerning rate design issues ("Rate Design S&A").[2] Section 2 of the Rate Design S&A details agreements among the signatories on issues related to TOU rates. In addition, Section 6 of the Rate Design S&A notes that the Company's two-part TOU tariffs will continue and will not be available to new customers. The details of Section 2[3] are as follows:

"*2. a. The Signatories believe this Rate Design Stipulation defines a meaningful and successful process to establish alternative rate plans in the form of Time of Use ("TOU") rates for residential customers following accepted best practice and ensuring measured impact to customers within the class. The Company believes TOU rates should be part of a broad selection of rates offered to Customers and utilized to help the Company provide an opportunity to Customers to shift demands from peak periods and benefit from that shifting load. Further, TOU rates allow the Company and Customers to extract additional benefit from recent upgrades in metering and billing systems.*

b. Effective October 1, 2019, KCP&L and GMO will offer a residential Time of Use Service, originally proposed as a pilot by the Company in this case, as an opt-in rate that would be available as an alternative to standard residential rates, which shall continue to be available.

i. The TOU opt-in rate will remain in effect until changed by Commission order.

ii. Customers who take service under the TOU opt-in rate and switch back to a standard rate will be required to wait 12 months before they will be eligible to re-enroll in the TOU opt-in rate.

c. The Company will develop a comprehensive customer research, education and marketing plan and identify the Company readiness and outreach capabilities and resources required to introduce the TOU rate plan to residential customers.

i. By the end of Q4 2018, the Company will meet with Staff, OPC, DE and Renew MO (stakeholders) to review the customer research plan.

ii. By the end of Q1 2019, the Company will launch the customer research plan.

[2] Refer to Order Approving Stipulations and Agreements, dated October 31, 2018.
[3] Ibid

iii. The Company will evaluate leading practices on customer education and engagement on TOU deployment. During Q2 2019, the Company will develop a marketing and education plan and will meet with stakeholders to review.

1. The Company will develop a plan that may include various forms of tools, marketing, and customer education such as mailings, outbound calling, text messaging, website information, media outlets and outreach through various company partners including community action agencies, senior housing centers and others.

2. The plan will include marketing to specific end-uses that might benefit from the TOU rate plan, such as Electric Vehicle charging and space conditioning.

3. The Company will address the potential impact to the customer contact center and training that will ensue to properly address customer questions. The Company will provide all call center personnel with effective and sufficient training and education on their TOU offering. Company shall evaluate opportunities to educate new customers requesting service on the availability of a TOU as well as other educational opportunities when existing customers call the contact center for other matters, including TOU education through an Interactive Voice Recognition ("IVR").

4. The plan will address how to approach vulnerable customer segments, such as low-income customers, elderly customers and customers with electricity-dependent medical needs.

5. Education on the merits of the TOU opt-in rate plan, both specific to the customers taking service thereunder as well as to customers at large, will continue throughout the offering of the TOU opt-in rate plan.

6. The Company will work with stakeholders to operationalize the customer journey from first learning about the TOU rates, to enrolling/un-enrolling, receiving the first bill and managing their energy usage going forward

iv. The Company will develop a process to solicit feedback from customers availing themselves of the TOU rate and those who do not avail themselves of such rate to determine program success and opportunities for improvement. This is referred to as "Customer Feedback Mechanism"

1. End of Q4 2018, discuss with stakeholder options for Customer Feedback Mechanism". This process shall be developed with stakeholder input. The Company will keep customer documentation and records on all customer feedback to the degree possible regarding its post-implementation of TOU in a format that can be shared with stakeholders upon request.

2. End of Q2 2019, finalize draft of Customer Feedback Mechanism and share with stakeholders.

3. End of Q4 2019, finalize Customer Feedback Mechanism and plans for implementing the mechanism, and share with stakeholders.

v. *The Company will develop, with stakeholder input, metrics to gauge changes in customer behavior. This is referred to as "Customer Behavior Metrics."*

1. *End of Q4 2018, discuss with stakeholders options for Customer Behavior Metrics.*
2. *End of Q2 2019, finalize draft of Customer Behavior Metrics and share with stakeholders.*
3. *End of Q4 2019, finalize Customer Behavior Metrics and share with stakeholders.*

vi. *Company will develop a business case for implementation of shadow billing feasibility, with the goal of implementing shadow billing for all residential customers.*

1. *End of Q4 2018, Company will review draft plan of shadow billing with stakeholders.*
2. *End of Q1 2019, Company will finalize business case for shadow billing and share with stakeholders to define next steps.*

vii. *Education on the merits of the opt-in rates, both specific to the customers taking service thereunder as well as to customers at large, will continue from the dates addressed herein until the Company's next general rate cases.*

d. *The Company will provide details of the education, marketing and outreach efforts, and customer TOU subscription numbers to the Commission at an on-the-record presentation in December 2019 and September 2020.*

e. *When completed the Company will submit to the Commission the following documents on an ongoing basis: Customer research plan, business case for shadow billing, marketing and education plan, EM&V plan, Customer Feedback Mechanism, Customer Behavior Metrics, EM&V interim and final results and documentation shared at each stakeholder meeting.*

f. *Company will meet with stakeholders by the end of Q1 2020 and end of Q1 2021 to discuss number of customers on TOU rate plan; changes in customer behavior including shift demands from peak periods and benefit from that shifting load; education effectiveness; customer feedback and questions; observations from summer vs non-summer rate impacts. Nothing precludes any stakeholder from making a filing with the Commission should it believe the Company is not actively providing reasonable outreach and education to their customers or other concerns regarding TOU deployment. Nothing prevents the Company from opposing any such filing.*

g. *If by December 31, 2019 KCP&L and GMO do not have at least 750 customers per company signed up for the TOU service, stakeholders will discuss and consider changes to the education and outreach plan or changes to program design necessary to enhance enrollment.*

h. *If KCP&L and GMO have not gained at least an additional 1000 customers per company by December 31, 2020, stakeholders will review education and outreach plan and program design changes necessary to enhance enrollment.*

i. By June 30, 2020, KCP&L will file a rate design case limited to TOU issues. For GMO, signatories further agree the September 20, 2016 Non-Unanimous Stipulation and Agreement in ER-2016-0156 will be expanded to include TOU, with the TOU rate design case to commence by June 30, 2020.

j. KCP&L and GMO will submit a Residential TOU rate design in their next rate cases based on lessons learned from the TOU service.

k. Company will complete an EM&V Report by December 31, 2021.

1. End of Q2 2019, review draft of EM&V plan with parties and solicit feedback on parameters and methodology.

2. End of Q4 2019, finalize EM&V plan with parties.

l. KCP&L and GMO shall be authorized to defer for recovery prudently incurred program costs (representing the prudently incurred work detailed above and including marketing, education, evaluation and administration costs) associated with the TOU service. In the next rate case, KCP&L and GMO shall be authorized to recover prudently incurred program costs at the level represented by the percentage of customers enrolled in the TOU service at the time of filing of the rate cases compared to the above target level, not to exceed 100% recovery of costs. KCP&L and GMO will demonstrate that such percentage is not simply a result of transferring customers to a lower rate, but based on efforts directly related to changing customer behavior through marketing and education."

On September 27, 2018, parties to Dockets ER-2018-0145 and ER-2018-0146 entered into a non-unanimous partial stipulation and agreement regarding class revenue shifts ("Class Revenue S&A").[4] Paragraph 4 of the Class Revenue S&A addresses customer education regarding rate design:

4(a). The Company agrees to develop and implement a customer education plan regarding the rate design presented in this Stipulation. In the development of the education plan, the Company will examine and evaluate leading educational processes and practices on customer education of rate designs. The Company's rate design education plan may include various forms of tools, marketing and customer education such as mailings, outbound calling, utilization of their Interactive Voice Response Unit ("IVR"), text messaging, website information, media outlets and outreach through various company partners including community action agencies, senior housing centers and others.

4(b). The Company agrees to provide Staff, OPC, and DE with a report detailing its planned rate design education program within the Q2 of 2019. The Company and interested parties may further address the Company's rate design education program within the stakeholder meetings identified in the Time Of Use ("TOU") Non-Unanimous Stipulation and Agreement filed on September 25, 2018 in these cases."

[4] Ibid.

It should also be noted that on June 15, 2020, the Company filed a request for an extension of the Time of Use Rate Design Case referred to in Case No. ER-2018-0145, Section 2.i.. On June 29, 2020, the Commission granted the Company's request for extension and ordered the Company to file a TOU Rate Design Case by June 15, 2021. This Report fulfills that requirement.

2.2 ADHERENCE TO RATE DESIGN AND CLASS REVENUE STIPULATION AND AGREEMENTS

To date, the Company has fulfilled the requirements of the Rate Design and Class Shift S&A's regarding TOU. Table 1 is a summary of the meetings with signatories and presentations to the Commission to fulfill the Company's requirements.

Table 1: Summary of Company Meetings To Fulfill S&A Requirements

DATE	DESCRIPTION
December 20, 2018	TOU Stakeholder Meeting-Shadow Billing Business Case, Customer Research Plan, Customer Feedback Mechanism and Customer Behavior Metrics discussed
February 27, 2019	TOU Stakeholder meeting-Draft of the EM&V Plan was shared
June 28, 2019	TOU Stakeholder meeting Project goals, Marketing Campaign & Rate Education Plan, and Customer Service Approach
October 1, 2019	Company began offering opt in TOU rates
December 11, 2019	MPSC Presentation-Strategy, Marketing & Outreach & Education, Enrollment Success
January 22, 2020	TOU Stakeholder meeting- Strategy, Marketing & Outreach & Education, Enrollment Success
March 26, 2020	TOU Stakeholder meeting -COVID-19 Pandemic, Marketing Campaign Recap, Enrollments, Education Effectiveness and Customer Feedback
September 23, 2020	MPSC Presentation-Enrollments, Education & Marketing Campaign Update, Customer Feedback, and COVID-19 Pandemic Considerations
October 30, 2020	TOU Stakeholder Meeting-Enrollments Update and EM&V Update
December 17, 2020	TOU Stakeholder Meeting -Enrollments Update and EM&V Interim Results
March 29, 2021	TOU Stakeholder Meeting -Enrollment Update, Education Effectiveness, & Customer Feedback

In accordance with the Rate Design and Class Shift S&A's, the Company has strived to gain input from stakeholders on this TOU Rate Design Case submittal. The Company presented its plan to stakeholders on March 3, 2021.

3 EVERGY'S RATE MODERNIZATION PLAN OVERVIEW

In 2020, Evergy developed a Rate Modernization Plan ("Rate Plan") that will guide the Company on several identified rate objectives over a period of time. The Rate Plan provides a framework for Evergy that is both responsive to its historical regulatory obligations in Missouri and Kansas, but also provides a framework for the Company's future general rate case filings. TOU is an important element in the Company's overall rate portfolio and this report and filing have aided in informing the Company on its initial TOU rate offering established in October 2019. It is important to the Company that the Rate Plan addresses how TOU fits into its overall portfolio of choice based rates for our customers.

The drivers of Evergy's Rate Plan are not all encompassing. However, the drivers identified reflect that the utility must balance many forces to increase overall customer satisfaction while recovering revenue requirements. The Company identified the following drivers to inform the Rate Plan:

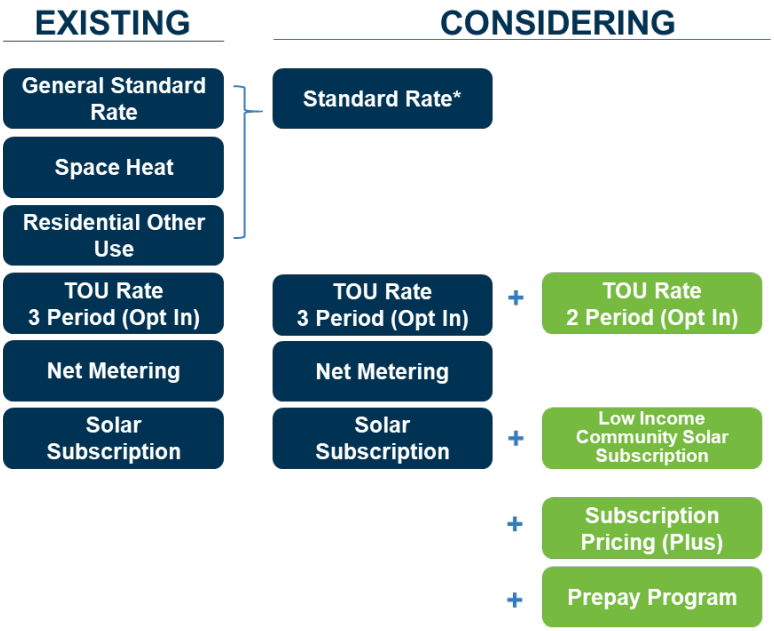
- Rates should include proper price signals that will enable adoption of emerging energy technologies that are most beneficial to the grid
- Rates should implicitly promote beneficial electrification and grid benefits
- Customer surveys indicate that higher customer satisfaction is directly correlated to choice
- As a result of mergers and acquisitions the past two decades, Evergy has multiple service territories in Missouri and Kansas with disparate rates
- Strive for rates that are more equitable across diverging customer classes and subclasses
- Significant MPSC and Kansas Corporation Commission ("KCC") interest exists around time of use and distributed generation rates

Through the Rate Plan, which will be executed over several rate cases and will flex with changes in regulatory outcomes, industry developments and customer desires, the Company will drive towards the following rate objectives:

- Creating rates that are independent of end use requirements
- Bringing rate structures closer together across jurisdictions
- Enabling business growth
- Simplifying rates and increase pricing transparency
- Providing greater customer choice
- Increasing customer satisfaction
- Leveraging Customer Information System ("CIS") and Automated Meter Infrastructure ("AMI") investments
- Developing price signals to increase grid efficiency

Considering these drivers, Evergy developed its Rate Plan. Figure 1 specifically highlights the components of the Rate Plan for Evergy's residential customers in anticipation of the Company's next rate case in Missouri[5]. As shown in Figure 1, the Company has developed a 2-period TOU rate to complement the Company's existing 3-period TOU rate offer. These TOU rates are further described in Section 5. A Low Income Community Solar Subscription rates, Subscription Pricing rates, and a Prepay program are further described in Appendix B.

Figure 1: Missouri Residential Rate Plan



The Rate Plan may take several years/rate cases to fully capture rate designs being considered to meet goals.

[5] Evergy does not address a Rate Plan for business customers in this Report.

4 SUCCESS OF EVERGY'S TOU RATE

While having the option to choose from multiple plans or services is not new in most aspects of a customer's life, the ability for an Evergy residential customer to choose from multiple rates is a new concept to customers given the regulated utility environment. Historically, rates have been focused on revenue recovery and providing only basic pricing signals. As the utility landscape has evolved, Evergy has prioritized choice for its customers. Following the approval of the Rate Design and Class Shift S&A's in October 2018, Evergy utilized the following twelve months to research, develop and implement the S&A's requirements to develop a TOU rate plan and looked to to turn this pricing mechanism into a productized solution for customers. To address these requirements, Evergy formed a cross-functional project team of over 80 subject matter experts from almost every area of the Company and began the year-long initiative to research, develop and implement a cohesive TOU solution.

Evergy deems that the TOU deployment has been successful, particularly if measured against the initial goals but also with respect to customer satisfaction. Within the 0145 Stipulation, each jurisdiction had a goal of reaching 1,750 customers by December 31, 2020. These goals were exceeded. As of June 11, 2021, Evergy exceeds the enrollment target with a total of 5,538 active enrollments (2,917 enrollments in Missouri West and 2,621 enrollments in Missouri Metro). This equates to about 160% of the stipulated goal.

The following sections describe the plan the Company undertook to develop a TOU Rate Plan that would be robust and responsive to customer needs. The primary goals of Evergy's TOU rate include:

(1) expand realm of customer choice by offering new choice based, time varying rates;
(2) reduce system coincident peak demand; and
(3) align pricing structure with cost causation.

Appendix C includes examples of the Company's education tools referred to in this section.

4.1 CUSTOMER RESEARCH PLAN

By the end of 2018, Evergy had collaborated with stakeholders to develop a comprehensive Customer Research Plan that leveraged qualitative and quantitative customer feedback to inform critical product, marketing and education decisions. As part of this plan, a Customer Feedback Mechanism was developed that comprised of five channels for soliciting and measuring customer reactions. These include: Focus Groups, Surveys, Social Media, Contact Center, and Website.

In early 2019, the Company began implementing this Customer Research Plan, kicking it off with six qualitative in-person focus groups:

- Adults with kids
- Adults with no kids

- Electric vehicle ("EV") drivers
- Low-income adults
- Elderly and on a fixed income
- Elderly and not on a fixed income

The Company sought to understand customer reactions to the TOU rate plan, the products and tools that would be needed by customers to understand the plan and support them when taking service on the plan, identify segments most likely to enroll, and test marketing and education messaging and visual creative content.

Following the in-person focus groups, the Company measured quantitative reactions to these same questions and incorporated marketing and education message testing to a larger digital audience. Once the TOU plan was launched in October 2019, the Company implemented post-enrollment, un-enrollment and behavior change surveys, as well as a form submission on the website and tracking mechanisms on social media and through the Customer Contact Center to continue measuring customer satisfaction, solicit feedback and gain insights for innovation and continuous improvement. In the spring of 2020, after customers had been on the plan for at least six months, a series of in-depth interviews were conducted with TOU participants to have a more comprehensive conversation on the offering - what's working, what could be improved, what do you like the most, etc. These measurement mechanisms are ongoing.

4.2 IN-PERSON FOCUS GROUPS[6]

After learning about TOU and seeing the actual visuals on rate plans, almost all except the elderly were very interested in the TOU Rate Plan. The interested customers were motivated by the ability to make changes that would lower their electric bill. The two elderly groups (both fixed and non-fixed income) were very hesitant to adopt the TOU rate plan. Hesitancy rested on change, worry about whether they would end up paying more, and uncertain of Evergy's motivations.

Through the focus groups, the Company learned that customers are aware of their electricity usage and do try to control their usage. Their motivation is to lower their monthly electric bill, but not to reduce their electrical footprint.

- 4-8 pm is peak usage in many households ("HHs"), although not all. This is the time when adults are getting home from work and children are coming home from school and afterschool activities. Thermostats are set to ensure comfort, dinner is being cooked, and members are using electricity for laundry, lights, TV, gaming, and phone charging. Several said that their peak usage time is 6-10 pm.

[6] In-Person Focus Groups (n = 47) Six 90-minute focus groups, Dates: January 29-31, 2019 / Six Groups: 1) No kids under 18 y/o living in HH, 2) With kids under 18 y/o living in HH, 3) Low-Income working, 4) Elderly and NOT on a fixed income, 5) Elderly and on a Fixed Income, and 6) Electric Vehicle Owners

- Activities that could be shifted fairly easily by most HHs were dishwasher usage (turned on later, or programmed later), laundry (shifted to other times or shifted to the weekend), and electric car charging (programmed to charge during the night).
- Changing the thermostat to “savings” during 4-8 pm would cause discomfort for most respondents. Most feel that they don’t have any margin for thermostat change within the “comfort” temperature range and that their HH members would not tolerate less comfortable temperatures.
- Bathing (tended to be children), cooking, and TV were activities that were too timely to shift. These are activities that must happen during the 4-8 pm timeframe. A few did mention that they could shift cooking away from the peak hours by meal planning or cooking earlier in the day.
- Turning out unneeded lights is an activity that most customers saw as a potential savings, yet most said that they are already trying to turn out unneeded lights, to varying success.

The different customer groups had different capabilities to make behavior/usage changes:

- Elderly - Many are home all day and could conceivably shift electrical usage to times earlier in the day (although they are very resistant to change).
- Low-Income - This group is doing the most already to reduce usage. They set the thermostat to “savings” or completely turn it off more often, leave fewer lights on in the house, and try to cut back on appliance use. They are less likely to have a dishwasher and dryer than higher-income HHs. Many have smaller houses or apartments. This group is very interested in finding more changes to make but may have less electrical usage to shift or reduce.
- Families / kids under 18 - This group has kid activities that must happen between 4-8 pm due to school and bedtime schedules: dinner, baths, afterschool TV/gaming/charging. Many parents are trying to do laundry that is needed for the next day. With more people in the house, it will be harder to get compliance from all family members. Families with kids under 18 years would have a very hard time making changes to their electrical usage.
- Working Adult HHs - All-adult HHs are smaller so have fewer persons who are using peak time electricity. Many said that their schedule is flexible or that their peak time is later in the evening already. This is the group that is best suited to make changes to their schedule to accommodate the TOU rate plan.
- EV Owners - While some EV owners charge their cars at work, many are charging them at home and could easily make use of their timers to schedule charging during the low rate nighttime hours of midnight-6 am. Those with cars that have a small battery were more likely to say that they couldn’t wait to leave their battery on low until midnight. Those with high capacity batteries were already scheduling their charging for the later, non-peak hours.

In addition, customers expressed both questions and hesitations about the TOU Rate Plan:

- "I might end up paying more" - top concern
- "It's not worth the discomfort for small savings" – top concern
- "My household can't change their behavior or change enough"
- Suspicious of Evergy motivations/intentions
- Too complicated to figure out if savings are possible

4.3 ENROLLMENT SURVEYS[7]

Evergy has also been retaining results of TOU customer enrollment surveys. Results of the enrollment surveys include:

- Saving money was the primary incentive for switching to the TOU plan for 93% of enrollees.
- Just under 90% of Missouri Evergy customers were largely satisfied with the enrollment process for the TOU plan.
- Three-quarters of customers rated the TOU communications - that included online tools, emails, and rate comparison reports to educate customers on the available plans - as very to extremely helpful.
- Just under half (48%) of the enrollees were aware of the Rate Comparison Tool. Of those, nearly two-thirds (63%) said the Rate Comparison Tool had a strong influence on their enrollment decision.
- While higher income customers were more likely to be aware of the Rate Comparison Tool (55% versus 44%), they were less likely to be influenced by it (56% versus 68%).
- Cost (96%) and comfort (85%) are the highest considerations on household electricity usage.
- Those that enrolled in TOU expected just under $20 in monthly savings (average: $19.11).
- Customers used a wide range of energy saving behaviors, even before their enrollment in TOU.
- Nearly all customers had at least one person at home during the peak hours.

4.4 UN-ENROLLMENT SURVEYS[8]

Results of TOU customer un-enrollment surveys include:

- Increased electricity costs or failure to save were the two biggest reasons for opting out of the TOU plan. Moving was also cited quite often, indicating that a process for automatic re-enrollment process might be helpful.

[7] Enrollment Surveys (n = 1,114) Every customer who enrolled in TOU received an email inviting them to complete a short survey. These surveys were completed between October 21, 2019 and October 4, 2020. All respondents were sent a $10 e-gift card for completing the survey.

[8] Un-enrollment Surveys (n = 160) Every customer who un-enrolled in TOU received an email inviting them to complete a short survey. These surveys were completed between December 20, 2019 and October 4, 2020. All respondents were sent a $10 e-gift card for completing the survey.

- Most of these customers put a great deal of effort into changing their behaviors. Running appliances during non-peak hours, turning off lights and running air conditioner less during peak hours were the most common changes with some finding them challenging to make.
- Those that chose to opt out of the plan were more likely to have people at home during the 4-6 pm time period.
- Making it cheaper, either through lower peak rates or non-peak rates, was mentioned by nearly a third of unenrolled customers completing the survey. Many customers who opted out also felt that they were not fully informed of how the pricing worked.

4.5 BEHAVIOR SURVEYS[9]

Participating TOU customers were also surveyed six months following enrollment. Results of the behavior surveys include:

- Two-thirds of TOU participants are satisfied and feel that the plan has met expectations. Older people are more highly satisfied (72% vs. 64%) and feel TOU has more fully met expectations (70% vs. 64%)
- Most customers saw their electric bills go down at least somewhat, on average $17 a month. Over 1 in 5 were unsure of the TOU rate plan's impact on their bill. A few customers reported seeing their bills increase.
- TOU customers have been most successful with running appliances during non-peak hours and adjusting the thermostat. Older TOU customers feel they have been more successful in shifting usage (60% vs. 52%)
- Saving money was still the primary incentive for switching to the TOU plan after being on the rate plan for 6 months.
- Over half of TOU participants said the Rate Comparison Tool had a strong influence on their enrollment after being on the rate plan after 6 months. While nearly two-thirds rated the Rate Coach reports as very useful, less than half felt that way about the Energy Analyzer and Welcome Kit.
- Seventy-eight percent of TOU participants have reviewed their hourly usage at least a few times since enrolling. Almost two-thirds who did review their hourly usage found it useful.
- EV owners made a substantial movement to charging their electric cars overnight after enrolling in the TOU plan (24% to 84%).

[9] Behavior Surveys (n = 750) Every TOU customer received an email inviting them to complete a short survey after being on the TOU rate plan for six months. These surveys were completed between July 16, 2020 and November 1, 2020. All respondents were sent a $10 e-gift card for completing the survey.

- COVID-19 Pandemic made shifting to non-peak hours harder for more than one-third of TOU participants. More people were at home during the quarantine period both during peak times and in general.
- Over half felt that it was harder to shift their usage from the peak hours during warmer weather. The use of the air conditioner was the overwhelming reason that made it hard to shift usage.
- TOU participants most appreciate savings and pricing options, as well as awareness of their energy usage.

4.6 EDUCATION TOOLS

Per the Rate Design S&A, by the end of 2018 Evergy completed a business case that evaluated shadow billing. The business case included industry research on traditional shadow billing approaches, goals of shadow billing, best practices and pitfalls. Understanding the advantages of shadow billing allowed Evergy to establish goals and criteria to evaluate solution options. Evergy recommended a shadow billing approach that included three tools - Rate Education Reports, Online Rate Analysis Tool, and Post-Enrollment Rate Coach Reports[10]. These tools are delivered strategically and cohesively to customers to provide personalized information that allow customers the ability to better make decisions on managing their energy. This shadow billing strategy formed the foundation for Evergy's TOU engagement strategy. Marketing and education were then built in collaboration with this engagement strategy.

4.6.1 Pre-Enrollment Education Tools

The Company's pre-enrollment education tools include a Rate Education Report and an Online Rate Analysis Tool.

Rate Education Reports
A personalized paper and/or email report mailed and/or emailed to customers two times per year educating them on their rate plan options. Specific report features include: detail on why they are receiving the report, overview of different rate plans available, personalized cost comparison of rate plans the customer is eligible for, monthly and yearly rate plan comparisons, tips, and frequently asked questions.

Key statistics are as follows:

- 42% average unique open rate
- 68% average overall open rate, indicating many customers open the report more than once
- 60% spent time reading the report vs glancing or skimming it

[10] See Appendix C for examples of the TOU education tools.

Online Rate Analysis Tool
An interactive web tool that includes rate plan comparisons, rate details and a rate simulator. The tool helps customers answer key questions including: How does this rate plan work? Is this the best rate plan for me? How will this rate affect my bill, short and long-term? What behavioral changes can I make that would make an optional rate plan, like TOU, work best for me?

Key statistics are as follows:

- 61% TOU customers interacted with the Online Rate Analysis Tool before enrolling
- 44% clicked the "Change My Plan" call to action within the tool

4.6.2 Post-Enrollment Education Tools

The Company's post-enrollment education tools include Rate Coach Reports and self-service hourly AMI data analytics.

Rate Coach Reports
Personalized, proactive, data-driven weekly report to TOU customers educating and coaching them on how to be successful on TOU. Customers receive an introductory report, week over week coaching, and a monthly peak usage and cost summary. Key report features include: rate details, hourly usage and costs visualization, weekly comparison, peak usage summary, tips, and season transition education when applicable.

Key statistics are as follows:

- 57% average unique open rate and many customers open multiple times. Opower[11] shared that this open rate was the highest in its experience in the utility industry. In addition, for comparison, Evergy company unique open rate average is approximately 40%.

Self-Service Hourly AMI Data Analytics
Interactive web tools that visualize customer hourly usage and costs.

Key statistics are as follows:

- 63k impressions, or views, since October 2019

[11] Evergy has retained Opower and partners with Opower to provide the TOU Rate Education Reports, Online Rate Analysis Tool, and Post-Enrollment Rate Coach Reports.

4.7 MARKETING OUTREACH AND EDUCATION PLAN

Evergy created an awareness, enrollment and success campaign to help customers understand their rate options, to reach and exceed the stipulated enrollment goal of 3,500 customers, and help customers to be successful to manage their energy on the new rate plan once enrolled.

The Company identified the four main objectives:

- Inform all customers on the new TOU rate option and how time of day affects electricity pricing.
    - Measurement:
        - Location: TOU participation location percentages consistent with Evergy residential customer location
            - Result: TOU participation locations consistent[12]
        - Channels: Use J.D. Powers 2019 recommended communication channels for rate education (bill insert, direct mail, email, bill message, bill newsletter)[13]
            - Result: Used Bill inserts, direct mail, email, bill message and more
        - Rate Landing Pages: Increase TOU rate page visits 20% over Evergy's General Use Rate pages
            - Result: 800% more pages views vs Evergy's Standard Rate Page after Spring Campaign based on Google Analytics
- Educate interested customers on where to find information about the TOU option and how the rate plan works.
    - Measurement:
        - TOU Landing Page: Time of page (over 1 minute) and bounce rate (under 60%)
            - Results: 1:49 avarage time on page, 51.5% bounce rate based on Google Analytics after Spring 2020 campaign
        - Rate Comparison Tool Visits: Rate Comparison Tool percentage of enrollment Over 40%
            - Results: 61 percent
        - Rate Video Views: Achieve over 2,500 views
            - Results: 4,400 after one year based on YouTube video plays

[12] *Based on Guidehouse Evaluation from December 2020*
[13] *J.D. Power 2019 Electic Utility Residential Customer Satisfaction Study, SM – (Results includes Waves 1-3)*

- Enroll customers in TOU, exceeding enrollment goals of 3,500, through targeted, data-driven marketing.
    - Measurement:
        - Enrollment numbers as of December 2020
            - Result: 2,261 Mo Metro, 2,744 Mo West[14]
        - Enrollment channel: Goal of over 70% enrollments coming from online
            - Result: 91% as of 12/14/2020
        - Surveys: Post-enrollment surveys to understand enrollment experience and any challenges
            - Results: See section 4.3, 4.4 and 4.5 for results
        - Marketing channel: Channel performance at or above industry benchmark
            - Result: Just under 90% of Missouri Evergy customers were largely satisfied with the enrollment process for the TOU plan.

- Assist customers who have enrolled by creating tools and an ongoing communication campaign.
    - Measurement:
        - TOU Rate Coach Report open rates, stay at or above Evergy marketing email average of 40% open rate
            - Result: Over 57% average weekly open rate
        - Survey Response: Use post-enrollment survey, 1:1 interviews and un-enrollment survey data to understand customers understanding or rate and communication needs
            - Results: See section 4.3, 4.4 and 4.5 for results

Evergy developed a multi-pronged education and outreach campaign to educate customers about the new TOU rate plan, while also specifically focusing on key segments who, based on research, were likely to enroll. Prior customer feedback reflects that rate information feels complicated, so it was imperative to simplify messaging and use strong visuals to help customers understand the complexities of the TOU program relative to the standard rate. Due to the multiple TOU time frames and pricing[15], the offer had the potential of being confusing. Therefore, the team focused on messaging, creative, tools (pre-enrollment and post-enrollment), and outreach tactics to engage the TOU customer.

[14] *Based on GuideHouse Evaluation from December 17, 2020*

[15] The current TOU rate includes 3-period pricing of Off-Peak: 6 am-4 pm and 8 pm-12 am; Super Off-Peak: 12 am-6 am; and On-Peak: 4 pm-8 pm.

4.7.1 Messaging

Because the TOU rate could feel complicated relative to the standard rate and hard for customers to remember and understand the time periods, a simple tagline of “Wait ‘til 8” was developed to help customers understand the plan and what times they needed to shift their usage to save money. While there are other time periods during the day that a customer could save money, Evergy wanted to simplify the concept and make it easy to understand, therefore the “after 8pm” messaging was selected.

4.7.2 Creative

The Company identified the need to develop a creative concept that tapped into everyday behaviors to connect the new plan in a simple, fun and memorable way. It was important to show customers that they could save money on energy with the new plan – not by changing what they do, but when they do it. To do this, a simple everyday clock concept was developed, with a tagline of “Wait ‘til 8” in the middle to help customers remember the after 8 o’clock message. Then, a bold, everyday appliances imagery like a dishwasher and washing machine, was paired with a clock to visually represent the types of changes a customer would need to make to be successful on the new plan.

4.7.3 Pre-Enrollment Tools

During the focus groups, the Company learned that customers were interested in new options, but they wanted to be able to do a lot of their own research and self-educating before selecting a new rate plan. Therefore, it was important to provide new, easy to understand tools to help customers learn about the rates and use personalized energy usage information.

Rate Education Reports

Mass awareness and understanding of the new rate options was an identified goal. As a special direct mail and email item, each customer would receive a personalized Rate Education Report two times per year – one in the spring and one in the fall. This personalized report educates customers about their new rate plan options, leverages customer AMI data to explain how the plan works and provides a detailed rate comparison of what a customer would have paid over the past 12 months on the two different rate plan options.

Online Rate Analysis Tool

To provide a great online experience and to help customers compare their options and costs, an Online Rate Analysis Tool was added. This new tool allows customers to login to their billing account and compare what they would have paid over the last twelve months on TOU compared to their current rate. Evergy data shows that over 60% of customers who signed up for TOU first looked at this comparison tool before deciding to enroll.

4.7.4 Post-Enrollment Tools

Knowing that this was a new concept for customers, and if behavioral changes did not persist, customers may realize a higher energy bill, instead of lowered energy costs. Therefore, data driven tools and continuous education were imperative to help customers be successful on the new TOU plan. To accomplish this, Welcome Kits and Rate Coach Reports were developed to increase a customer's success of participating on the TOU rate.

Welcome Kit

Once a customer enrolls, they receive a welcome letter via US Postal Service. The welcome kit provides a tear-away card with the rate hours to keep on hand and a "Clean/Dirty" dishwasher magnet that reminded customers to "Wait 'til 8" to run their dishwasher.

Rate Coach Reports

A week after a customer signs up for the TOU plan, they begin to receive a weekly email report called the "Rate Coach". This weekly email serves as a proactive success tool, delivering to customers key TOU information. It provides customers an hourly breakdown of usage and costs overlaid with the pricing period time frames to help them understand their hourly, daily and weekly consumption patterns and how that impacts them considering the TOU rate structure. It also provides a week over week comparison to encourage continuous improvement, a time period and pricing reminder to reinforce the TOU pricing differentials and importance of usage shifting out of the peak period, and realistic tips to continue to educate on and motivate behavioral changes. Research has shown that these weekly reports are TOU customer's favorite success tool. These reports realize nearly a 60% unique open rate each week, with most customers opening it more than 3 times.

4.7.5 Outreach Tactics

A campaign goal was to provide a large-scale customer awareness campaign and to meet and exceed enrollment numbers. To do this, the Company used both mass awareness and more targeted enrollment tactics.

Website

The Company made updates to the rate plan webpage, adding more customer-friendly language, new graphics and a new video which explained how the rate plan works. A new special campaign landing page was developed, which includes additional graphics that matched many of the TOU marketing items, new helpful charts, a video and additional information and imagery.

Video

A new TOU video was created to help explain the new program and concept. The three-part video includes: "How the Rate Works", "Why We Have the New TOU Rate Plan", and "Tips on Being Successful on the Plan".

Digital

The digital campaign included mostly short animated ads to grab the viewer's attention, while also allowing for extra time to share more information about the plan. The creative followed the rest of the campaign and directed customers to landing pages to learn more. Targeted display ads were used to hit key enrollment groups, while also using pixels to retarget individuals who visited the site but chose not to enroll.

Social

A mix of Awareness and Enrollment ads were used to help spread mass awareness. For Awareness ads, Facebook video, static and carousel ads were used to help explain the TOU Plan and provide key points. In Enrollment ads, research-backed audiences of "Early Adopters", "Auto Savers", and "Working Adults with No Kids" were used to target with the ads. In addition, social ads were developed for lookalike customers who enrolled during our first phase and retargeting pixel ads.

Radio

To help accomplish a goal of mass awareness of the TOU Plan, the Company partnered with Fradio to accomplish much of the mass awareness needs. Because research shows that area customers spend a lot of time in the car listening to the radio, the Company used a a "sandwich" approach to the radio ad, with a very catchy jingle used at the opening and closing of the ad and a more informational section in the middle.

Email

Using customer email list and segmentation based on research findings, the Company used email to target customers to enroll. Costumed graphics and copy were used for target groups, including "EV drivers", "Auto Savers", "Working Adults with No Kids" and "Technology Adopters".

4.8 IMPLEMENTATION

It was important to build momentum for the introduction of the new TOU Rate Plan. As a traditional product adoption curve illustrates, connecting with Innovators and "Early Adopters" to ignite early awareness, enrollment and advocacy would allow the Company to move in a positive direction to build greater awareness within the larger customer base. A four-phased implementation approach was developed.

4.8.1 Phase 1: Employees

Not only was the TOU Rate Plan new for customers, but it was also something different for most Evergy employees. Providing a strong foundation to employees was important as they are often on the front-line getting questions from their friends and neighbors. The Company started with an internal employee campaign to help all employees, from linemen to accountants, understand how the TOU Rate Plan works and to be confident advocating the new plan to their families and friends. Unique ways were created to get the key message points to stick with team members which included restroom mirror clings, elevator wraps in all buildings, a desk info card and identification badge card with helpful information.

4.8.2 Phase 2: Early Adopters

The second phase, which lasted about three months, included reaching out to customers who are identified as "Early Technology Adopters" and customers who may believe the TOU Rate Plan could be an easy switch for their current lifestyle. This would allow the Company to test the new tools and enrollment process, develop success stories to help advocate for the new rate plan and continue to test messaging and creative. In this phase, email, a low-cost tactic, was used to allow for different messages to be tested. The three main target groups for this phase included:

- "Early Technology Adopters": The Company identified this group through third party data and matched it with customer information. This group tends to be familiar with being the first to try something new and willing to give feedback.
- "EV Drivers": EV drivers are generally already familiar with new technology and options. In addition, they would benefit from the off-peak charging times for their vehicles.
- "Auto Savers": Through an electric usage analyses, we identified customers who would automatically save money on the new TOU rate, without much lifestyle changes.

4.8.3 Phase 3: Mass Awareness

In this phase, mass awareness channels, like radio, were used to create wider reach for the TOU message. Though research using U.S. Census data, the Company learned that Evergy's overall customer group spends a lot of time in the car. On average, the drive commute in Evergy's region is 23 minutes, and 83% of those employed drive to work alone, meaning the Company had a captured audience who often listened to the radio each day. A radio campaign was developed using high-level messaging to drive customers to our website where they could learn more. The Rate Education Report is also mailed to all residential customers.

4.8.4 Phase 4: Enrollment

Our fourth phase was geared toward getting enrollments into the TOU Rate Plan. Through focus groups and online surveys, "Working Adults with No Kids" were identified as a group who was very interested in the program and felt they could make the lifestyle changes necessary to be successful on the new rate. Marketing channels, like social, email and digital, were used to target messaging to this group, in addition to other main audiences like EV Drivers and "Routine Changers".

4.9 EVALUATION, MEASUREMENT AND VERIFICATION (EM&V) PLAN

In accordance with the Rate Design S&A, Evergy agreed to submit an EM&V plan, provide for an interim EM&V report by December 2020, and a final EM&V report to be completed by December 31, 2021. Evergy retained Guidehouse Inc. ("Guidehouse") to support the efforts to study residential TOU rates and provide independent evaluation services to verify the ex-post (historical) impacts of the TOU rates.

Evergy shared the results of the interim EM&V results to stakeholders on December 17, 2020. Below are the key findings from the interim EM&V:

- Results indicate that the TOU rate and associated program design has had the desired effect of reducing consumption during the on-peak period (4-8 pm M-F) in both the summer and non-summer seasons and driving participant bill savings (on average).
- Peak System Impacts – TOU participants lowered their demand by 4-9% at system coincidence peak.
- Bill Impacts - On average, participants are saving annually. Summer bills see the greatest savings, approximately half of which are driven by behavioral changes while non-summer bills see an increase for those previously on the electric heating rate primarily driven by rate structure changes.
- Annual savings for residential general customer ranges from 5 to 10%.
- Annual savings for residential space heating customer ranges from 3 to 6%.
- Enrollments – the Company had exceeded stipulated enrollment targets within the evaluation year, which at the time was 142% of the overall Missouri enrollment target of 3,750 customers[16].
- Attrition – Approximately 50% of attrition (700 customers) that occurred during the evaluation year was from customers moving.

Appendix A includes detailed information regarding the interim EM&V report. Evergy will also submit a final EM&V report per the Rate Design S&A by December 31, 2021.

[16] Evergy had achieved 142% of the stipulated goal (3,500 customers) at December 7, 2020 at the time of the presentation of the interim EM&V. As of June 11, 2021, the Company has achieved 5,538 active enrollments (2,917 enrolled customers in Missouri West and 2,621 enrolled customers in Missouri Metro). This equates to about 160% of stipulated goal.

5 TOU RATE DESIGN PLAN

5.1 INDUSTRY RESEARCH & BEST PRACTICES

Evergy, with the assistance of Brattle, conducted research and benchmarking on TOU deployments across the electric utility industry. Despite the fact that TOU rates are available in most states, enrollment in TOU rates is still very low nationwide, with only a few utilities having substantial (>10%) participation in TOU rates.

5.1.1 Best Practices in TOU Design

The analysis of dozens of TOU pilot programs worldwide indicate that customers do respond by shifting consumption and reducing peak demand. The design choice that most affects the impacts of TOU rates is the ratio of peak to off-peak prices, with stronger price signals yielding higher peak load reductions.

The TOU rate being offered by many utilities today fall into two design categories, legacy and modern. Legacy TOU rates were often introduced decades ago to satisfy Public Utility Regulatory Policies Act requirements and have not been heavily marketed to customers. Many legacy TOU rates have very long (i.e., >6 hour) peak periods, an increased fixed charge (to cover the cost of a TOU meter), and mild peak-to-off-peak price differentials.

Widespread AMI deployment led to a new, more customer-centric generation of modern TOU rates. These rates generally are designed with the simultaneous goals of reflecting costs, encouraging load shifting, and accommodating customer preferences. A survey of TOU pricing pilots over roughly the past two decades provides useful insight into the design best practices of modern TOU rates, which include:

- Most TOU rates are offered on an opt-in basis.
- Many utiliiites offer customers multiple TOU rate option choices.
- On-Peak time periods are significantly shorter, typically 4 hours.
- Modern designs have significantly higher On-Peak to Off-Peak price ratios.
- There is a clear relationship between peak impact and Peak to Off-Peak price ratios.
- Utilities with large solar penetration are shifting their On-Peak period to address the changing system load patterns.

5.1.2 TOU Deployment Strategy, Opt-In vs Opt-Out

As discussed in Section 3, in Dockets ER-2018-0145 and ER-2018-0146, the MPSC approved that KCP&L and GMO would offer a residential **opt-in** Time of Use Service (effective October 1, 2019) as an alternative to the Company's standard residential rate. The TOU opt-in rate would also remain in effect until changed by Commission order.

The subject of opt-in versus opt-out TOU rates has been debated in the electric utility industry for several years. An opt-in structure is such that the default is a flat rate or a blocked/tiered rate and a customer may choose to have a time varying rate. The choice of remaining on the status quo flat or blocked/tiered rate is the choice of the customer. On the other hand, an opt-out structure is such that a commission mandates that all customers are placed on the time varying rate, which forces a customer to take action to revert to the flat or blocked/tiered rate, or select another rate within the utility's portfolio of rates.

States and commissions have adopted different approaches on opt-in versus opt-out. Most utilities in the U.S. still offer TOU rates on an opt-in basis. In a limited number of cases, some utilities have or will deploy TOU on a opt-out or mandatory basis. For example, in California, by 2022, all investor-owned utility ("IOU") companies must automatically move customers to a TOU rate. Customers will be provided the option to "opt out" and stay on their current rate or select another rate. Depending on the utility, some customers, such as low income, will be considered differently and may be offered a different rate.

The California default TOU path began in 2013 and came as a result of legislation to reform residential rates. Specific guidance was offered and key steps were expected to be completed by IOUs to ensure readiness. That transition spanned seven years (2015-2022). It is yet to be determined how successful these rates will be. The success will be contingent on a number of factors.

Another well known default TOU rate was the one offered by Puget Sound Energy in 2001, which had a slight peak to off-peak differential. Following a backlash related to limited customer bill savings because of this low differential, the result was an immediate opt out by 10% of its 300,000 customers and Puget terminated its program in 2002.

In addition to national research, Ameren transitioned to a portfolio of TOU rates in Docket No. ER-2019-0335. Ameren's portfolio includes TOU rates that have different rate differentials and periods. Their portfolio consists of the following: Anytime Users rate, Morning/Evening Savers rate, Overnight Savers rate, Smart Savers rate, and Ultimate Savers rate. With the exception of the Anytime Users rate, the balance of the rates feature time variation in the price of electricity. The Ultimate Savers rate includes a demand charge. Evergy understands that Ameren's AMI deployment will be completed in 2024 at which time all of their customers will fully be able to select service under these rates. Evergy is not familiar with any publicly available results (eg, EM&V, customer satisfaction, off peak load shift) from Ameren's TOU rate offerings to this date.

Brattle performed research for Evergy for purposes of this Report and found that:

- **Opt-out TOU deployment remains an uncommon** deployment method across utilities

  Brattle identified 100+ residential TOU rates offered by IOU across the U.S. Most of these TOU rates are opt-in. Consumers Energy (Michigan), Xcel Energy (Colorado), and the 3 IOUs in California (Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric) have the only opt-out rates among IOUs as far research indicates. The opt-out rates offered by these utilities have all been implemented within the past two years.

- **Average peak demand reduction per participant is higher under opt-in** deployments than opt-out deployments There are few pilots directly comparing opt-in versus opt-out rate designs. One is the Sacramento Municipal Utility District's evaluation of opt-in versus opt-out TOU pilots, which found that the average response per opt-in TOU participant was double that of an opt-out TOU participant.
- **Customer satisfaction** under TOU remains high either opt-in or opt-out. The majority of customers who started and also completed TOU pilots, expressed a high level of satisfaction in their experiences with the new rates and continued taking service under the rate after the study ended, provided such opportunities were available.
- **Opt-out rates have higher enrollment rates relative to opt-in rates** (e.g., 80% enrollment for opt-out versus 20% enrollment for opt-in). "Inertia" causes the majority of customers to stay on their default rate. Time and significant marketing will be required to drive towards a high opt-in rate enrollment. For example, OG&E reached ~20% penetration of its residential class on the Variable Peak Pricing rate tested after a little more than three years of marketing it.[17]
- **Opt-in programs can potentially achieve greater overall impact** due to the fact that opt-in offerings achieve greater impacts per-participant than opt-out program participants. The strong price ratio in Evergy's TOU rate design (6:1)[18] is expected to produce greater system peak demand reductions than an opt-out TOU rate with a mild price differential. Brattle's analysis concluded that an opt-out rate offering with 80% participation would need to have a price ratio of greater than 2:1 in order to produce the same impact as Evergy's opt-in TOU rate with 20% participation.

Evergy has achieved an approximate 1.1% customer enrollment in its opt-in TOU program to date over a 20 month period. While customers continued to enroll during the COVID-19 Pandemic and Evergy did not see a higher than normal un-enrollment in the TOU program, it is likely that customer enrollment was hampered by the COVID-19 Pandemic. Additionally, it will require time for customers to become more aware of the TOU offer, which will occur over time through education and marketing efforts. As described in Section 4.6, Evergy will continue to offer the three core TOU education tools which include the Rate Education Reports, Online Rate Analysis Tool, and Post-Enrollment Rate Coach Reports. These tools have had very good success with customers and have been received positively by customers as indicated by research and data analytics.

[17] "Final Report on Customer Acceptance, Retention, and Response to Time-Based Rates from the Consumer Behavior Studies" by US Department of Energy, November 2016

[18] Throughout this report, ratios are presented to reflect the pricing relationship between the TOU periods. In this example, 6:1 indicates that the on-peak price is six times the off-peak price. The supporting text offered with the respective ratio should help the reader to understand the periods being compared and represented with the ratios.

Section 5.3 offers further detail on the Company's strategic intent with respect to the inclusion of TOU rates in its portfolio of residential rates.

5.2 CUSTOMER RESEARCH

Evergy believes that a TOU rate should reflect customer preference in order to maximize results and objectives. The Company has a long history of listening to our customers and working to best understand what they want in many facets of energy and as their energy provider, exploring electric rates with customers is no exception. Specifically in the last 5-10 years, as part of industry research studies, ongoing research with customer panels and as deliverables of agreements in prior regulatory proceedings, the Company has engaged with customers in numerous ways around their electric rates. One common theme rings true in the results from these studies and that is the ongoing desire for customers to enjoy a choice of rate plans.

When breaking down some of the prior research into "past" or pre-TOU pilot launch and "current" or during the TOU pilot activity, the trends of customers insights stay steady with a strong preference for electric rate choice. These studies and few current findings include:

"Past" – Previous studies incurred to learn from customers on rate preferences and behaviors

1. Industry studies on rates and customer behavior (Electric Power Research Institute 2015)
2. Residential Rate Design Strategy Study (Burns & McDonnell 2017)
3. Demand Side Management ("DSM") Market Potential Studies (2017, 2020)
4. TOU Pre-launch Focus Groups (2019)

   Relevant finding: Most customers said they wouldn't like a mandatory TOU rate plan but also understand that customers don't have a choice.

"Present" – Engagement with current TOU rate participants and non-participants post-enrollment/un-enrollment and behavior change surveys and 1:1 interviews (2019-2021)

1. Current TOU participant 1:1 behavior surveys (2020-2021)

   Relevant finding: Over half of TOU participants would regard Evergy less favorable if they required participation in the TOU plan.

2. Rate Modernization all customer survey (2021)

   Relevant finding: Ninety-three percent of Evergy customers feel it is important to have choice in rate plans. Bill amount and complexity are the two most important considerations when choosing a rate plan. More than half (57%) would be less satisfied with Evergy if TOU were mandatory.

3. JD Power Residential Electric (Annual)

   Relevant finding: Customer satisfaction is higher among customers who have switched from the default rate plan to one they have chosen.

Additionally, Evergy will continue to learn from its customers following approval of new rate options. Activities to obtain feedback and stay in tune with customer attitudes could look similar to the list below.

"Future" – Expected ongoing interaction with TOU participants and Evergy customers at large

1. Repeat current TOU participant and non-participant survey instruments – enrollment, post-enrollment and non-participant attitudes towards their experience and/or preferences.
2. Evergy online customer panel – engage with customers who are interested in giving feedback around energy topics to understand rate choice preferences including experience with existing offerings and preferences around potential offerings.
3. Monitor social media – ongoing observations of Evergy customer reactions to existing rate choice offerings to identify if emerging trends for Evergy to take action.

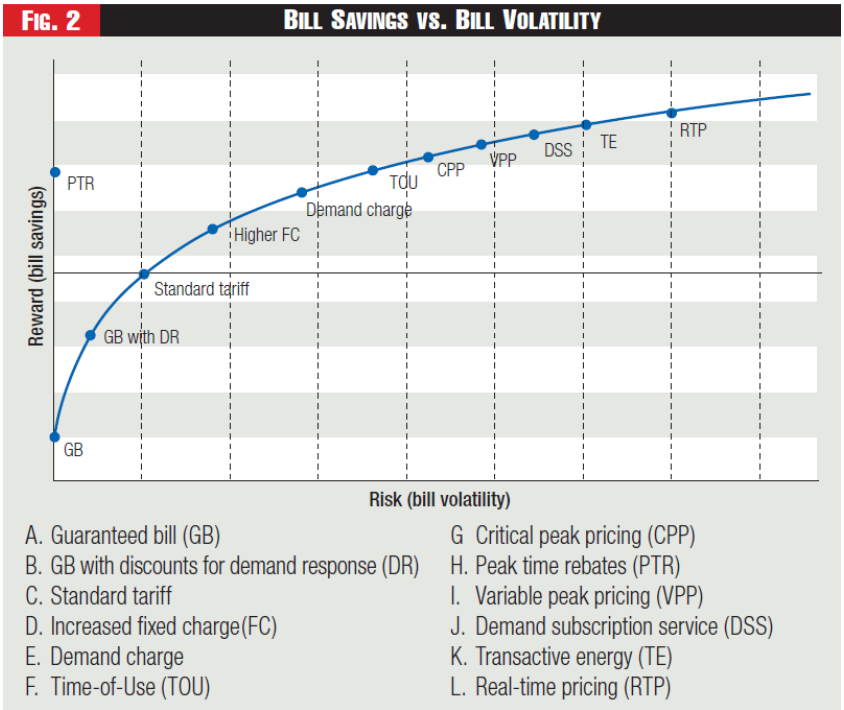
5.3 STRATEGIC INTENT

As the Company continues to move forward with offering its TOU rate, it is important that it delivers on the expectations of the initial Commission approval and appropriately improves upon the rate offering. Earlier in this report the Company detailed the development of its Rate Plan and identified the drivers and goals behind that plan. These broad objectives informed action on a variety of rates with TOU rates being an integral part of the Rate Plan. Strategic expectations for the TOU rate were detailed in the negotiated conclusion of the Company's 2018 Missouri rate cases. As set forth in Section 2.1 of this Report describing the elements of the Rate Design S&A, parties agreed that "TOU rates should be part of a broad selection of rates offered to Customers and utilized to help the Company provide an opportunity to Customers to shift demands from peak periods and benefit from that shifting load. Further, TOU rates allow the Company and Customers to extract additional benefit from recent upgrades in metering and billing systems."[19]

In confirming the TOU rate design's place in a broad selection of rates, the Company examined a range of rate alternatives deployed by electric utilities and noted that most are seeking some balance between risk and reward. This relationship is best visualized in a chart offered by Dr. Ahmad Faruqui of the Brattle Group. Figure 2 shows a number of rate design approaches along a continuum, expressing how these rate offerings balance customer risk and reward.

[19] Non-Unanimous Partial Stipulation and Agreement Concerning Rate Design Issues. Case No. ER-2018-0145 and ER-208-0146, filed September 25, 2018, page 2

Figure 2: Rate Design Spectrum[20]



The baseline reference of Figure 2 is the standard tariff. Other rate design approaches are represented along a curve with higher or lower bill savings and high or lower bill volatility. TOU is shown to the right of the standard bill, suggesting that the TOU rate delivers a higher opportunity for bill savings, but does so with higher bill volatility for the customer. TOU rate designs are distinctly different from standard rate designs and successfully serve as a viable options for customers. Under the Company's Rate Plan, TOU continues to serves a distinct role in the portfolio of rate designs the Company is considering for the future.

Evergy has observed that utilities who offer portfolios of rates experience a distribution of customers across the rate offerings. This is to be expected and in the Company's opinion, a healthy outcome. For example, in 2013 Oklahoma Gas & Electric Company ("OG&E") offered seven distinct rate options to its residential customers. OG&E further reported that participation varied across these rates such that about 44% of the customers sought rates that provide price security, about 36% sought rates that provide price sensitivity and about 20% sought to remain on standard tariff pricing. Georgia Power, for example, offers seven rates for customers to choose from so that customers may "choose the right plan for your budget and lifestyle".[21] Georgia Power's rate plan includes a variety of rates that range from standard residential service to time of use to prepay and a flat bill. Evergy would expect similar distribution of

[20] Ahmad Faruqui, Rate Design 3.0: Future of Rate Design, Public Utilities Fortnightly, May 2018, page 38.
[21] https://www.georgiapower.com/residential/billing-and-rate-plans/pricing-and-rate-plans/plug-in-ev.html

customers across the various rates, similar to OG&E, and the rate plan offered by Georgia Power is similar in concept to the Rate Plan presented in Section 3.

In confirming the expectation of extracting additional benefit from Evergy's recent upgrades in metering and billing systems, one should first consider the nature of these upgrades. At the time of the 2018 Stipulation, the Company, specific to the KCP&L-MO and KCP&L-GMO jurisdictions, endeavored to replace its CIS, or billing system, and deploy an AMI system. The billing systems of both utilities and the Automated Meter Reading ("AMR") system used by KCP&L had reached end of life and replacement was needed. Sufficient benefit to justify the upgrade was expected to be received by bringing the jurisdictions together under a common billing system and AMI system. Important benefit was provided in the area of customer data. In deploying TOU rates, it was expected that these systems could enable further benefit. These expectations have been substantiated through review of customer surveys and the other customer interactions, as it has been demonstrated that TOU has been effective in raising the energy awareness of participating TOU customers. In addition, the Company has communicated comparison of TOU and standard rates in the Rate Education Reports to all customers – participating and non-participating. Among other activities, the Company specifically utilizes the AMI data to support education on the TOU rate plan.

In addition, most significant has been the transition to broader utilization of AMI data. Evergy has every indication that the capabilities of the new billing system and AMI upgrades are providing benefit consistent with the investment and that TOU allows for the extraction of additional benefits.

Turning to the TOU Rate Design Plan and confident these stakeholder and Commission initial expectations are being met, Evergy re-evaluated the state of the Company since the 2018 TOU agreement. Much has occurred since that time and two primary events were relevant in assessing the Company's TOU plans going forward. These events include the merger with Westar and the announcement of Evergy's Sustainability Transformation Plan ("STP"). The merger with Westar brought with it the assets and customers, but also the rate structures and approaches deployed in that jurisdiction. KCP&L and Westar had many similarities but also many differences, all that needed to be brought together as Evergy. At the time of the merger, Westar was planning a billing system replacement, had deployed a limited TOU pilot and was initiating the deployment of an AMI system. Although similar in concept to the work being undertaken by KCP&L side, there were many details that were distinct. As a result, viewing TOU rate design plans from a combined company, or Evergy, perspective required some adjustment.

With the announcement of the STP, Evergy set out its vision to become a sustainable energy company, transitioning generation, modernizing the grid, achieving cost efficiencies and creating an enhanced customer experience. These goals provide an overarching context to guide plans for rate design. The Rate Plan and the TOU Rate Design Plan seeks to complement the goals of the STP.

Under these events and other more tactical perspectives, the Evergy team set out its considerations for the TOU rate design. Efforts began with the consideration of traditional rate design principals, like those exemplified by the Bonbright Principles. The TOU Rate Design Plan represents the continuation of the existing strucutre but yet enhancements. The Company considers the following notable additions:

- ***TOU remains an important part of Evergy's plans for today and in the future.*** Customer Experience is identified as one of the four, key elements of the Evergy STP Plan. Giving customers a choice on their rate plan has been identified as a factor in ensuring the customer experience remains positive. As explored in Section 5.2 of this report, significant weight was given to customer considerations through customer research. In addition, the Company's Rate Plan reinforces the need for not only the existing 3-period TOU plan, but expanding it to also offer a 2-period TOU plan.

- ***It is appropriate to providing a broad selection of rates.*** Building on the prior point, customers have expressed a preference for choice in their rate plan. As shown in Figure 2, a number of commonly deployed rates offer customers a range of options to seek the balance of risk and reward suitable for their situation. TOU rate designs, introducing more bill volatility but offering greater opportunity for savings, move beyond simple cost recovery and seek to influence behavior. The influence is certainly through pricing but is also established by educating customers and helping to align their point of view with the cost drivers observed by the utility. Customer relationships are critical in helping achieve this alignment. A growing portion of customers seek to be more involved in their energy experience. Others are seeking less involvement, instead seeking predictability and control. By providing choice and meeting customers where they are, we expect to receive a more meaningful and lasting effect from the offered rate designs.

- ***The TOU approach implemented by Evergy is working***. When the plan for TOU was defined in the Rate Design S&A, the Company and parties worked together to define "a meaningful and successful process to establish alternative rate plans in the form of Time of Use ("TOU") rates for residential customers following accepted best practice and ensuring measured impact to customers within the class."[22] The process was based on customer education and allowing customers to self-select, or opt-in to, the TOU rate. As Evergy evaluates conditions today, key conditions relevant for TOU deployment such as capacity positions, capacity availability and customer interest are largely the same as they were in 2018. With that, the Company is committed to continuing the TOU deployment largely consistent with the initial deployment. Evergy has been monitoring publicly available information from other utilities that have implemented TOU rates, including recent TOU deployments and the new TOU proposals in rate case filed by Ameren. Evergy has evaluated these developments and again remains committed to the plan, concluding that a selected approach by a utility is dependent on many factors and "one size does not fit all".

[22] Refer to Order Approving Stipulations and Agreements, dated October 31, 2018, Section 2.a. Also referred to in Section 2 of this Report.

- ***Alignment of rate designs across Evergy is an appropriate goal.*** As Evergy brings together the various jurisdictions, having a common rate plan portfolio is a necessary goal. In defining the Rate Plan as well as this TOU Rate Design Plan a focus was kept on aligning rate structures and ensuring a path that will ultimately unify the rate portfolios of the Evergy jurisdictions. While Evergy will certainly look to do what is best for its customers and shareholders within its respective regulatory structures of the Missouri and Kansas jurisdictions, it recognizes that customers simply see Evergy as one company and our customers and shareholders will benefit from increasing consistency with all customer-facing elements of the Company's operations. This is a significant step and one that may take years to fully achieve.

- ***TOU rate designs present challenges and some issues cannot be resolved.*** At face value, TOU rate designs seem to be a good rate design for all customers. However, under closer examination, one might say this is not true. Two situations exemplify the types of issues that may be encountered if expanded or mandatory rates are ordered. First, TOU rate designs are not well suited for customers with loads that cannot be shifted. Customers with continuously running medical equipment or simply those with low levels of usage cannot shift usage to achieve the potential bill savings. Enabling technologies may not be deployed to better respond to the rate's price signals.

  Second, net metering presents a challenge. Issues with net metering and TOU are driven by statutory provisions that have not been updated to reflect dynamic rates. In Missouri, netting and excess provisions are built around the billing period, or month, and do not include provisions that would allow the net metering process to reflect the pricing established by the TOU rate design. Evergy expects that statutory change would be needed to resolve this inconsistency. It is logical to think that the existence of AMI should compel a company to deploy TOU to all customers, however, the truth is some situations are not yet ready for TOU.

  When combined with the customer-facing value of rate plan choice, Evergy remains in support of measured and optional deployment of the TOU rate design.

Evergy has taken a broad view and remains open to new information in considering its TOU Rate Design Plan. The TOU Rate Design Plan builds on its successful initial roll-out of the rate and continues to establish a Rate Plan that respects customer choice and allows for further maturization of the policies and enviroments where the TOU rate will be utilized.

5.4 TOU RATE DESIGN ANALYSIS

This section of the Report provides the results of Evergy's analysis to determine the most appropriate and best time period constructs and price differentials for residential TOU rates for near term offerings to its customers. This analysis is presented in the following sections:

- TOU Season Analysis
- TOU Time Period Analysis
- TOU Price Differential Analysis

The analytical approach was geared toward determining the optimum seasonal TOU pricing periods and price differentials that will reflect the current drivers of system generation and distribution capacity needs and the market energy price variation. To determine the seasonal TOU pricing periods, this study assembled and analyzed system and retail class loads and wholesale cost data for 2019, which represents the last full calendar year of data available.

5.4.1 TOU Season Analysis

Evergy performed a Seasonal Rate Period Alignment Study that explored the possible alignment of seasons across the Evergy jurisdictions. The proposed TOU Rate Design Plan implements a consistent summer season period from June 1 to September 30 for both the Evergy Missouri jurisdictions for TOU rates. There is considerable empirical support for the selection of this four month summer season rate period.

Figures 3–5 show that Evergy and each jurisdiction individually exhibit the highest daily peak load in in the four months of June, July, August, and September. A more detailed analysis for each jurisdiciton, illustrated in Figures 6-8, shows that all hours in which the system load exceeds 90% of the annual system peak hour (pink shading) occur during the months of June through September. This analysis also shows that the majority of hours in which the system load exceeds 75% of the annual system peak hour (yellow shading) also occur during this four month period, with a few hours occurring during the non-summer period.

Figure 3: 2019 Evergy Daily Peak, Average, and Minimum Loads (MW)

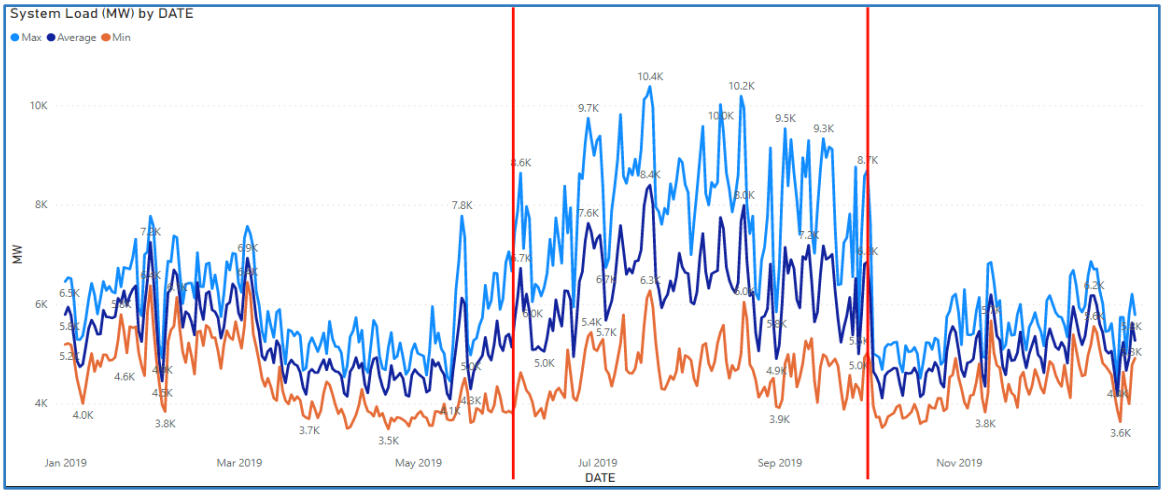


Figure 4: 2019 Missouri Metro Daily Peak, Average and Minimum Loads(MW)

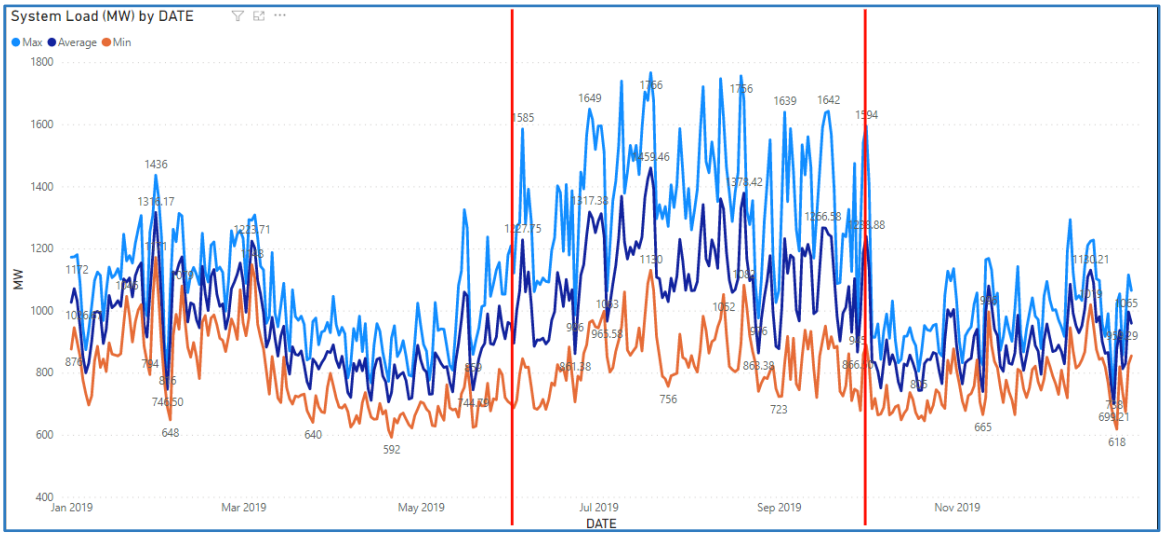


Figure 5: 2019 Missouri West Daily Peak, Average and Minimum Loads(MW)

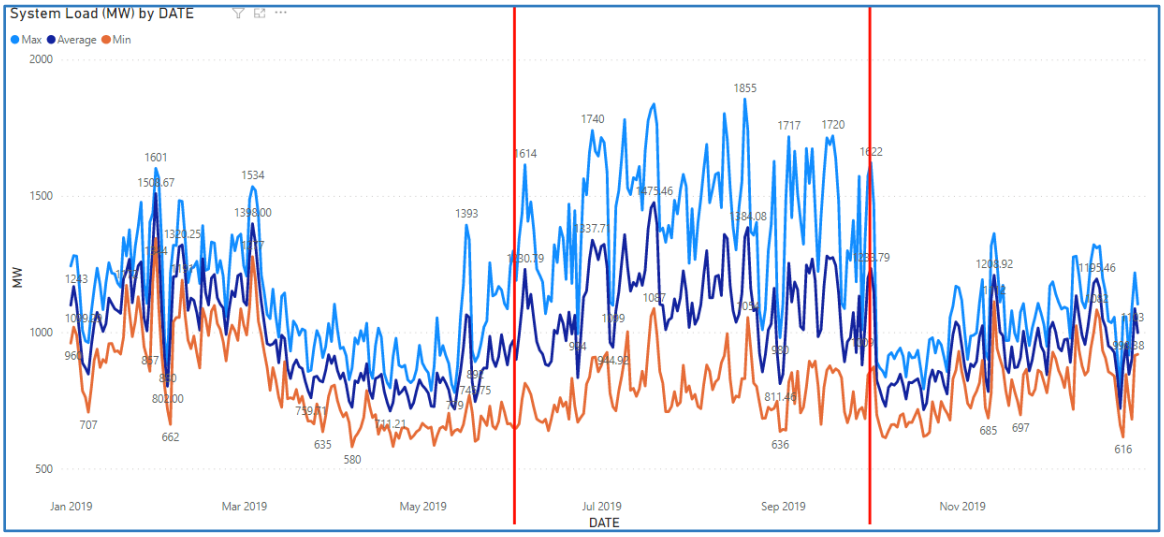


Figure 6: 2019 Evergy High Load Days

DATE	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
6/4/2019	5755	6161	6578	6890	7144	7301	7588	7823	7874	7774	7516	7149	6920	6364	5772
6/5/2019	6517	6986	7451	7839	8227	8506	8617	8638	8611	8456	8076	7638	7292	6614	5872
6/7/2019	6039	6531	6947	7304	7599	7786	7901	7967	7928	7712	7368	6950	6717	6244	5667
6/20/2019	5761	6087	6428	6835	7275	7631	7981	8275	8377	8335	8086	7715	7477	6926	6327
6/22/2019	5556	6129	6653	7046	7376	7643	7813	7942	7920	7532	6994	6624	6191	5645	5129
6/25/2019	5875	6418	6904	7357	7780	8115	8394	8588	8627	8507	8180	7727	7388	6758	6128
6/26/2019	6258	6713	7031	7389	7782	8071	8266	8477	8525	8367	8042	7651	7414	6920	6294
6/27/2019	7078	7622	8127	8547	8882	9071	9195	9252	9079	8907	8575	8185	7928	7358	6716
6/28/2019	7295	7897	8441	8902	9294	9521	9738	9742	9623	9330	8963	8524	8283	7745	7176
6/29/2019	6905	7525	8132	8573	8914	9122	9281	9348	9336	9146	8837	8394	8113	7621	7050
6/30/2019	6597	7165	7675	8083	8385	8624	8806	8945	8991	8851	8560	8104	7785	7218	6543
7/1/2019	7110	7640	8102	8498	8830	9030	9197	9295	9286	9123	8778	8331	8015	7383	6699
7/2/2019	7165	7735	8207	8584	8978	9155	9339	9383	9353	9150	8710	8242	7910	7328	6681
7/3/2019	6731	7187	7551	7902	8182	8304	8336	8276	8148	7875	7452	7019	6790	6368	5906
7/6/2019	5600	6132	6535	6916	7254	7511	7741	7890	7833	7571	7257	6873	6676	6278	5823
7/7/2019	5815	6372	6874	7320	7676	7918	8122	8290	8358	8266	7978	7546	7243	6718	6161
7/8/2019	6956	7553	7988	8336	8546	8685	8839	8903	8873	8656	8356	7971	7708	7106	6483
7/9/2019	6924	7531	8107	8652	9074	9428	9675	9804	9817	9660	9383	8977	8635	8016	7335
7/10/2019	6934	6769	6963	7327	7702	8119	8423	8564	8575	8438	8153	7645	7253	6670	6017
7/11/2019	6345	6796	7175	7531	7882	8119	8309	8430	8425	8263	7952	7460	7119	6547	5924
7/12/2019	6435	6920	7370	7752	8142	8397	8587	8731	8727	8563	8190	7682	7308	6735	6117
7/13/2019	6126	6697	7204	7608	7929	8206	8418	8569	8597	8480	8185	7716	7370	6891	6281
7/14/2019	6278	6937	7490	7904	8242	8509	8716	8872	8919	8793	8545	8087	7851	7177	6526
7/15/2019	6581	7029	7502	7872	8175	8361	8493	8590	8510	8349	8049	7635	7348	6767	6111
7/16/2019	6617	7091	7567	8083	8578	8883	9027	9093	9099	9000	8734	8337	8058	7491	6833
7/17/2019	7639	8171	8654	9087	9419	9708	9962	10099	10116	10027	9710	9285	8934	8318	7671
7/18/2019	7884	8456	8964	9401	9795	9987	10186	10188	10189	10122	9809	9384	9077	8486	7844
7/19/2019	7990	8542	9019	9459	9885	10171	10339	10380	10301	10158	9792	9337	9035	8471	7875
7/20/2019	7420	8001	8461	8874	9220	9551	9760	9920	9953	9796	9477	9054	8761	8232	7625
7/21/2019	5942	6393	6846	7054	7290	7579	7787	7924	7954	7737	7324	6992	6666	6175	5651
7/22/2019	6285	6677	7004	7249	7498	7664	7802	7861	7838	7633	7262	6763	6479	5968	5358
7/24/2019	5834	6215	6545	6883	7208	7454	7695	7884	7930	7784	7445	7003	6665	6100	5499
7/25/2019	6008	6460	6870	7228	7559	7770	7813	7769	7597	7374	7118	6849	6678	6201	5665
7/26/2019	6171	6636	7042	7425	7786	8083	8300	8424	8396	8112	7691	7226	6908	6393	5847
7/27/2019	5749	6250	6719	7106	7461	7719	7920	8092	8109	7961	7613	7174	6920	6453	5937
7/28/2019	5884	6427	6974	7464	7811	8097	8318	8431	8466	8297	8010	7716	7466	6965	6372
7/29/2019	6855	7367	7820	8181	8547	8754	8888	8931	8889	8696	8294	7678	7256	6571	5908
7/30/2019	6299	6812	7264	7701	8079	8393	8658	8822	8852	8696	8295	7804	7470	6844	6222
7/31/2019	6183	6521	6917	7255	7672	8000	8266	8408	8294	8139	7771	7451	7144	6608	6045
8/1/2019	6261	6640	7013	7403	7811	8122	8247	8197	8071	7900	7599	7375	7155	6666	6139
8/4/2019	5528	6124	6653	7118	7503	7791	8040	8195	8279	8154	7828	7487	7164	6567	5943
8/5/2019	6660	7284	7786	8198	8537	8769	8924	8929	8802	8589	8235	7924	7618	6972	6374
8/6/2019	7164	7788	8378	8863	9273	9526	9579	9492	9346	9152	8757	8276	7845	7163	6496
8/7/2019	6282	6444	6653	6955	7229	7612	7971	8170	8227	8131	7833	7505	7191	6566	5962
8/8/2019	5948	6105	6317	6542	6930	7247	7571	7849	7993	7874	7574	7270	6960	6387	5827
8/9/2019	6245	6728	7154	7611	7928	8193	8369	8451	8400	8192	7849	7508	7207	6677	6172
8/10/2019	6071	6663	7152	7500	7746	8006	8189	8298	8353	8310	8022	7758	7490	7016	6533
8/11/2019	5794	6075	6431	6820	7222	7664	8042	8254	8448	8395	8160	7961	7712	7187	6641
8/12/2019	7117	7730	8350	8930	9458	9830	10018	9994	9954	9720	9301	8977	8582	7891	7171
8/13/2019	7293	7868	8388	8785	9140	9379	9476	9452	9326	9056	8586	8109	7637	6953	6266
8/14/2019	6435	6864	7317	7728	8097	8366	8548	8647	8645	8427	7983	7568	7095	6384	5736
8/15/2019	6090	6510	6918	7422	7779	8093	8267	8318	8296	8149	7837	7608	7223	6509	5883
8/16/2019	6118	6444	6705	6930	7145	7178	7375	7708	7854	7754	7439	7182	6909	6428	5964
8/17/2019	5367	5773	6123	6479	6862	7241	7645	7966	8163	8108	7768	7439	7180	6704	6227
8/18/2019	5323	5689	6209	6782	7300	7777	8158	8445	8592	8491	8153	7819	7416	6787	6176
8/19/2019	6924	7585	8250	8853	9383	9771	10031	10174	10186	9992	9608	9307	8836	8091	7441
8/20/2019	7553	8092	8423	8713	9125	9507	9736	9918	9938	9761	9403	9099	8675	7928	7225
8/21/2019	6614	6860	7236	7611	7869	7960	7982	8010	7922	7676	7391	7131	6754	6203	5695
8/29/2019	6335	6926	7477	7873	8442	8768	8997	9146	9138	8941	8544	8247	7528	6700	5986
9/2/2019	5140	5718	6306	6880	7336	7727	8011	8257	8349	8135	7736	7489	7019	6391	5788
9/3/2019	6568	7085	7589	8145	8638	9063	9364	9533	9474	9199	8796	8515	7963	7245	6563
9/4/2019	6228	6580	6961	7355	7710	8017	8238	8379	8351	8070	7640	7354	6887	6205	5590
9/5/2019	6234	6792	7347	7906	8479	8899	9176	9314	9242	8962	8532	8228	7737	7038	6368
9/6/2019	6478	6907	7402	7844	8223	8471	8616	8645	8478	8051	7509	7152	6675	6115	5533
9/7/2019	5327	5801	6295	6779	7210	7620	7902	8091	8098	7860	7460	7199	6767	6291	5815
9/9/2019	6650	7209	7726	8172	8569	8797	8927	8949	8815	8531	8163	7920	7454	6860	6303
9/10/2019	6520	6895	7228	7579	7911	8297	8482	8560	8485	8305	8009	7792	7347	6774	6167
9/11/2019	6878	7373	7822	8280	8724	9071	9243	9294	9196	8837	8377	8061	7594	6943	6360
9/14/2019	5059	5515	5987	6468	6956	7374	7688	7915	7906	7667	7313	7074	6715	6293	5852
9/15/2019	5781	6382	6960	7510	7961	8303	8570	8698	8701	8441	8078	7794	7299	6698	6093
9/16/2019	6707	7304	7885	8430	8876	9142	9303	9331	9142	8884	8569	8229	7706	7007	6334
9/17/2019	6427	6962	7515	8030	8472	8737	8882	8950	8829	8451	8048	7744	7250	6559	5942
9/18/2019	6498	7073	7665	8219	8643	8903	9059	9163	9032	8714	8274	7892	7330	6676	6031
9/19/2019	6598	7280	7955	8438	8811	9064	9116	9012	8827	8478	8195	7864	7347	6694	6062
9/25/2019	5935	6334	6666	7009	7328	7524	7725	7817	7636	7281	7019	6735	6260	5635	5069
9/27/2019	6213	6716	7203	7652	8103	8459	8691	8761	8600	8141	7791	7446	6915	6195	5582
9/30/2019	6587	7035	7513	7921	8250	8461	8577	8563	8381	8030	7845	7582	7171	6580	6057
10/1/2019	6633	7182	7632	8073	8456	8615	8693	8623	8327	7925	7766	7542	7085	6427	5866

Figure 7: 2019 Missouri Metro High Load Days

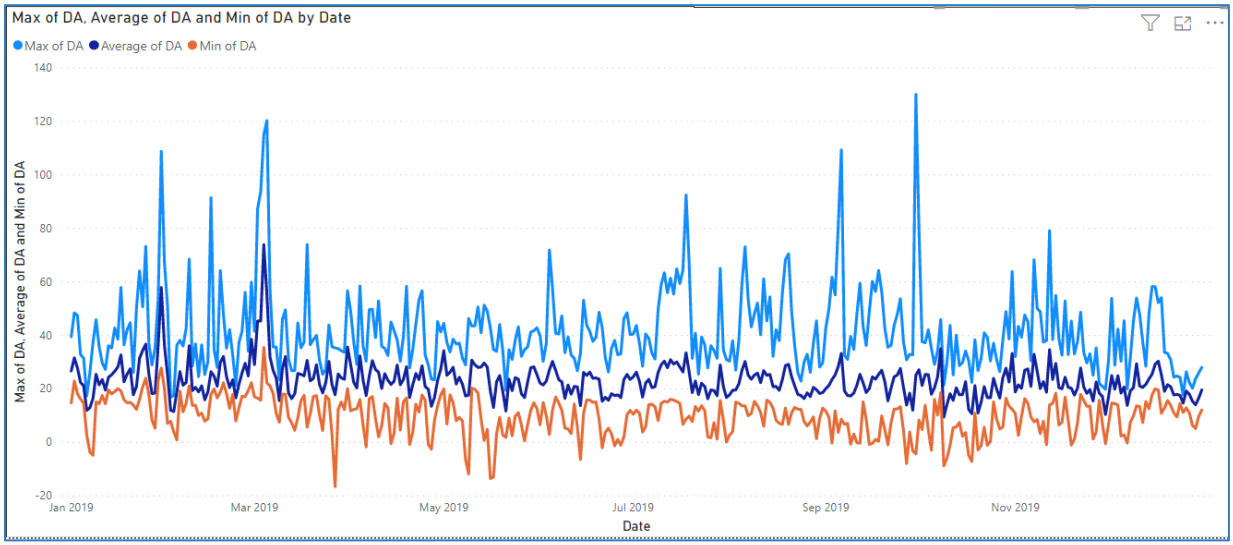
DATE	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1/30/2019	1308	1354	1382	1384	1348	1387	1389	1391	1364	1366	1358	1402	1436	1394	1358	1303	1259	1198
1/31/2019	1328	1361	1364	1323	1293	1239	1185	1142	1107	1083	1103	1154	1206	1195	1172	1127	1079	1039
5/16/2019	856	913	990	1032	1108	1163	1193	1240	1294	1319	1325	1323	1290	1261	1209	1182	1071	981
6/5/2019	950	1028	1128	1228	1305	1382	1447	1498	1563	1585	1559	1523	1515	1464	1406	1347	1215	1084
6/7/2019	876	951	1037	1109	1181	1257	1304	1362	1386	1391	1390	1380	1341	1278	1220	1194	1127	1049
6/17/2019	954	1009	1064	1159	1200	1275	1315	1365	1387	1402	1354	1330	1268	1243	1194	1176	1096	999
6/18/2019	909	973	1004	1063	1147	1232	1293	1343	1355	1380	1350	1275	1205	1148	1097	1092	1012	938
6/20/2019	853	941	1014	1070	1102	1107	1162	1248	1286	1311	1342	1406	1394	1369	1312	1284	1207	1116
6/22/2019	814	836	902	964	1068	1161	1225	1281	1339	1365	1379	1386	1326	1249	1208	1128	1012	945
6/25/2019	866	920	973	1039	1119	1189	1246	1314	1370	1418	1439	1446	1415	1366	1298	1251	1161	1080
6/26/2019	910	996	1052	1135	1188	1231	1270	1334	1357	1376	1388	1392	1361	1309	1257	1224	1143	1063
6/27/2019	974	1059	1132	1231	1327	1398	1460	1512	1547	1565	1560	1517	1482	1426	1357	1307	1239	1148
6/28/2019	1019	1101	1208	1276	1392	1484	1550	1601	1637	1649	1647	1621	1560	1493	1430	1406	1311	1224
6/29/2019	973	1037	1095	1186	1295	1392	1526	1572	1561	1594	1600	1616	1609	1513	1415	1386	1307	1241
6/30/2019	948	995	1088	1174	1270	1331	1384	1428	1479	1503	1519	1519	1499	1458	1378	1336	1257	1156
7/1/2019	1013	1099	1186	1274	1335	1411	1476	1524	1566	1569	1594	1572	1547	1484	1420	1383	1306	1205
7/2/2019	1037	1129	1205	1300	1372	1451	1505	1555	1575	1587	1595	1560	1556	1508	1449	1412	1329	1239
7/3/2019	1049	1113	1177	1208	1271	1325	1392	1445	1499	1510	1495	1487	1415	1339	1256	1213	1140	1067
7/6/2019	817	845	916	1024	1119	1186	1219	1255	1296	1325	1351	1354	1332	1283	1229	1210	1135	1071
7/7/2019	869	904	969	1070	1142	1213	1270	1315	1352	1380	1406	1416	1405	1350	1303	1267	1183	1099
7/8/2019	978	1060	1130	1220	1306	1365	1411	1470	1505	1532	1528	1511	1452	1413	1357	1336	1244	1160
7/9/2019	1059	1119	1172	1263	1364	1448	1530	1597	1677	1722	1739	1736	1695	1679	1612	1571	1500	1361
7/10/2019	1157	1227	1322	1217	1134	1163	1176	1251	1314	1347	1359	1351	1378	1354	1278	1228	1153	1060
7/11/2019	939	1016	1072	1130	1190	1253	1290	1331	1415	1436	1446	1439	1420	1373	1308	1288	1157	1073
7/12/2019	919	987	1077	1152	1226	1297	1391	1496	1524	1495	1530	1532	1520	1468	1320	1265	1177	1096
7/13/2019	874	926	1016	1107	1181	1248	1316	1369	1436	1459	1483	1482	1466	1399	1341	1305	1243	1151
7/14/2019	883	920	1014	1128	1245	1332	1377	1438	1487	1512	1532	1525	1510	1457	1405	1346	1274	1174
7/15/2019	992	1075	1138	1199	1261	1332	1378	1406	1416	1415	1438	1399	1369	1330	1273	1229	1149	1060
7/16/2019	951	1029	1097	1153	1243	1300	1366	1449	1504	1544	1558	1586	1556	1521	1450	1409	1313	1211
7/17/2019	1045	1133	1223	1318	1414	1482	1534	1558	1608	1678	1693	1704	1680	1634	1569	1532	1435	1340
7/18/2019	1146	1213	1289	1360	1454	1548	1613	1671	1671	1665	1652	1665	1677	1645	1590	1557	1474	1364
7/19/2019	1168	1225	1312	1390	1476	1548	1618	1677	1728	1766	1753	1739	1742	1682	1612	1586	1500	1409
7/20/2019	1065	1115	1219	1307	1402	1454	1515	1555	1605	1635	1669	1676	1657	1602	1553	1527	1461	1369
7/22/2019	934	983	1062	1112	1178	1238	1277	1308	1314	1341	1341	1327	1273	1215	1138	1103	1052	963
7/24/2019	856	913	982	1056	1110	1168	1208	1255	1276	1306	1316	1335	1294	1250	1180	1112	1025	932
7/26/2019	859	913	1009	1059	1128	1204	1271	1327	1374	1396	1399	1405	1345	1276	1226	1165	1092	1029
7/27/2019	794	820	912	995	1073	1128	1187	1234	1273	1295	1332	1318	1286	1243	1182	1160	1094	1027
7/28/2019	798	829	896	969	1072	1158	1240	1298	1350	1375	1400	1406	1392	1345	1323	1286	1216	1107
7/29/2019	992	1059	1142	1213	1281	1338	1424	1537	1549	1586	1571	1502	1455	1389	1292	1231	1149	1053
7/30/2019	936	991	1046	1126	1191	1247	1312	1362	1394	1428	1445	1449	1425	1363	1293	1258	1161	1070
8/1/2019	928	970	1014	1056	1137	1195	1262	1333	1382	1393	1382	1353	1318	1285	1244	1223	1147	1077
8/4/2019	802	831	891	976	1083	1170	1225	1295	1333	1372	1381	1390	1356	1307	1284	1233	1151	1058
8/5/2019	963	1034	1094	1183	1296	1400	1461	1502	1528	1568	1575	1571	1480	1401	1360	1312	1220	1136
8/6/2019	1066	1116	1204	1282	1397	1526	1603	1653	1700	1721	1717	1694	1662	1589	1458	1351	1237	1138
8/7/2019	1023	1063	1091	1078	1103	1127	1201	1287	1360	1433	1474	1480	1418	1331	1260	1221	1138	1061
8/8/2019	966	1009	1028	1054	1102	1148	1187	1275	1339	1389	1414	1444	1404	1369	1315	1273	1183	1096
8/9/2019	983	1044	1109	1170	1260	1330	1421	1475	1515	1543	1542	1517	1472	1402	1355	1295	1216	1143
8/10/2019	921	944	1006	1090	1195	1279	1324	1362	1416	1451	1471	1467	1456	1402	1370	1320	1240	1159
8/11/2019	993	1008	1033	1031	1040	1067	1105	1160	1247	1300	1318	1351	1351	1332	1314	1276	1201	1139
8/12/2019	1051	1089	1154	1247	1327	1438	1584	1685	1731	1747	1736	1718	1683	1616	1581	1495	1403	1310
8/13/2019	1114	1162	1244	1311	1400	1461	1521	1584	1604	1621	1598	1573	1516	1441	1390	1304	1196	1103
8/14/2019	1018	1054	1104	1163	1228	1289	1360	1398	1437	1460	1462	1455	1424	1338	1270	1208	1113	1007
8/15/2019	913	965	1021	1075	1135	1202	1252	1301	1346	1380	1338	1328	1303	1260	1257	1180	1029	939
8/17/2019	825	818	851	914	993	1067	1134	1213	1259	1319	1375	1382	1374	1325	1272	1220	1142	1088
8/18/2019	829	838	873	913	969	1049	1157	1249	1319	1366	1421	1444	1413	1376	1330	1281	1189	1093
8/19/2019	1011	1060	1105	1185	1313	1454	1538	1618	1681	1735	1756	1754	1715	1600	1547	1490	1383	1292
8/20/2019	1195	1226	1276	1331	1400	1445	1499	1540	1612	1648	1667	1680	1661	1577	1511	1465	1344	1231
8/23/2019	977	1007	1051	1103	1157	1207	1270	1297	1326	1346	1354	1329	1267	1198	1170	1122	1065	1019
8/28/2019	902	937	980	1057	1135	1189	1237	1287	1343	1382	1413	1413	1395	1306	1278	1199	1065	948
8/29/2019	923	967	1042	1124	1220	1301	1383	1467	1501	1540	1550	1549	1497	1434	1385	1226	1089	984
9/2/2019	742	741	802	870	961	1030	1115	1171	1239	1297	1338	1346	1313	1262	1232	1160	1081	991
9/3/2019	990	1030	1074	1119	1183	1279	1431	1518	1563	1619	1639	1628	1519	1471	1455	1373	1282	1180
9/4/2019	1011	1019	1041	1085	1117	1163	1211	1296	1321	1343	1344	1351	1288	1247	1164	1101	1011	924
9/5/2019	900	941	986	1035	1128	1245	1375	1486	1541	1528	1541	1586	1541	1500	1455	1339	1199	1106
9/6/2019	1017	1054	1091	1140	1207	1336	1392	1430	1409	1450	1431	1412	1385	1300	1210	1121	1041	948
9/9/2019	981	1034	1084	1153	1253	1331	1410	1480	1497	1522	1534	1518	1435	1383	1360	1278	1189	1128
9/10/2019	1011	1030	1084	1120	1183	1232	1291	1336	1406	1437	1430	1397	1368	1336	1306	1208	1135	1043
9/11/2019	995	1034	1095	1153	1241	1314	1387	1468	1534	1553	1560	1545	1458	1402	1357	1283	1171	1089
9/12/2019	1046	1079	1113	1209	1305	1323	1346	1447	1462	1416	1353	1284	1234	1252	1208	1163	1083	996
9/15/2019	854	867	935	1010	1090	1185	1263	1336	1391	1440	1448	1439	1398	1363	1329	1257	1175	1083
9/16/2019	1045	1095	1156	1226	1315	1396	1495	1547	1590	1587	1570	1535	1511	1483	1440	1356	1248	1148
9/17/2019	1039	1077	1123	1175	1251	1360	1504	1578	1619	1637	1636	1572	1482	1418	1373	1286	1167	1091
9/18/2019	1008	1047	1090	1172	1257	1368	1446	1518	1575	1636	1642	1602	1548	1457	1384	1285	1204	1114
9/19/2019	1035	1077	1130	1195	1280	1386	1451	1512	1549	1567	1531	1523	1442	1419	1366	1277	1172	1075
9/20/2019	992	1028	1059	1106	1138	1208	1297	1342	1380	1387	1296	1241	1184	1170	1138	1077	1040	989
9/25/2019	1015	1053	1053	1080	1124	1150	1204	1248	1296	1319	1326	1280	1208	1171	1118	1054	951	870
9/27/2019	861	913	961	1044	1141	1231	1301	1376	1445	1470	1474	1436	1374	1329	1263	1176	1032	940
9/30/2019	999	1036	1090	1135	1214	1288	1397	1445	1525	1542	1525	1493	1362	1329	1299	1236	1147	1072
10/1/2019	1006	1046	1084	1152	1245	1349	1480	1534	1558	1594	1591	1542	1488	1458	1395	1324	1214	1080
10/2/2019	1075	1094	1084	1104	1150	1221	1285	1340	1373	1400	1403	1373	1307	1235	1131	1032	924	824

Figure 8: 2019 Missouri West High Load Days

DATE	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1/25/2019	1279	1313	1376	1466	1477	1443	1373	1314	1272	1244	1211	1202	1176	1176	1214	1227	1205	1188	1165	1106
1/28/2019	865	892	965	1091	1180	1194	1180	1185	1179	1181	1182	1183	1196	1256	1340	1404	1390	1376	1344	1268
1/29/2019	1205	1230	1286	1377	1404	1360	1338	1292	1262	1251	1244	1269	1294	1348	1403	1437	1428	1412	1389	1352
1/30/2019	1401	1439	1500	1554	1601	1600	1601	1586	1558	1545	1530	1521	1507	1539	1591	1600	1587	1546	1497	1425
1/31/2019	1375	1388	1452	1531	1567	1539	1496	1419	1346	1275	1227	1173	1153	1164	1242	1274	1271	1245	1198	1141
2/7/2019	1072	1108	1161	1236	1300	1361	1393	1420	1401	1391	1383	1376	1367	1380	1434	1483	1480	1453	1432	1366
2/8/2019	1308	1334	1386	1451	1480	1459	1415	1379	1336	1292	1254	1221	1191	1203	1256	1325	1334	1330	1313	1274
3/3/2019	1106	1144	1189	1241	1274	1325	1328	1305	1279	1272	1256	1231	1229	1266	1327	1442	1481	1487	1465	1412
3/4/2019	1369	1406	1455	1532	1534	1504	1462	1423	1377	1338	1309	1283	1277	1300	1341	1440	1474	1476	1434	1383
3/5/2019	1350	1362	1434	1520	1499	1442	1375	1331	1289	1261	1228	1205	1191	1206	1250	1333	1357	1352	1327	1285
3/6/2019	1254	1290	1353	1433	1429	1338	1262	1214	1156	1131	1099	1084	1098	1113	1154	1203	1205	1177	1152	1063
5/16/2019	718	722	769	836	905	949	1014	1082	1136	1199	1244	1290	1335	1368	1393	1365	1317	1280	1221	1098
6/4/2019	754	762	806	862	915	953	1006	1088	1172	1243	1284	1293	1352	1401	1435	1418	1369	1311	1261	1134
6/5/2019	814	813	847	903	1011	1093	1186	1276	1366	1442	1517	1568	1593	1600	1614	1596	1529	1456	1379	1208
6/6/2019	796	797	820	878	906	953	988	1050	1107	1175	1240	1298	1340	1400	1407	1386	1321	1261	1216	1098
6/7/2019	782	772	794	857	920	1007	1084	1191	1278	1345	1393	1435	1461	1478	1472	1429	1368	1295	1249	1155
6/20/2019	681	688	720	763	830	901	972	1037	1075	1158	1240	1309	1376	1444	1462	1470	1426	1366	1318	1195
6/22/2019	736	729	741	755	794	844	926	1037	1162	1253	1326	1382	1431	1446	1437	1376	1300	1249	1192	1074
6/25/2019	711	702	748	790	855	921	1007	1105	1209	1294	1378	1442	1508	1555	1563	1543	1484	1388	1316	1187
6/26/2019	821	810	835	870	930	1012	1092	1187	1232	1277	1327	1391	1425	1478	1504	1460	1392	1322	1269	1178
6/27/2019	839	835	855	916	1012	1114	1215	1333	1430	1506	1575	1617	1637	1660	1640	1600	1534	1467	1423	1306
6/28/2019	924	907	928	974	1068	1172	1288	1393	1498	1603	1671	1712	1740	1724	1711	1639	1574	1503	1458	1345
6/29/2019	948	918	914	909	977	1095	1225	1340	1449	1521	1581	1615	1648	1662	1664	1642	1585	1497	1434	1340
6/30/2019	927	890	863	855	934	1049	1170	1281	1376	1460	1511	1557	1592	1629	1646	1614	1558	1481	1408	1297
7/1/2019	894	877	896	927	1032	1148	1252	1367	1460	1534	1594	1639	1683	1695	1714	1688	1622	1535	1473	1341
7/2/2019	923	910	922	965	1049	1156	1269	1370	1462	1534	1596	1629	1671	1676	1696	1658	1610	1527	1462	1340
7/3/2019	933	926	937	963	1036	1099	1184	1268	1354	1423	1509	1559	1580	1587	1559	1488	1408	1321	1260	1158
7/6/2019	726	712	716	724	766	859	966	1083	1166	1248	1305	1359	1418	1450	1461	1437	1383	1292	1239	1152
7/7/2019	827	802	789	785	826	910	1015	1127	1221	1318	1384	1421	1462	1504	1519	1501	1452	1363	1293	1197
7/8/2019	839	844	886	922	1002	1087	1196	1321	1400	1457	1519	1589	1614	1640	1638	1583	1519	1450	1403	1277
7/9/2019	906	918	950	1011	1078	1147	1243	1359	1461	1552	1625	1699	1748	1780	1778	1758	1692	1625	1562	1438
7/10/2019	1010	1002	1022	1061	1152	1239	1274	1182	1184	1253	1304	1377	1451	1497	1529	1507	1455	1358	1282	1166
7/11/2019	798	787	814	853	927	1009	1083	1174	1237	1306	1377	1429	1473	1492	1505	1484	1425	1342	1272	1154
7/12/2019	795	794	808	855	929	1018	1128	1212	1308	1374	1447	1489	1537	1551	1567	1541	1473	1382	1298	1186
7/13/2019	794	765	772	780	836	948	1070	1190	1289	1370	1419	1473	1520	1544	1559	1535	1484	1395	1331	1211
7/14/2019	836	808	797	792	856	979	1114	1237	1348	1428	1478	1519	1566	1589	1608	1579	1528	1449	1388	1279
7/15/2019	861	857	881	919	989	1065	1127	1214	1289	1349	1390	1415	1435	1448	1443	1419	1360	1296	1253	1140
7/16/2019	803	809	847	889	960	1025	1099	1176	1262	1352	1445	1518	1579	1642	1665	1660	1601	1520	1450	1324
7/17/2019	936	936	963	1002	1089	1188	1332	1443	1533	1581	1619	1642	1705	1761	1776	1767	1721	1630	1573	1445
7/18/2019	1071	1059	1081	1106	1183	1264	1380	1486	1580	1650	1720	1744	1791	1775	1805	1818	1757	1678	1608	1505
7/19/2019	1108	1087	1100	1126	1196	1296	1396	1497	1583	1660	1729	1785	1837	1831	1827	1817	1747	1669	1603	1496
7/20/2019	1069	1023	1016	994	1063	1164	1290	1404	1491	1566	1617	1687	1720	1745	1762	1736	1690	1614	1552	1452
7/24/2019	710	709	739	790	837	903	975	1056	1117	1190	1244	1298	1338	1385	1392	1377	1320	1241	1176	1046
7/26/2019	782	786	809	838	903	981	1058	1162	1239	1312	1364	1420	1456	1484	1467	1421	1340	1261	1211	1107
7/27/2019	751	732	734	731	783	878	979	1080	1180	1252	1321	1366	1394	1434	1434	1398	1329	1254	1199	1105
7/28/2019	773	750	752	743	798	889	989	1086	1196	1297	1383	1428	1476	1512	1521	1476	1423	1354	1290	1197
7/29/2019	887	879	919	947	1004	1088	1174	1264	1343	1406	1480	1531	1555	1579	1570	1550	1492	1375	1296	1150
7/30/2019	781	781	809	854	914	982	1065	1155	1250	1330	1392	1448	1491	1524	1535	1504	1442	1344	1277	1140
8/1/2019	755	758	800	854	901	968	1015	1104	1191	1260	1334	1395	1438	1453	1442	1410	1358	1303	1241	1147
8/3/2019	753	728	745	747	778	856	952	1061	1153	1230	1275	1329	1357	1383	1401	1368	1311	1220	1146	1060
8/4/2019	738	721	722	720	760	862	973	1099	1198	1295	1353	1409	1448	1480	1491	1478	1427	1342	1274	1164
8/5/2019	810	814	843	882	949	1024	1133	1261	1371	1434	1487	1528	1556	1598	1575	1540	1482	1422	1353	1226
8/6/2019	897	880	930	967	1034	1133	1234	1352	1458	1546	1611	1653	1679	1678	1689	1672	1586	1492	1399	1252
8/7/2019	860	857	900	948	985	1017	1026	1047	1080	1148	1202	1272	1357	1427	1475	1456	1398	1339	1256	1123
8/8/2019	790	789	825	878	923	966	997	1049	1106	1167	1264	1353	1433	1494	1525	1518	1449	1379	1301	1182
8/9/2019	828	818	848	895	945	1031	1105	1208	1300	1398	1472	1532	1561	1579	1567	1543	1469	1397	1339	1233
8/10/2019	867	829	832	831	872	966	1069	1209	1311	1381	1437	1503	1555	1585	1581	1563	1505	1434	1369	1255
8/11/2019	905	888	889	913	947	980	1015	1043	1076	1106	1175	1262	1349	1402	1457	1450	1403	1369	1313	1212
8/12/2019	914	929	962	1011	1057	1103	1205	1325	1439	1560	1648	1735	1791	1784	1802	1780	1699	1641	1560	1440
8/13/2019	1011	995	1008	1054	1103	1181	1287	1395	1500	1564	1630	1670	1693	1708	1696	1653	1566	1463	1368	1230
8/14/2019	834	828	863	921	961	1029	1106	1189	1270	1339	1402	1456	1497	1524	1529	1494	1418	1342	1236	1098
8/17/2019	796	772	762	783	791	826	888	950	1021	1106	1213	1293	1368	1396	1457	1448	1388	1320	1253	1154
8/18/2019	872	845	835	830	839	900	961	1006	1085	1188	1294	1385	1463	1520	1552	1549	1479	1413	1315	1199
8/19/2019	840	830	879	955	1014	1084	1181	1313	1439	1558	1663	1741	1808	1839	1855	1818	1748	1700	1601	1463
8/20/2019	1066	1054	1083	1160	1178	1238	1321	1409	1455	1459	1524	1585	1660	1709	1743	1726	1660	1610	1522	1372
8/23/2019	803	801	835	905	944	983	1022	1096	1160	1220	1284	1337	1378	1403	1391	1340	1258	1203	1161	1069
8/28/2019	719	715	764	829	873	902	942	1002	1072	1128	1205	1269	1327	1383	1396	1359	1285	1221	1137	1010
8/29/2019	721	731	773	863	911	975	1050	1159	1273	1372	1462	1533	1579	1620	1627	1614	1540	1439	1269	1077
9/2/2019	650	641	650	650	667	738	833	937	1051	1166	1254	1326	1377	1439	1491	1457	1394	1339	1239	1113
9/3/2019	817	835	870	944	1003	1055	1126	1217	1308	1420	1511	1586	1665	1717	1715	1658	1595	1539	1433	1285
9/4/2019	869	852	857	932	955	980	1013	1084	1139	1209	1265	1331	1370	1420	1418	1381	1296	1249	1154	1031
9/5/2019	738	738	779	871	907	956	1030	1115	1226	1337	1445	1549	1620	1664	1662	1616	1531	1496	1387	1257
9/6/2019	863	857	887	957	989	1043	1113	1185	1274	1350	1418	1471	1491	1509	1482	1398	1295	1230	1140	1025
9/7/2019	708	704	708	727	755	803	887	962	1057	1134	1211	1303	1358	1401	1412	1358	1281	1220	1150	1055
9/9/2019	799	812	865	943	995	1059	1144	1255	1368	1487	1574	1643	1659	1674	1652	1617	1542	1478	1370	1276
9/10/2019	917	894	935	997	1040	1080	1128	1186	1257	1339	1412	1490	1523	1546	1533	1495	1440	1398	1320	1204
9/11/2019	881	872	914	999	1040	1103	1200	1291	1379	1466	1545	1609	1652	1673	1661	1604	1518	1466	1375	1236
9/12/2019	910	894	932	1034	1071	1142	1225	1329	1378	1417	1438	1450	1409	1385	1364	1330	1313	1277	1219	1109
9/14/2019	666	662	672	704	732	793	856	930	1018	1103	1210	1303	1373	1425	1417	1386	1302	1258	1176	1101
9/15/2019	821	798	798	804	827	914	1028	1149	1238	1343	1432	1500	1553	1577	1582	1538	1482	1418	1310	1197
9/16/2019	861	864	897	979	1014	1081	1179	1293	1400	1502	1594	1636	1698	1713	1680	1624	1585	1515	1403	1254
9/17/2019	880	877	915	996	1034	1091	1131	1241	1375	1486	1582	1637	1662	1688	1674	1602	1532	1478	1370	1230
9/18/2019	860	852	891	979	1013	1067	1146	1272	1394	1513	1604	1656	1689	1720	1697	1630	1547	1485	1375	1247
9/19/2019	873	866	906	988	1016	1082	1150	1270	1391	1488	1554	1614	1638	1613	1573	1528	1475	1413	1322	1183
9/20/2019	863	858	890	958	1008	1041	1101	1162	1248	1355	1435	1476	1480	1412	1369	1295	1248	1212	1149	1064
9/25/2019	782	793	838	925	966	987	1024	1092	1160	1217	1291	1339	1386	1410	1382	1307	1251	1197	1098	974
9/27/2019	715	729	776	860	906	957	1030	1142	1249	1345	1433	1506	1557	1572	1550	1464	1414	1352	1262	1122
9/30/2019	843	853	903	988	1034	1070	1142	1193	1299	1390	1468	1509	1539	1574	1537	1470	1427	1368	1279	1159
10/1/2019	866	860	888	980	1018	1073	1146	1254	1350	1440	1548	1601	1622	1617	1576	1508	1461	1410	1319	1197
10/2/2019	873	877	901	982	1028	1040	1088	1145	1232	1304	1365	1429	1453	1461	1468	1413	1329	1241	1150	1008

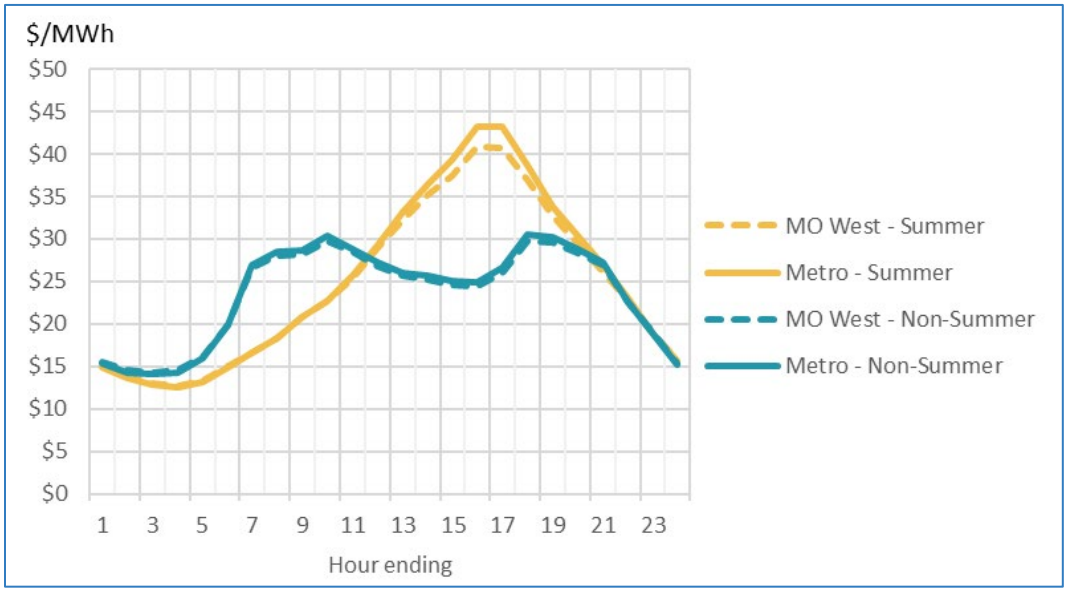
A review of Southwest Power Pool's ("SPP's") Integrated Marketplace day-ahead ("DA") locational marginal prices ("LMP") for 2019 do not indicate a significant seasonal pattern in average daily prices and show that 'price spikes' can occur throught the year. Figure 9 shows that SPP's maximum daily DA prices exhibit quite a bit of fluctuation on a daily basis but the daily average DA prices are fairly consistent throughout the year.

Figure 9: 2019 SPP Daily Peak Prices-KCP&L LMP($/MW)



Further analysis of the SPP DA energy prices shows that the SPP DA average daily energy price profile is substantially different between the summer and non-summer period, as shown in Figure 10. This further supports the summer season definition of June through September.

Figure 10: 2019 SPP Average Daily Day Ahead Energy Prices by Season



A review of cooling degree days for the past 10 years also indicate that the summer period should be aligned with the calendar period June 1 through September 30. Table 2 below shows that June, July, and August are clearly the three dominant summer season months. September historically has 60% higher cooling degree days than May, further supporting the June-September summer period.

Table 2: Historical Monthly Cooling Degree Days

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2010	0	0	6	38	109	383	488	512	158	11	0	0
2011	0	0	3	20	111	336	568	414	97	48	1	0
2012	0	0	49	40	180	385	634	376	131	39	5	0
2013	0	0	0	13	92	276	367	346	223	28	0	0
2014	0	0	0	9	152	277	289	395	130	14	0	0
2015	0	0	2	7	59	301	398	304	262	33	0	0
2016	0	0	2	12	57	417	428	381	221	55	13	0
2017	0	0	6	27	78	299	446	222	205	42	0	0
2018	0	0	0	11	269	390	439	391	217	40	0	0
2019	0	0	0	17	81	272	404	349	304	22	0	0
Total	**0**	**0**	**68**	**194**	**1188**	**3336**	**4461**	**3690**	**1948**	**332**	**19**	**0**

5.4.2 TOU Time Period Analysis

In defining the daily time periods for TOU pricing programs, consideration must be given to the actual seasonal and daily fluctuation in system and customer class loads along with the wholesale costs of energy. This section of the Report provides an overview of the analysis Evergy performed in developing the time periods for residential TOU tariffs. This analysis is presented in the following sections:

- System Load Analysis
- SPP Energy Market Pricing Analysis
- Residential Class Load Analysis
- System Cost Analysis

This analysis shows there is considerable empirical support for the following general daily TOU time periods:

- Summer On-Peak – 6-hour period from 2 pm to 8 pm
- Super Off-Peak – 6-hour period from Midnight to 6 am

There is less empirical support for a general daily Non-Summer On-Peak period, but the system and residential load profiles are elevated in the late afternoon and early evening hours, potentially indicating there may not be a need for a Non-Summer On-Peak period, or that the Non-Summer On-Off-Peak price differential should be modest in comparison to the Summer season differentials.

It should be noted that Evergy used the seasonal and general daily TOU pricing periods presented here in the Business Electric Vehicle Charging Service ("BEVCS") tariff proposed in the Company's current Transportation Electrification filing[23].

The identification of an optimum, most desirable 4-hour On-Peak period for residential customers is less straight forward. Most of the empirical evidence based on analysis of historical data indicates for a 4-hour Summer On-Peak period from 3–7 pm, which is slightly misaligned with the residential class 4-hour peak load period and Evergy's current TOU On-Peak period from 4-8 pm. Based on a desire to maintain consistency with the current TOU rate design and "future proof" the time period for the future anticipated impact of increased solar penetration and customer behavioral load shifts, Evergy determined to continue with the On-Peak period of 4-8 pm.

5.4.2.1 System Load Analysis

The first step in the TOU time period analysis was to establish and compare the system peak day/hour for each jurisdiction. Table 3 lists the system peak day and hour for the consolidated Evergy system and individual jurisdiction for each of the past five years. The Evergy summer system peak usage periods are very weather temperature dependent and the Peak Day varies throughout the months of July and August based on when the hottest days occur. However, the system annual Peak Hour consistently occurs from 4-5 pm as the late afternoon increases in residential usage adds to the system load and before the commercial and industrial loads begin to diminish.

Table 3: Evergy System Peaks by Jurisdiction

	Evergy			KS Metro			MO Metro			MO West			KS Central		
Year	Date	Hour	MW	Date	Hour	MW	Date	Hour	MW	Date	Hour	MW	Date	Hour	MW
2019	7/19	4-5	10.380	7/18	5-6*3	1,700	7/19	3-4	1766	8/19	5-6	1,855	7/19	4-5	5,108
	GPE			KCP&L-KS			KCP&L-MO			KCP&L-GMO			Westar		
2018	7/12	4-5	5,439	6/28	4-5	1,737	7/11	3-4*2	1,819	7/12	5-6*3	1,929	6/28	4-5	5,204
2017	7/20	5-6*3	5,384	7/21	4-5	1,648	7/20	5-6*3	1,847	7/20	4-5	1,910	7/20	4-5	5,242
2019	8/04	4-5	5,408	8/11	5-6*2	1,700	8/04	4-5	1,842	8/11	4-5	1,904	7/21	4-5	5,184
2015	7/13	4-5	5,266	7/13	4-5	1,623	7/13	4-5	1,802	7/13	4-5	1,841	7/24	4-5	5,167
2014	8/25	4-5	5,258	8/25	5-6*3	1,605	7/22	4-5	1,833	8/25	5-6*2	1,849	8/25	4-5	5.223
2013	8/30	4-5	5,242	7/09	5-6*3	1,556	7/22	4-5	1,878	8/30	4-5	1,860	7/09	4-5	5,184
2012	7/25	4-5	5,653	7/25	4-5	1,698	7/25	3-4*1	1,945	7/25	4-5	2,011	7/25	3-4	5,393

*1 Load was 1 MW greater than 4-5 hour
*2 Load was <5 MW greater than 4-5 hour
*3 Load was <10 MW greater than 4-5 hour

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To identify general system peak loading periods for all Evergy jurisdictions, the combined Evergy load profile for 2019 was reviewed. Table 4 shows the 72 peak load hours (red shading) where total system load exceeded 90% of the 2019 annual system peak. All of the peak load hours occurred between noon and 9 pm, with nearly 90% (64) of the peak hours occurring during a 6-hour period from 2 pm to 8 pm.

Table 4: Evergy 2019 Peak Load Hours

DATE	12	13	14	15	16	17	18	19	20	21	22
6/28/2019	8441	8902	9294	9521	9738	9742	9623	9330	8963	8524	8283
6/29/2019	8132	8573	8914	9122	9281	9348	9336	9146	8837	8394	8113
7/2/2019	8207	8584	8978	9155	9339	9383	9353	9150	8710	8242	7910
7/9/2019	8107	8652	9074	9428	9675	9804	9817	9660	9383	8977	8635
7/17/2019	8654	9087	9419	9708	9962	10099	10116	10027	9710	9285	8934
7/18/2019	8964	9401	9795	9987	10186	10188	10189	10122	9809	9384	9077
7/19/2019	9019	9459	9885	10171	10339	10380	10301	10158	9792	9337	9035
7/20/2019	8461	8874	9220	9551	9760	9920	9953	9796	9477	9054	8761
8/6/2019	8378	8863	9273	9526	9579	9492	9346	9152	8757	8276	7845
8/12/2019	8350	8930	9458	9830	10018	9994	9954	9720	9301	8977	8582
8/13/2019	8388	8785	9140	9379	9476	9452	9326	9056	8586	8109	7637
8/19/2019	8250	8853	9383	9771	10031	10174	10186	9992	9608	9307	8836
8/20/2019	8423	8713	9125	9507	9736	9918	9938	9761	9403	9099	8675
9/3/2019	7589	8145	8638	9063	9364	9533	9474	9199	8796	8515	7963

Table 5 shows that while each of the jurisdiction load profiles varies somewhat, they all generally align with the Evergy load pattern with 100% of peak load hours occurring between noon and 9 pm with over 80% of the peak load hours occurring between 2 pm and 8 pm.

Table 5: 2019 Peak Load Hours by Jurisdiction

MO-West HOURLY LOAD

DATE	12	13	14	15	16	17	18	19	20	21	22
6/28/2019	1498	1603	167	1712	1740	1724	1711	1639	157	1503	1458
7/1/2019	1460	1534	159	1639	1683	1695	1714	1688	162	1535	1473
7/2/2019	1462	1534	159	1629	1671	1676	1696	1658	161	1527	1462
7/9/2019	1461	1552	162	1699	1748	1780	1778	1758	169	1625	1562
7/17/2019	1533	1581	161	1642	1705	1761	1776	1767	172	1630	1573
7/18/2019	1580	1650	172	1744	1791	1775	1805	1818	175	1678	1608
7/19/2019	1583	1660	172	1785	1837	1831	1827	1817	174	1669	1603
7/20/2019	1491	1566	161	1687	1720	1745	1762	1736	169	1614	1552
8/6/2019	1458	1546	161	1653	1679	1678	1689	1672	158	1492	1399
8/12/2019	1439	1560	164	1735	1791	1784	1802	1780	169	1641	1560
8/13/2019	1500	1564	163	1670	1693	1708	1696	1653	156	1463	1368
8/19/2019	1439	1558	166	1741	1808	1839	1856	1818	174	1700	1601
8/20/2019	1455	1459	152	1585	1660	1709	1743	1726	166	1610	1522
9/3/2019	1308	1420	151	1586	1665	1717	1715	1658	159	1539	1433
9/9/2019	1368	1487	157	1643	1659	1674	1652	1617	154	1478	1370
9/11/2019	1379	1466	154	1609	1652	1673	1661	1604	151	1466	1375
9/16/2019	1400	1502	159	1636	1698	1713	1680	1624	158	1515	1403
9/17/2019	1375	1486	158	1637	1662	1688	1674	1602	153	1478	1370
9/18/2019	1394	1513	160	1656	1689	1720	1697	1630	154	1485	1375

MO-Metro HOURLY LOAD

DATE	12	13	14	15	16	17	18	19	20	21	22
6/28/2019	1484	1550	16	1637	1649	1647	1621	1560	149	1430	1406
6/29/2019	1392	1526	15	1561	1594	1600	1616	1609	151	1415	1386
7/1/2019	1411	1476	15	1566	1569	1594	1572	1547	148	1420	1383
7/2/2019	1451	1505	15	1575	1587	1595	1560	1556	150	1449	1412
7/9/2019	1448	1530	15	1677	1722	1739	1736	1695	167	1612	1571
7/17/2019	1482	1534	15	1608	1678	1693	1704	1680	163	1569	1532
7/18/2019	1548	1613	16	1671	1665	1652	1665	1677	164	1590	1557
7/19/2019	1548	1618	16	1728	1766	1753	1739	1742	168	1612	1586
7/20/2019	1454	1515	15	1605	1635	1669	1676	1657	160	1553	1527
8/6/2019	1526	1603	16	1700	1721	1717	1694	1662	158	1458	1351
8/12/2019	1438	1584	16	1731	1747	1736	1718	1683	161	1581	1495
8/13/2019	1461	1521	15	1604	1621	1598	1573	1516	144	1390	1304
8/19/2019	1454	1538	16	1681	1735	1756	1754	1715	160	1547	1490
8/20/2019	1445	1499	15	1612	1648	1667	1680	1661	157	1511	1465
9/3/2019	1279	1431	15	1563	1619	1639	1628	1519	147	1455	1373
9/16/2019	1396	1495	15	1590	1587	1570	1535	1511	148	1440	1356
9/17/2019	1360	1504	15	1619	1637	1636	1572	1482	141	1373	1286
9/18/2019	1368	1446	15	1575	1636	1642	1602	1548	145	1384	1285
10/1/2019	1349	1480	15	1558	1594	1591	1542	1488	145	1395	1324

Since the peak load periods correlate so well, the Company established the 2 pm to 8 pm as a common 6-hour summer system peak load period that load modification rates and programs should be designed to address. The establishment of this common 6-hour system peak load period is not intended to set the peak period for any specific rates or programs as lower-level customer or device load profiles have been reviewed. It is only established as a time period that load modification measures should focus on for system capacity benefits. Individual measures

may need to incorporate only a subset of these hours or include hours outside of these to capture other grid level benefits, to encourage customer participation, or to minimize customer impact.

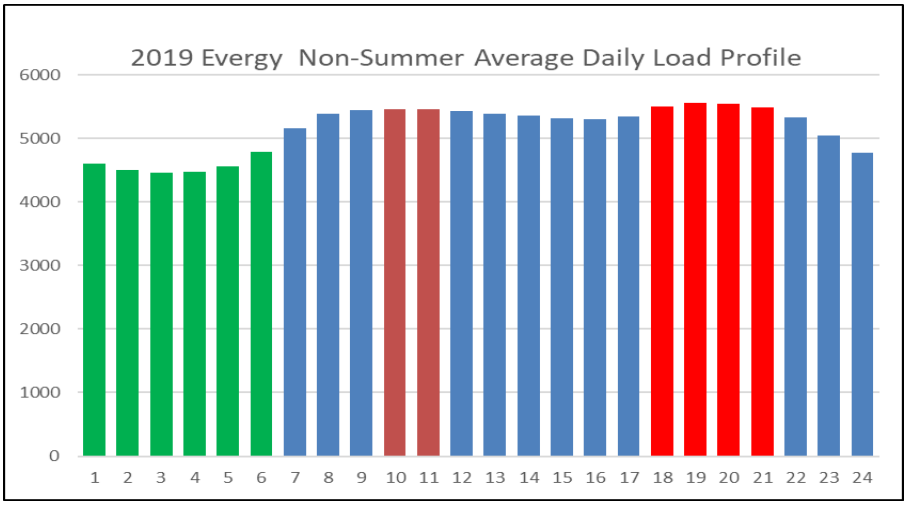
The monthly system peak loads were also analyzed to determine if the 6-hour system peak load period (2-8 pm) represents the time period in which monthly peaks can also be expected to occur. Table 6 presents the hour in which the system monthly peak has occurred during the past three years. A majority of the monthly system peak loads occur between 3 pm and 7 pm, but a few non-summer months experience a monthly system peak during the 7-8 am hour.

Table 6: Evergy/GPE[24] Monthly System Peak Load Hour (hour-ending)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Evergy 2019	1900	1900	800	1700	1800	1700	1700	1800	1700	1600	800	1900
GPE-2019	1900	1900	800	800	1800	1600	1700	1800	1700	1600	800	1800
GPE-2018	800	800	1900	800	1700	1800	1700	1600	1700	1700	800	800
GPE-2017	800	800	800	1700	1800	1700	1800	1700	1700	1700	800	1900

Figure 11 shows that in 2019, the Evergy non-summer month average day, the four peak load hours, while much less pronounced in the non-summer months, occur between 5 pm and 9 pm with the next two highest load hours occur between 9 am and 11 am. Figure 15 shows similar patterns for each Missouri jurisdiction during non-summer months. A residential On-Peak TOU period for the non-summer months should consider both the monthly system peak period and the early evening residential load influence on the average load.

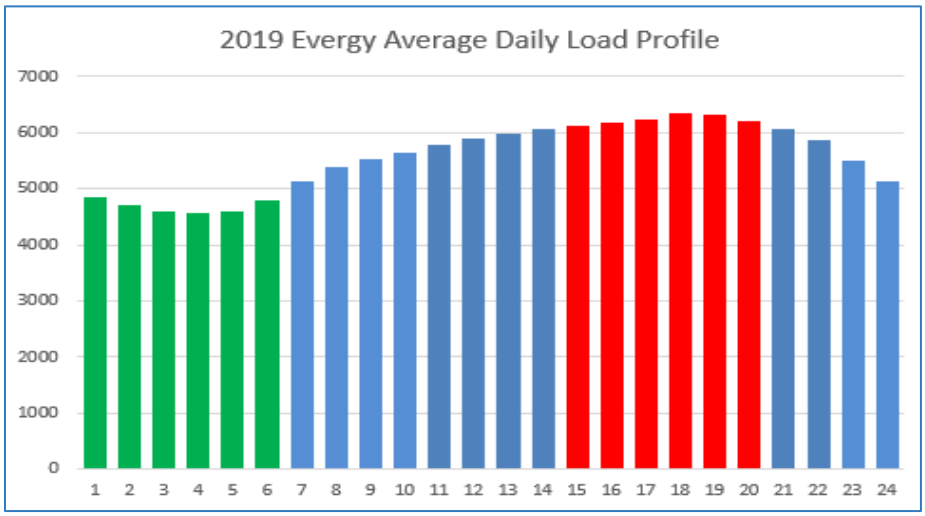
Figure 11: 2019 Evergy Non-Summer Average Day Hourly Loads



[24] *In this table GPE (Great Plains Energy) represents the combined loads of the legacy KCP&L and KCP&L GMO jurisdictions and Evergy represents the combined loads of all current Evergy jurisdictions.*

In defining the system minimum loading period for a 'Late-Night' or 'Super Off-Peak' TOU pricing programs across all Evergy jurisdictions, the Company first examined the combined Evergy load profile for 2019. Figure 12 illustrates that the 6-hour 'low-load' period with the lowest average system load occurs between midnight and 6 am.

Figure 12: 2019 Evergy Average Day Hourly Loads



To determine if this 6-hour low-load period is consistent for all jurisdictions, the Company performed a similar examination for each jurisdiction. Figure 13 show the similar low-load period for each jurisdiction. The 6-hour period with the lowest load is consistently midnight to 6 am in each jurisdiction.

While each jurisdiction generally follows the Evergy load patterns, there are subtle differences in the jurisdictional system loading patterns due the customer classes that make up each jurisdictional customer base. Figure 14 and Figure 15 present the six highest and lowest average annual hourly load hours by jurisdiction and season (summer and non-summer).

Based on the system load analysis the following system level characteristics were identified and are used in defining the daily time periods for Residential TOU rates:

- Summer On-Peak period must incorporate the historical annual system peak hours (4 pm-6 pm).
- Summer On-Peak period should fall within the 6-hour (2 pm-8 pm) system peak loading period.
- Non-Summer peak load periods are less well defined but there is generally a 4-hour higher load period from 5 pm-9 pm.
- There is a 6-hour system low-load period from midnight to 6 am.

Figure 13: 2019 Evergy Average Day Hourly Loads by Jurisdiction

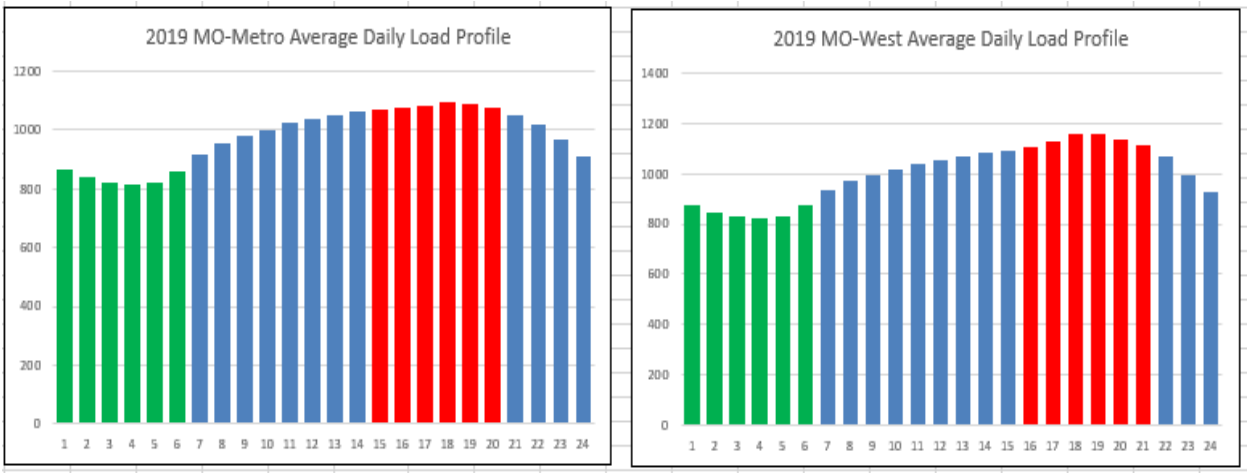


Figure 14: 2019 Evergy Average Summer Day Hourly Loads by Jurisdiction

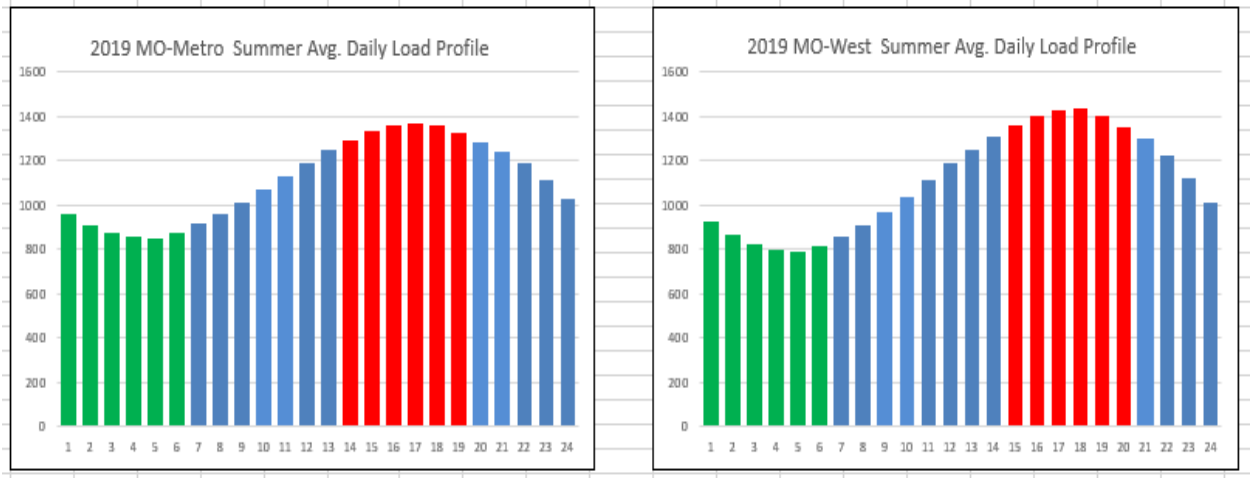
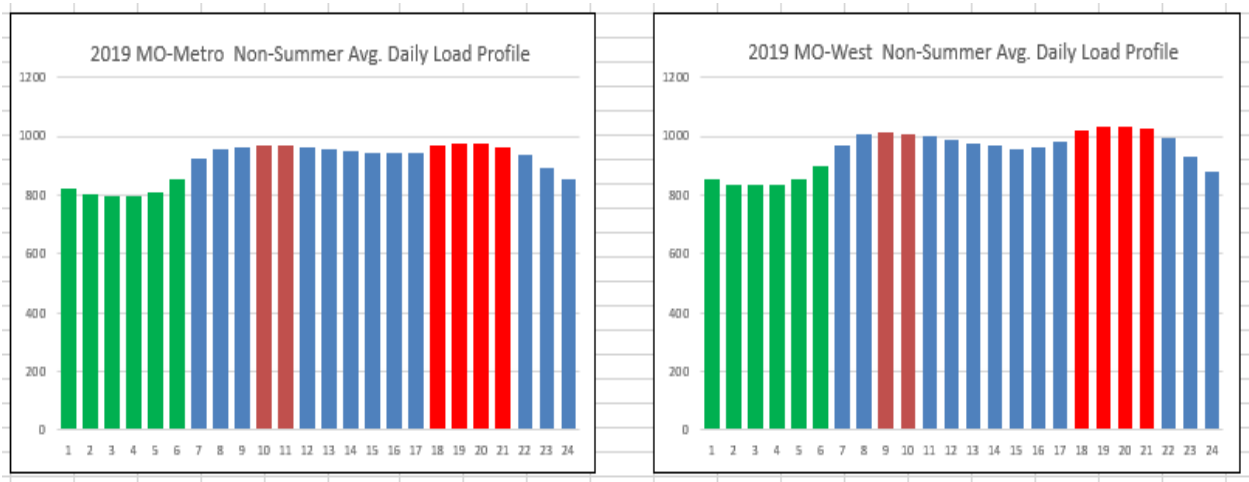


Figure 15: 2019 Evergy Average Non-Summer Day Hourly Loads by Jurisdiction



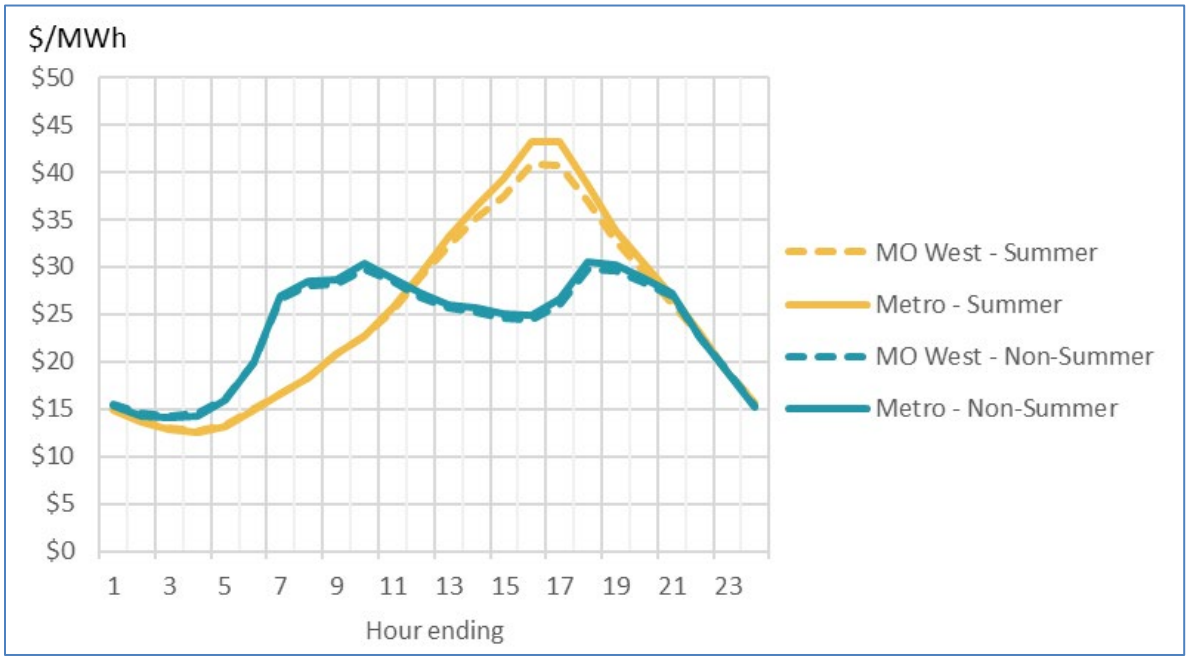
5.4.2.2 SPP Energy Market Pricing Analysis

In defining the system peak loading periods for time varying rate ("TVR") pricing programs, consideration must also be given to the actual daily fluctuation in the cost of energy during each season season. Each TVR requires different considerations and analysis of hourly energy prices. For Critical Peak Pricing and Peak Time Rebate rate options the focus would be on determining the price impact of the few extreme or outlier pricing periods. In contrast, for TOU rates, which sets a fixed rate by time period and season, the focus of the analysis is to identify the consistent daily high- and or low-cost periods. For this TOU peak pricing period analysis, Evergy analyzed the 2017-2019 SPP day-ahead hourly prices.

The Evergy Metro and West systems each have individual SPP LMP load nodes that follow the same hourly price patterns, but often differ in magnitude due to transmission congestion that can occur between the load nodes. For report simplicity, we have only presented illustrations of the SPP DA LMPs for Evergy Metro.

As discussed earlier in this Report, a review of SPP's DA LMP for 2019 do not indicate a significant seasonal pattern in the average daily energy prices and show that 'price spikes' can occur throught the year. The previous seasonal analysis identified significant differences in the daily price profiles between the summer and non-summer seasons as illustrated in Figure 16.

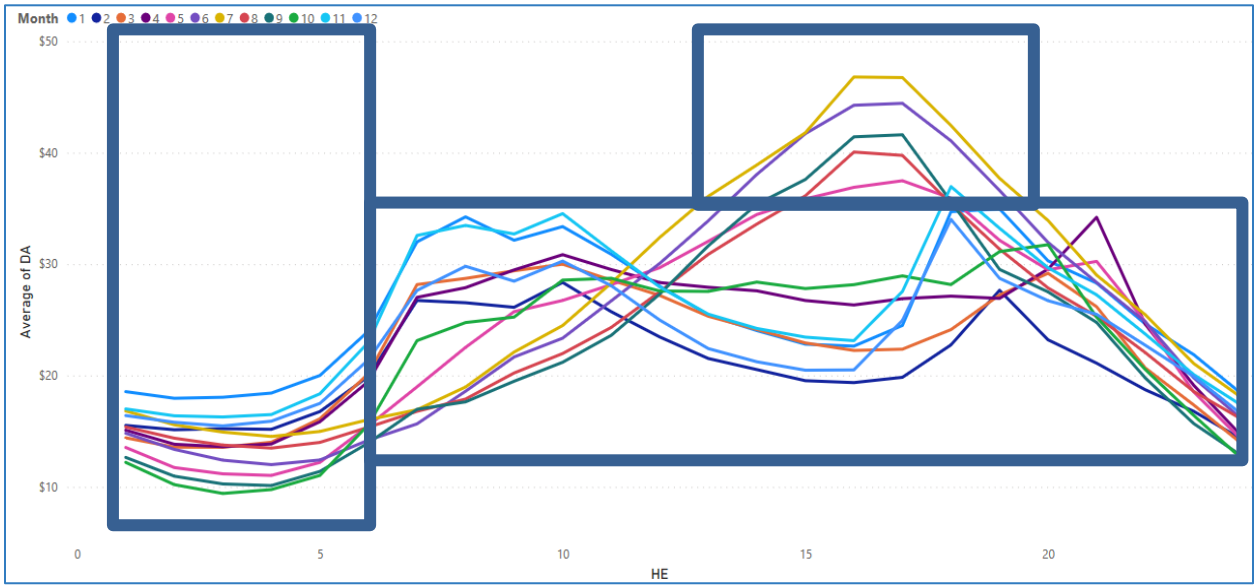
Figure 16 - 2019 SPP Average Daily Day Ahead Energy Prices by Season



In defining TOU pricing periods, consideration must be given to the actual daily fluctuation in the cost of energy. To identify any daily pricing patterns we further analyzed the three year monthly average hourly day-ahead energy prices which are illustrated in Figure 17. Inspection of the average hourly day-ahead energy prices shows three clear time-based pricing patterns.

1. A year-round low pricing period between midnight and 6 am.
2. A summer season (June-Sept) high price period generally between 1 pm and 8 pm with the highest price hours occurring between 3 pm and 6 pm.
3. Consistent market prices across other time periods and seasons.
4. Non-summer months prices are generally elevated in the morning and evening hours and are softer between noon and 5 pm.

Figure 17: SPP Three Year Monthly Average Hourly Day-Ahead Energy Prices
KCP&L-LMP 2017-2019



5.4.2.3 Residential Class Load Analysis

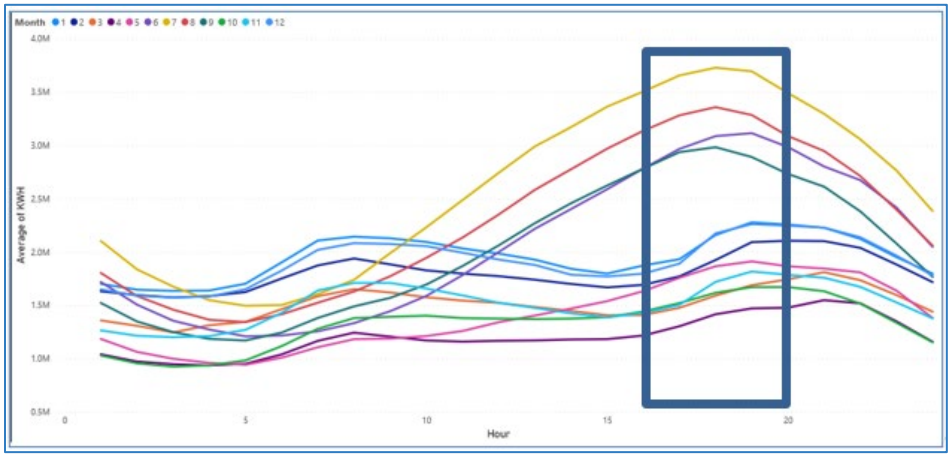
To establish the basis for the TOU rate pricing periods for residential customer classes across all jurisdictions, Evergy performed an analysis of the residential class loading profiles to establish any common characteristics for both the Summer and Non-Summer seasons.

In defining a residential summer peak loading period for all Evergy jurisdictions, the Company first looked at the Evergy residential class load research data for 2019[25]. Figure 18 shows that the combined Evergy residential load is substantially higher during the four month summer season period (June-September) than during the non-summer period. The monthly residential peak hours occurred during the 5-6 pm (hour ending ("HE") 18) or the 6-7 pm (HE19) hours.

[25] The most recent load research data available for Evergy Central was the 2016-2017 test year data used in the last general rates case.

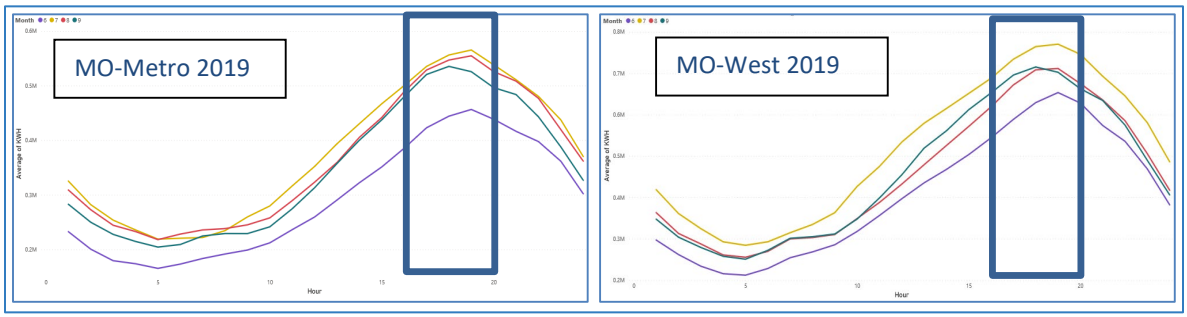
Figure 18 also illustrates that the residential class has a fairly symmetrical load profile around a 4-hour summer peak load period between the hours of 4 pm and 8 pm.

Figure 18: 2019 Evergy Residential Load Profile by Month



While there are slight variations in the residential summer load profiles by jurisdiction, as Figure 19 illustrates, they all follow the Evergy combined profile with the summer average monthly peak hours occurring between 5 pm and 7 pm and the highest residential class load hours generally occurring between 4 pm and 8 pm.

Figure 19: 2019 Evergy Residential Summer Load Profile by Jurisdiction



In defining a residential non-summer peak loading period for all Evergy jurisdictions, the Company further analyzed the Evergy residential class load research data for 2019. Figure 19 shows that the combined Evergy residential class load is substantially lower and less pronounced during the non-summer months than during the four month summer season. Figure 20 shows that the residential non-summer peak load period, while exaggerated by the plot scale, occurs between 5 pm and 10 pm.

Figure 20: Evergy Residential Non-Summer Load Profile by Month

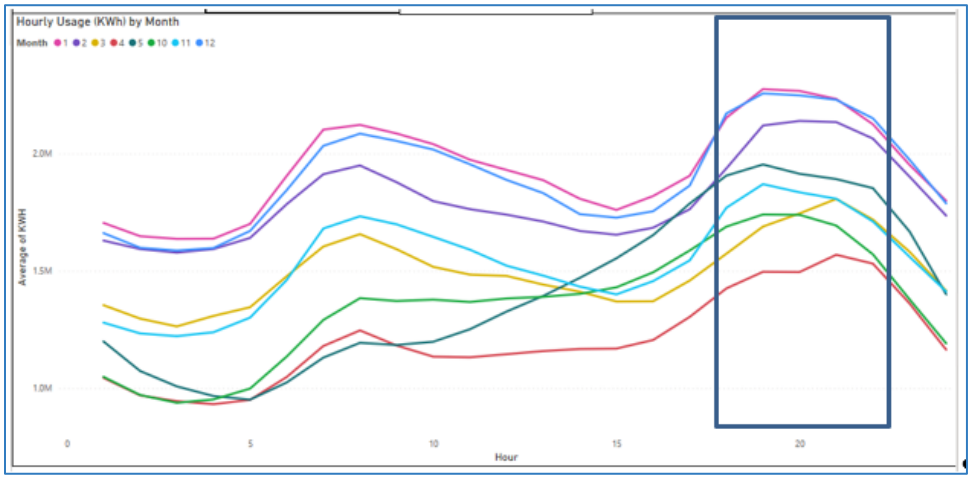
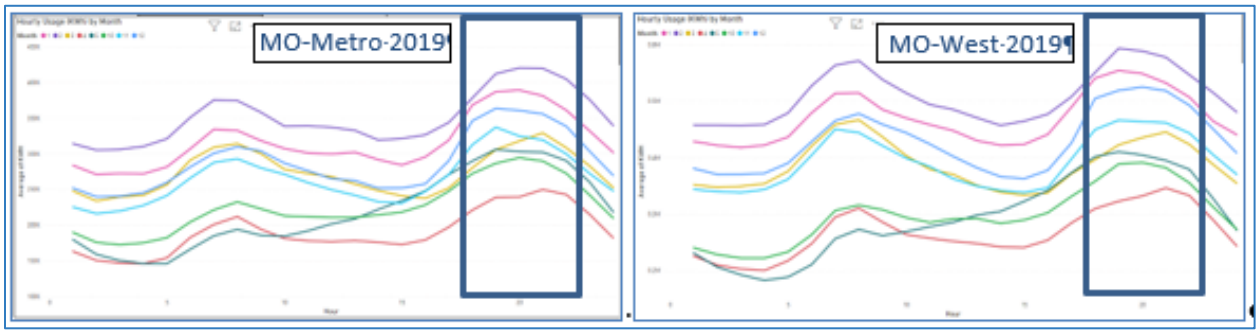


Figure 21 illustrates the Evergy residential non-summer monthly load profiles by jurisdiction. While there are slight variations in the non-summer load profiles by jurisdiction, the early evening high load period aligns with the Evergy combined profile with the highest residential class non-summer load hours generally occurring between 5 pm and 10 pm.

Figure 21: Evergy Res Non-Summer Monthly Load Profile by Jurisdiction



In defining the residential class minimum loading period for all Evergy jurisdictions, the Company first examined the Evergy residential class load profile for 2019. Figure 21 illustrates that the residential 'low-load' generally occurs in the early morning hours, but that there are variations that requires us to look more closely at the Summer and non-summer periods.

Figure 22 shows that the Evergy combined residential classes has a consistent five hour low usage period in the non-summer months between midnight and 5 am. The sixth hour may be the hour before or after depending on the month and weather.

Figure 23 shows that the Evergy combined residential class five hour low usage period occurs later between 2 am and 7 am. The sixth hour may be before or after depending on weather.

Inspection of the residential class load profiles by jurisdiction (Figure 18 and Figure 20) show consistent low load periods for each Missouri jurisdiction.

Figure 22: Evergy Residential Non-Summer Low Load Period

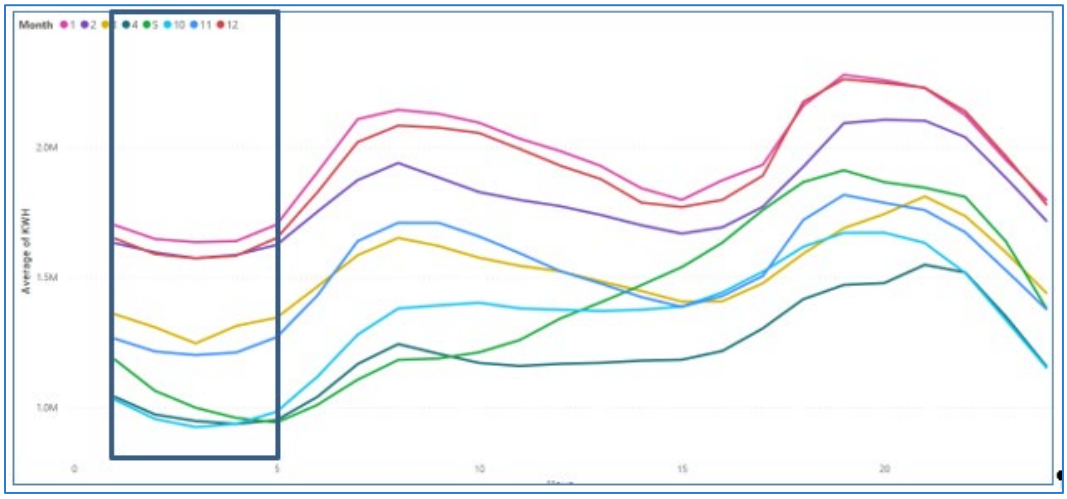
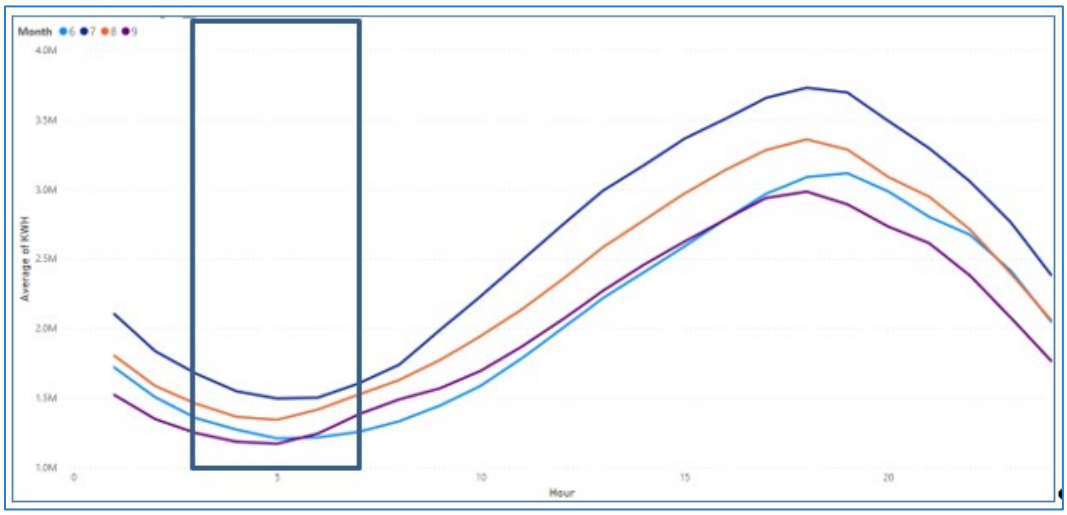


Figure 23: Evergy Residential Summer Low Load Period



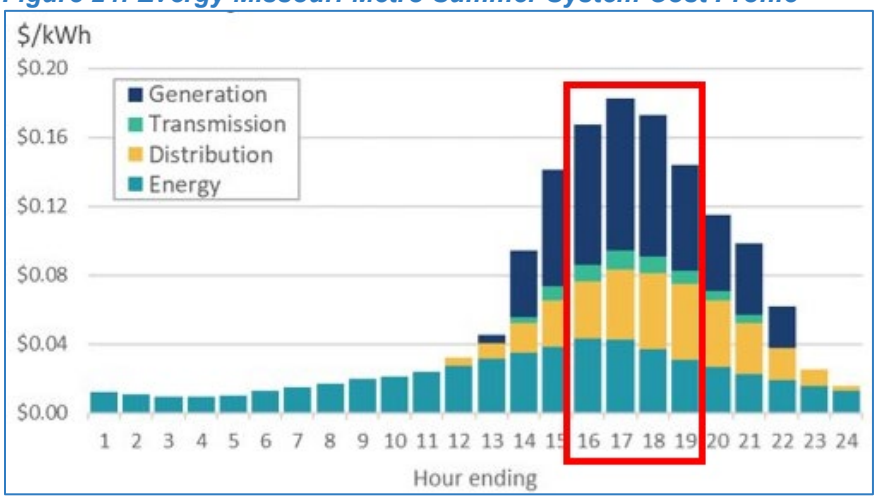
5.4.2.4 System Cost Analysis

Evergy further analyzed the potential residential TOU pricing periods from a total system cost perspective that included marginal generation costs, embedded transmission and distribution infrastructure costs, and SPP DA energy costs. In developing the hourly system cost profiles the Company allocated the respective system cost components as follows:

- Generation capacity costs: The avoided cost of capacity approved in the Company's most recent Missouri Energy Efficient Investment Act ("MEEIA") filing[26] was used. This generation capacity cost was allocated to the top 100 system net load hours, assuming 1,000 MW of solar deployed. This level of solar adoption reflects the near-term customer Evergy grid scale solar and customer additions identified in the most recent Integrated Resource Plan ("IRP").
- Transmission costs: Embedded transmission costs[27] were allocated to the system top 25 high-load hours of each month of the year, approximating the driver of SPP transmission charges.
- Distribution costs: Assumed 25% of total embedded residential distribution cost[28] is driven by peak demand growth, and were allocated to top 500 residential load hours. This broad allocation reflects the diversity in timing of local distribution peaks.
- Energy costs: are based on the SPP Day-Ahead hourly energy costs.

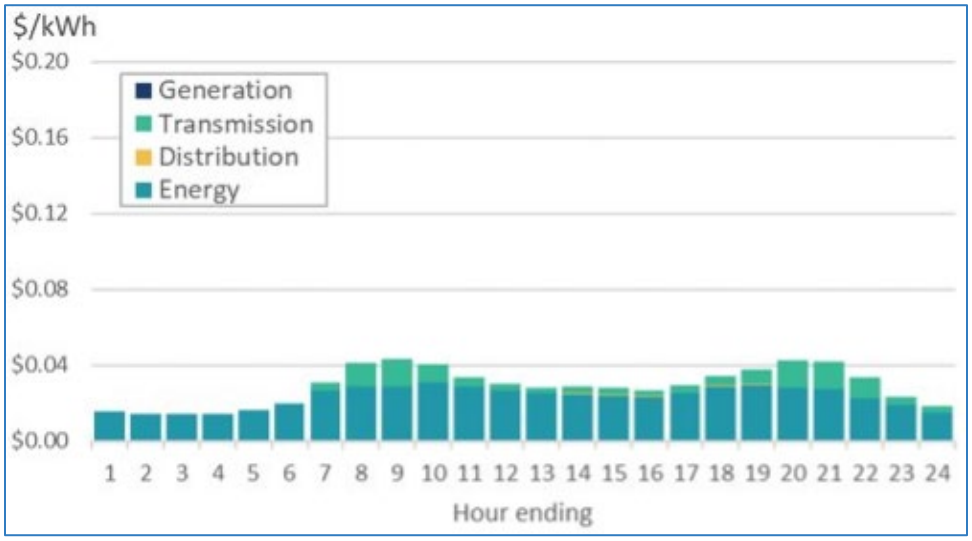
Figure 24 and Figure 25 show the results of this analysis for the Missouri-Metro jurisdiction for the summer and non-summer seasons, respectively. Since the jurisdictional load profiles are very similar, the results for Missouri-West will be very similar. This analysis show that the 4-hour period with the highest average cost for the summer season occurs between 3 pm and 7 pm. For the non-summer season, the analysis does not indicate any significantly higher cost period, but costs are slightly higher in the early morning and evening hours.

Figure 24: Evergy Missouri-Metro Summer System Cost Profile



[26] Docket No. EO-2019-0132
[27] Embedded costs were derived from the most recent rate case cost of service study
[28] Embedded costs were derived from the most recent rate case cost of service study

Figure 25: Evergy Missouri-Metro Non-Summer System Cost Profile



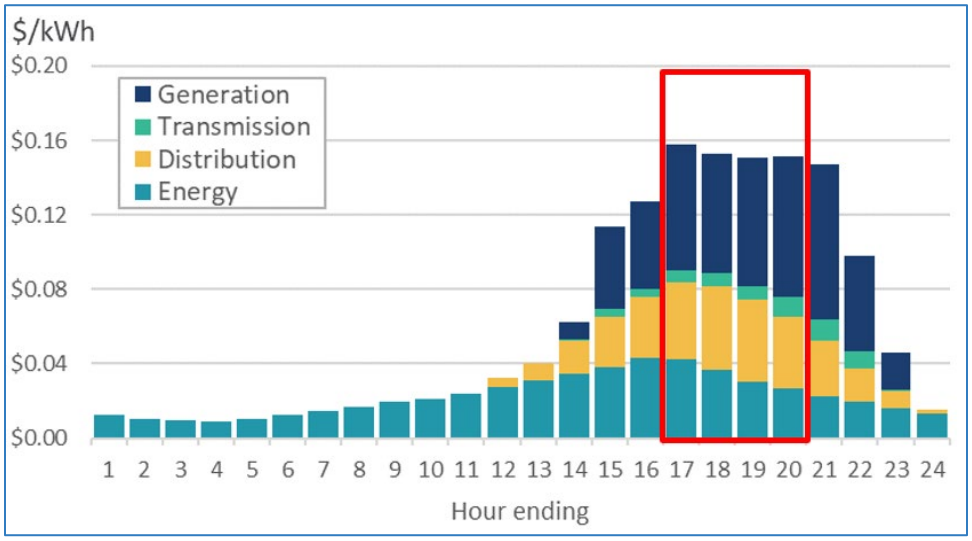
Since the system cost analysis included a significant number of assumption in cost allocations, we performed additional sensitivity analysis see if changes to the key assumptions changed the 4-hour high cost period. Table 7 shows the results of the sensitivity analysis. The only assumption change that moved the 4-hour high cost period to the 4-8 pm hours was an increase in solar penetration. The 2,500 MW of future solar reflects both the customer and Evergy grid scale solar additions identified in the Company's most recent IRP that are expected to occur over the next 10 years.

Table 7: Summer System Cost Profile Sensitivity Tests

Base Assumption	Alternative Assumption	4-hr High Cost Period
MEEIA Avoided Generation Cost	$0/kW-yr generation capacity cost	3 – 7 pm
25% of distribution costs assumed to be capacity driven	50% of distribution costs assumed to be capacity driven	3 – 7 pm
Distribution costs allocated to top 500 hours per year	Distribution costs allocated to top 1,000 hours per year	3 – 7 pm
Assumed 1,000 MW of future solar	Assumed 2,500 MW of future solar	4 – 8 pm

Figure 26 shows the modeled impact on the system cost analysis of the higher solar penetration with the summer 4-hour high cost period shifted to 4-8 pm with the 8-9 pm period of almost the same magnitude.

Figure 26: Evergy Missouri-Metro Modeled Summer System Cost Profile with 2,500 MW Solar

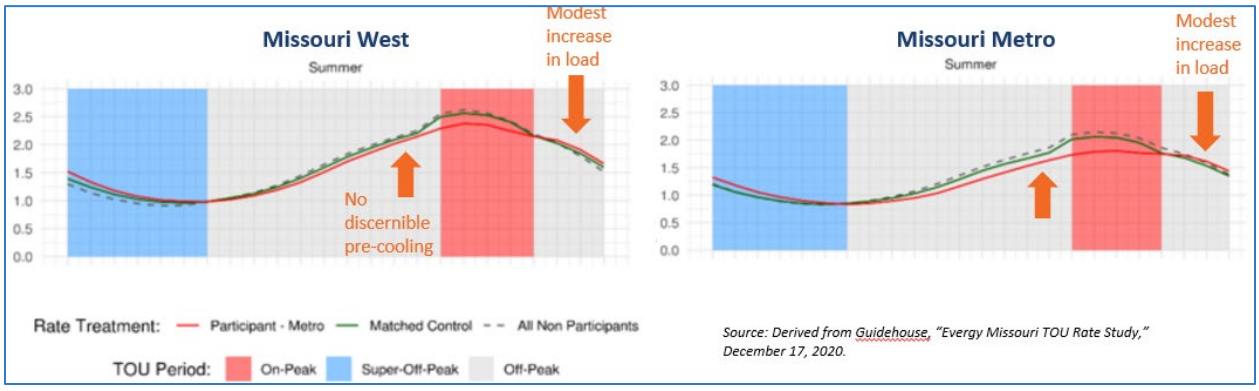


5.4.2.5 TOU Time Period Future Proofing Considerations

Most of the empirical evidence based on analysis of historical data presented in the previous sections indicates a 4-hour Summer On-Peak period from 3–7 pm is reasonable. Evergy's current TOU rate offering has a Summer On-Peak period of 4-8 pm which aligns with the residential class 4-hour peak load period. This misalignment begged the question of which period should be used going forward. Evergy considered several additional factors and decided to retain the 4-8 pm period as the summer On-Peak period to future-proof the rate structure to minimize future time period changes. The following factors were part of that consideration:

- Increased solar penetration – changes to the net system load profile due to the anticipated increase in current IRP will likely shift the summer system cost profile later in the day as illustrated in Figure 26.
- 'Snap-Back' of TOU load – The interim TOU EM&V analysis shows that there is a post TOU On-Peak load 'snap-back' due to the shifting of some load to the post On-Peak hours (Figure 27).

Figure 27: Load 'Snap-Back' after TOU On-Peak Period



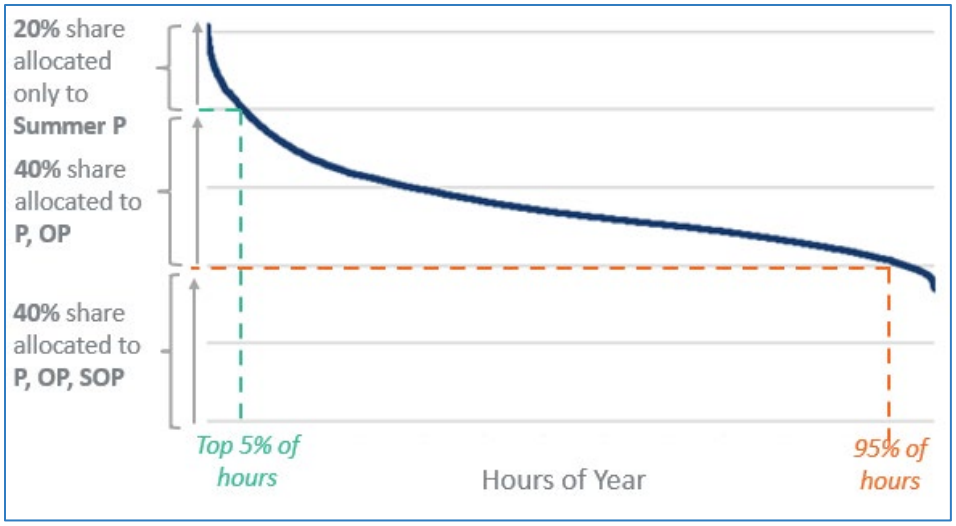
5.4.3 TOU Price Differential Analysis

After establishing the daily TOU On-Peak and Super Off-Peak time periods, the Company performed an analysis to determine the target price differential for each time period by season. In this analysis, the residential classes share of costs from the most recent class cost of service study were allocated to the TOU time periods.

Generation costs - The residential class's share of generation capacity costs were allocated based on analysis of the system load duration curve as illustrated in Figure 28, with the goal of allocating incremental costs of capacity only to the periods which "cause" those costs:

- Summer peak period costs are assumed to include peaking generation which runs during a limited number of hours of the year (i.e., 5%)
- All periods are assumed to include costs of generators that run most (i.e., 95%) of the hours of the year
- The remaining share of costs is allocated to the Off-Peak and Non-Summer peak periods

Figure 28: 2019 Evergy Load Duration Curve (MW)



Energy Costs - The residential class's share of energy costs were allocated proportional to Evergy's average SPP energy prices in each period.

Transmission costs - The residential class's share of transmission costs were allocated to the peak period in each month of the year.

Distribution costs - The residential class's share of distribution costs were allocated to reflect that the peak period drives a proportionally higher share of costs

- 25% of total distribution cost is allocated to the summer and non-summer peak periods
- 75% of total distribution cost is allocated to all periods

5.4.3.1 3-Period Price Differential

Using these cost allocations for calculating the prices for a year round 3-period TOU, results in a rate that has a strong summer peak price and a significantly discounted Super Off-Peak price, with modest price differences in the other periods. Table 8 shows the result of the price differential analysis based on the class cost of service costs from the most recent Missouri-Metro and Missouri-West rate cases.

- Current TOU Rate column presents the current Evergy TOU tariff prices which was established to be revenue neutral with the residential general service billing determinants.
- The Current RN ("revenue neutral") Rate column presents the TOU tariff prices that would be revenue neutral based on the existing tariff price differentials and the settlement billing determinants for both the residential general service and single meter space heating customers.
- The Proposed TOU Rate column presents the prices based on revised pricing differentials that would be revenue neutral with billing determinans for both the residential general service and single meter space heating customers.

  Note: The pricing is for illustrative purposes only and used determinants from the previous rate case. The actual pricing will likely when the Company makes their general rate case filing.

While there are slight variations in the rate differentials calculated for each jurisdiction they are fairly consistent. Based on this analysis we established the following price differential targets (On-Peak/Off-Peak/Super Off-Peak) targets for the 3-period TOU rates:

- Summer: 6.0 / 2.0 / 1.0
- Non-Summer: 3.0 / 1.5 / 1.0

Table 8: 3-Period TOU Price Differential Analysis

		Missouri Metro			Missouri-West		
		Current TOU Rate	**Current RN Rate**	**Proposed TOU Rate**	**Current TOU Rate**	**Current RN Rate**	**Proposed TOU Rate**
Customer Charge	$/mo	$11.47	$11.47	$11.47	$11.47	$11.47	$11.47
TOU Charges							
Summer							
On-Peak	$/kWh	$0.325	$0.304	$0.358	$0.266	$0.251	$0.297
Off-Peak	$/kWh	$0.108	$0.101	$0.099	$0.089	$0.084	$0.078
Super Off-Peak	$/kWh	$0.054	$0.051	$0.059	$0.044	$0.042	$0.048
Non-Summer							
On-Peak	$/kWh	$0.266	$0.249	$0.174	$0.216	$0.205	$0.183
Off-Peak	$/kWh	$0.104	$0.098	$0.098	$0.087	$0.083	$0.077
Super Off-Peak	$/kWh	$0.045	$0.042	$0.060	$0.037	$0.035	$0.050
Price Ratios							
Summer		6.0:2.0:1	6.0:2.0:1	6.1:1.7:1	6.0:2.0:1	6.0:2.0:1	6.1:1.6:1
Non-Summer		5.9:2.3:1	5.9:2.3:1	2.9:1.6:1	5.9:2.4:1	5.9:2.3:1	3.6:1.5:1
Heating Customer Impact							
Average annual bill	$		$1,472	$1,465		$1,588	$1,585
% Increase	%		6.6%	6.1%		3.6%	3.3%

The interim TOU EM&V analysis identified the condition where electric space heating customers on the TOU rate experienced higher bills during the heating season than on their traditional rate. Table 8 shows that the proposed TOU with reduced price differentials in the non-summer season will reduce slightly the impact of TOU for electric space heating customers.

5.4.3.2 2-Period Price Differential

In an effort to provide additional choice for customers beyond the 3-period rate, the Company also evaluated a 2-period TOU rate design that would be a Summer-only TOU option. This option should be attractive to customers with less ability to shift usage throughout the year and address bill impact of the existing TOU rate typically occurring for space heating customers. Table 9 shows the result of the price differential analysis for the Company's proposed 2-period price differential TOU rate to complement the existing 3-period TOU rate. The results of the 3-period price differential analysis were used for calculating the price differentials for the proposed 2-period TOU rate with the following price period definitions:

- Summer: On-Peak 4-8 pm; Off-Peak all other hours
- Non-Summer: Super Off-Peak midnight-6 am; Off-Peak all other hours

For the Summer season, the 2-period On-Peak price was set equal to the 3-period On-Peak price and the Off-Peak price was solved for for the revenue neutrality. For the Non-Summer the 2-period Super Off-peak price was set equal to the 3-period Super Off-peak price and the Off-Peak price was solved for revenue neutrality.

> *Note: The pricing is for illustrative purposes only and used determinants from the previous rate case. The actual pricing will likely when the Company makes their general rate case filing.*

While there are slight variations in the rate differentials calculated for each jurisdiction they are fairly consistent. Based on this analysis the Company established the following price differential targets (Summer On-Peak/Off-Peak and Non-Summer Off-Peak/Super Off-Peak) targets for the 2-period TOU rates:

- Summer: 4.0 / 1.0
- Non-Summer: 2.0 / 1.0

Table 9: 2-Period TOU Price Differential Analysis

		MO-Metro	MO-West
		Proposed TOU Rate	**Proposed TOU Rate**
Customer Charge	$/mo	$11.47	$11.47
TOU Charges			
Summer			
On-Peak	$/kWh	$0.358	$0.297
Off-Peak	$/kWh	$0.091	$0.073
Non-Summer			
Off-Peak	$/kWh	$0.111	$0.095
Super Off-Peak	$/kWh	$0.060	$0.050
Price Ratios			
Summer		3.9 : 1	4.1 : 1
Non-Summer		1.8 : 1	1.9 : 1
Heating Customer Impact			
Average annual bill	$	$1,466	$1,590
% Increase	%	6.2%	3.7%

5.5 PROPOSED RESIDENTIAL TOU RATES

Based on the TOU rate design analysis presented in the previous sections and feedback from our customers, Evergy proposes to incorporate these refinements to the existing 3-period TOU rate and introduce an optional 2-period TOU rate to provide customers an additional TOU rate option.

5.5.1 3-Period TOU Rate

Although the majority of customers on the existing TOU rate are satisfied with the rate and on average have seen an overall decrease in their electric bills, the Company's TOU analysis indicates that some refinement in the rate design is warranted. Evergy proposes to implement several refinements to the existing 3-period TOU rate in its next general rate case.

Table 10 presents the existing Missouri-Metro and Missouri-West 3-period TOU rate constructs along with the proposed refinements in red text. These refinements for further described in the following sections.

Table 10: Proposed 3-Period TOU Rate Refinements

TOU Period	Missouri Metro Price		Missouri West Price		New Price	Time Period
	(¢/kWh)	Delta	(¢/kWh)	Delta	Delta	
Summer	May 16-Sept. 15		June 1-Sept. 30			June 1-Sept. 30
On-Peak	32.498 ¢	6.0 X	26.577 ¢	6.0 X	6.0 X	4 - 8 pm, M-F excl. holidays
Off-Peak	10.833 ¢	2.0 X	8.859 ¢	2.0 X	2.0 X	All other hours
Super Off-Peak	5.416 ¢	1.0 X	4.429 ¢	1.0 X	1.0 X	Midnight - 6 am every day
Non-Summer	Sept 16 – May 15		Oct. 1-May 31			Oct. 1-May 31
On-Peak	26.575 ¢	5.9 X	21.629 ¢	5.9 X	3.0 X	4 - 8 pm, M-F excl. holidays
Off-Peak	10.422¢	2.3 X	8.727 ¢	2.4 X	1.5 X	All other hours
Super Off-Peak	4.449 ¢	1.0 X	3.667 ¢	1.0 X	1.0 X	Midnight - 6 am every day
Super Off Peak	% Summer	0.82 X		0.83 X	1.0 X	
Note: Proposed refinements are shown in red text						

5.5.1.1 Season Definition

As discussed in Section 5.4.1, there is considerable empirical support for the selection of this four month summer season rate period. Therefore, Evergy proposes to maintain two seasons, Summer and Non-Summer and revise the current TOU tariffs to reflect a consistent summer season period from June 1 to September 30 for both Evergy Missouri jurisdictions.

5.5.1.2 TOU Time Periods

Evergy does not propose any changes to the TOU time period defined in the current TOU tariff.

Evergy's current TOU rate offerings have a year round On-Peak period of 4-8 pm which aligns with the residential class 4-hour summer peak load period. The residential class's non-summer high-load period, while not as pronounced, generally occurs between 5 pm and 10 pm. Most of the empirical evidence from the analysis of historical system level data supports a 4-hour Summer On-Peak period from 3–7 pm. However, as discussed in Section 5.4.2.5, Evergy has elected to retain the 4-8 pm period as the On-Peak period for the 3-period TOU rate to future-proof the rate structure and minimize future time period changes.

Evergy's current TOU rate offerings have a year round Super Off-Peak period of midnight-6 am. All of the empirical evidence presented in the prior sections clearly support a year-round Super Off-Peak period from midnight- 6 am.

5.5.1.3 TOU Price Differentials

Evergy's current TOU rate offerings have have summer season price differentals (On-Peak/Off-Peak/ Super Off-Peak) of 6.0 / 2.0 / 1.0. Based on the price differential analysis presented earlier, Evergy proposes to maintain these summer proce differential targets.

Evergy's current TOU rate offerings have have non-summer season price differentals (On-Peak/Off-Peak/ Super Off-Peak) of 5.9 / 2.3 / 1.0 with the Super Off-Peak price being approximately 85% of the summer season Super Off-Peak price. Based on the price differential analysis presented earlier, Evergy proposes to revise the TOU tariffs to lower the price differentals and implement differential targets of 3.0 / 1.5 / 1.0 with no, or minimal, difference in the summer and non-summer Super Off-Peak prices.

5.5.1.4 Extreme Weather Considerations

In discussion with stakeholders on March 3, 2021, concern was expressed that the TOU price differentials may be too great and could generate extremely high bills during extreme summer hot spells. Based on this concern, Evergy performed an analysis to evaluate potential bill impact of the TOU rate during extremely hot weather. The analysis shows that a customer on the TOU rate will likely see less of a bill impact during extreme hot weather, especially if they use a programmable thermostat to raise their temperature during the On-Peak time period (see Table 11).

For the most extreme case, Evergy compared the bill impact of a 3-ton (3 kWh/hr) air conditioner running continuously for 24 hours. Under this scenario, a Missouri-Metro customer on the General Service rate would pay ($10.74/day) 14% more than what they would pay on the TOU rate ($9.42/day). In a less extreme case where the air conditioner runs 100% during the On-Peak period, 75% during the Off-Peak period, and 50% during the Super Off-Peak period the bill impact on either rate is the same at $7.80/day.

Table 11: Extreme Weather Comparison for Missouri-Metro

		3 Period TOU				Std Rate	
		On-Peak Hrs	Off-Peak Hrs	S.Off-Peak Hrs	Total Rate	All Hrs	Premium
AC kWh/hr	3						
Hrs/day		4	14	6		24	
Rate		$ 0.32498	$ 0.10833	$ 0.05416		$ 0.14916	
% Run Time		100%	100%	100%		100%	
kwh/day		12	42	18	72	72	
Cost/day		$ 3.90	$ 4.55	$ 0.97	$ 9.42	$ 10.74	114%
% Run Time		100%	75%	50%		72.92%	
kwh/day		12	31.5	9	52.5	52.5	
Cost/day		$ 3.90	$ 3.41	$ 0.49	$ 7.80	$ 7.83	100%

5.5.2 2-Period TOU Rate

Evergy proposes to add a 2-period TOU rate to provide our customers an additional TOU rate option that could be attractive to customers with less ability to shift usage throughout the year and address the bill impact of the current TOU rate typically occurring for space heating customers. The proposed rate constructs for the 2-period TOU rate are summarized in Table 12 and further described in the following sections.

Table 12: Proposed 2-Period TOU Rate

TOU Period	Price		Time Period
	(¢/kWh)	Delta	
Summer			June 1-Sept. 30
On-Peak	= TOU On-Peak	4.0 X	4 - 8 pm, M-F excl. holidays
Off-Peak		1.0 X	All other hours
Non-Summer			Oct. 1-May 31
Off-Peak		2.0 X	All other hours
Super Off-Peak	= TOU S Off-Peak	1.0 X	12 - 6 am, every day

5.5.2.1 TOU-2 Season Definition

As discussed in Section 5.4.1, the 2-period TOU rate will have two seasons, Summer and Non-Summer, and with the summer season period from June 1 to September 30 for both of the Evergy Missouri jurisdictions.

5.5.2.2 TOU-2 Time Periods

For the Summer season, the 2-period TOU rate will have an On-Peak period from 4-8 pm consistent with the 3-period TOU rate. All other hours will be Off-Peak. The alignment of Summer On-Peak periods between the TOU rates is to encourage peak load reduction.

For the Non-Summer season, the 2-period TOU rate will have a Super Off-Peak period from midnight-6 am consistent with the 3-period TOU rate. All other hours will be Off-Peak. The alignment of Super Off-Peak periods during the non-summer season encourages shifting load into this low-load, low-cost period to improve system utilization.

5.5.2.3 TOU-2 Price Differentials

Based on the price differential analysis presented earlier, Evergy proposes to set the Summer On-Peak price for the 2-period TOU rate equal to the TOU summer On-Peak price and have an On-Peak to Off-Peak price differential target 4.0 / 1.0. The non-summer Super Off-Peak price for the 2-period TOU rate will be set to the TOU Super Off-Peak price and have an Off-Peak to Super Off-Peak differential target of 2.0 / 1.0.

5.6 EDUCATION PLANS

Educating customers about rate plan options is an ongoing effort and one that can present a unique set of challenges. Rate information is highly detailed, complex, and requires customer effort and time to read and fully understand various rate structures and how changes to those structures impact their bills. Evergy will continue an integrated education and outreach campaign to help increase customer awareness of its rate plan offerings, especially the TOU plan.

Based upon the research and key takeaways from past campaigns, Evergy's strategy will center around the following focus areas:

- **Simplify:** Deliver education in a clear, concise manner using streamlined visualizations of key information when possible. To develop this message and personalized, data-driven education, the Company will continue to leverage critical technology and infrastructure such as our Customer Care and Billing System, AMI meter network, Meter Data Management system, Rate Education Reports, Online Rate Analysis Tool, Post-Enrollment Rate Coach Reports, and more.
- **Connect with new customer segments:** Deliver education across an integrated mix of channels proven – through research and historical practices – to be successful in reaching and resonating with new and additional customer segments. The Company will work with customers to help them to understand behavioral changes that may be required to save money on TOU.

- **Champion Consistency:** Implement a consistent, centralized message on Evergy's website. This is a destination to which all other tactics, including direct/in-person communication, will drive so customers can easily access additional information and education.
- **Explaing the Why:** Continue to help customers understand the important impacts of TOU and the community and grid benefits the rate structure delivers. Education materials will help customers understand how TOU relates to energy pricing and how they could save money by shifting their usage to Off-Peak times.

In addition, Evergy will continue to execute on our four mains goals from its 2021 TOU campaign, which are:

- **Inform** all customers on the TOU rate option and how time of day affects electricity pricing, through personalize Rate Education Reports, Online Rate Analysis Tools, and usage and cost visualization tools.
- **Educate** customers on where to find information about the TOU plan option and how the rate plan works.
- **Enroll** customers in TOU through targeted, data-driven marketing.
- **Assist** customers who have enrolled in TOU by developing and implementing tools and an ongoing communication campaign, through weekly post-enrollment coaching emails, to ensure customer success and satisfaction and avert attrition due to plan dissatisfaction.

In additional to individual marketing channel performance, measurement compared to Evergy benchmarks and continued customer post-enrollment and opt-out surveys will be monitored and a TOU awareness question will be added to the Company's Customer Quarterly Tracker survey. This survey will provide a baseline of awareness by end of June 2021 and allow the Company to track awareness over time. The Company's goal for 2021 is to improve overall customer TOU awareness by 5%.

6 APPENDIX A – INTERIM EM&V RESULTS

Below is an excerpt from the Executive Summary, Results and Key Finding of ***Guidehouse's Evergy Missouri Residential Time of Use Rate Evaluation***. This interim evaluation has been submitted to the MPSC and presented to stakeholders.

TOU Rate Impacts[29]

Figure 4 and Figure 5 present the TOU rate impacts for the Missouri Metro and West jurisdictions respectively. The impacts in both the summer and winter seasons are similar across the two jurisdictions with almost all of the impacts being statistically significant at the ninety percent confidence level, which indicates that participants in both jurisdictions did respond to the TOU prices by changing their consumption patterns.

The most notable savings in either season and jurisdiction occur during the on-peak periods as the price differential is the highest during these hours both in comparison to the other TOU periods as well as to the tiered rates (see section 1.2 for additional detail, Table 5 and Table 6). Furthermore, the on-peak period is four hours a day during weekdays, 4 to 8 pm, making it easier to shift consumption than if the on-peak period was longer.

The overall magnitude of the summer impacts, i.e. the kWh impacts, are greater than the winter impacts. However, the difference in the percent impact is closer which is mainly due to summer consumption being higher than the winter. Another potential contributing factor is that winter space heating loads may be less flexible as compared to summer space cooling loads.

It remains to be seen how the impacts change as more participants are available for analysis, but the confidence bands around the interim impact estimates are reasonable, meaning that they are not too wide. (For example, you do not see confidence bands stretch from -0.2 to -1.2 as then it would be difficult to draw reasonable conclusions).

[29] Guidehouse's Evergy Missouri Residential Time of Use Rate Evaluation, December 10, 2020; Executive Summary, Results and Key Findings

Figure 4. TOU Rate Impacts – Missouri Metro

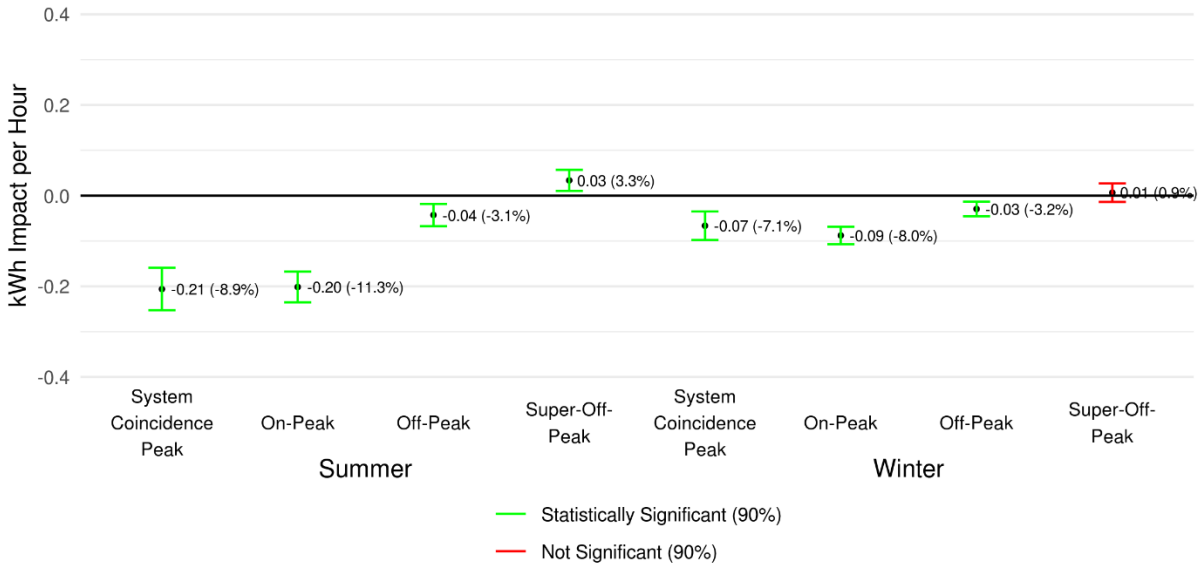
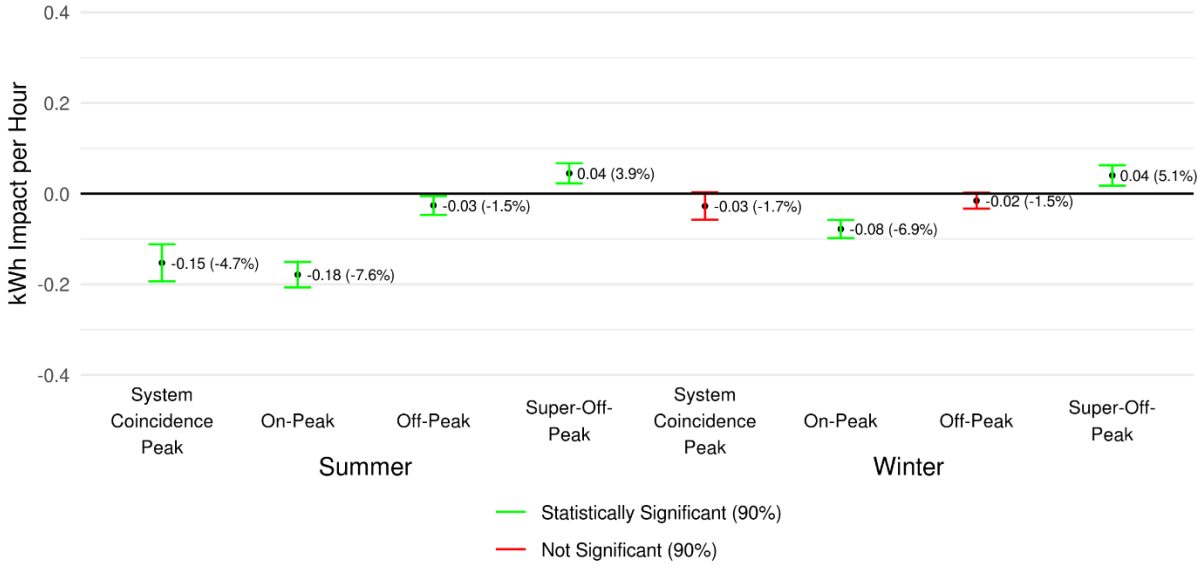


Figure 5. TOU Rate Impacts – Missouri West



During the off-peak period, we do see some impacts though the magnitude is much smaller than the on-peak period which is to be expected given that the off-peak price is much lower than the on-peak price. Given the low price offered during the super off-peak period, we see an increase in consumption as participants shift a portion of their consumption from the higher priced on-peak and off-peak periods to the super off-peak period.

During the summer season, the monthly system coincident peak demand impacts are very similar to those of the on-peak period impacts, but the winter system coincident peak demand impacts are lower than those of the on-peak period impacts.

In the summer, the system coincident peak hours always coincide with the on-peak hours during which we see the highest impacts and hence one would expect similar impacts in the summer system coincident peak. However, during some winter months the system coincident peak can occur in the early morning during the off-peak period, and hence one would expect lower system coincident peak impacts in the winter.

Bill Impacts

This compares the average participant's actual bill under the TOU rate compared to what it would have been under the tiered rate structure accounting for both the rate structure changes (i.e. tiered vs. TOU rates) as well as the associated behavioral changes. The impact estimates of the TOU rates for each jurisdiction, presented above, were used to determine what the average participant's consumption would have been in the absence of TOU rates, effectively adjusting for the change in behavior.

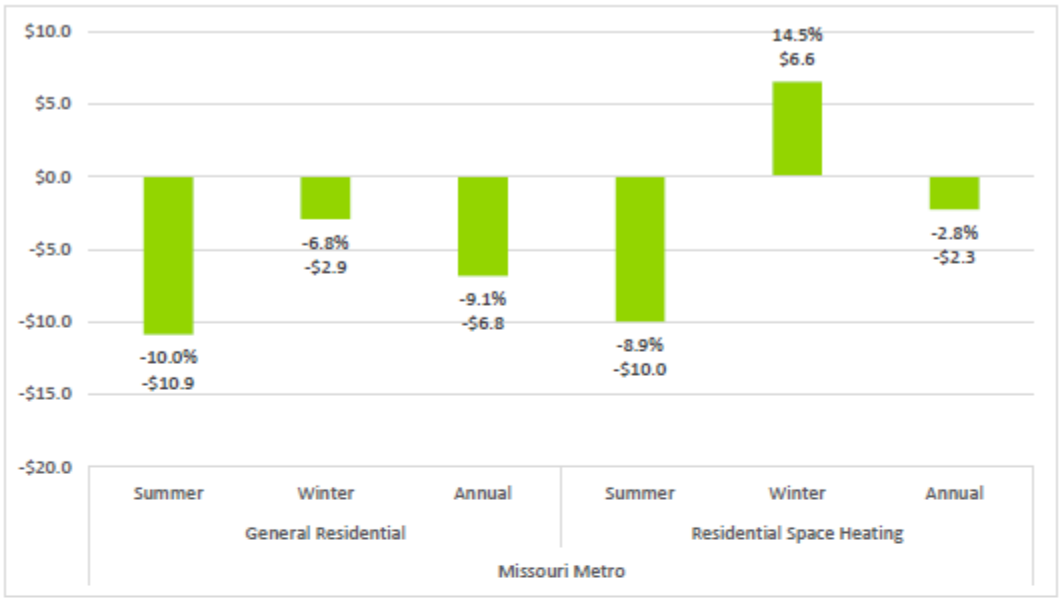
Figure 6 and Figure 7 present the total monthly bill impacts for each season as well as on an annual basis for the Metro and West jurisdictions respectively. Given that participants can be on one of two tiered rates prior to enrolling, we separate the bill impacts based on the tiered rates for each jurisdiction. The composition of these bill savings is discussed in section 3.2.2.

The average participant saves approximately six to ten percent on their bills during the summer season. During the winter months, the average general residential participant sees a slight decrease on their bills while the average residential space heating participant sees an increase. On an annual basis, we can see reductions ranging from three to ten percent depending on the tiered rate that an average participant was on prior to enrolling. This is primarily driven by the savings from the summer season. This pattern is consistent across both jurisdictions.

The aggregate level of consumption in the summer season is higher than the winter in both jurisdictions, and hence the associated kWh impacts are much higher as seen above. This means that more energy is shifted out of the on-peak periods in the summer than in the winter. Furthermore, space cooling loads are more flexible compared to space heating loads. Hence, we see a notable reduction ranging from six to ten percent in monthly summer bills.

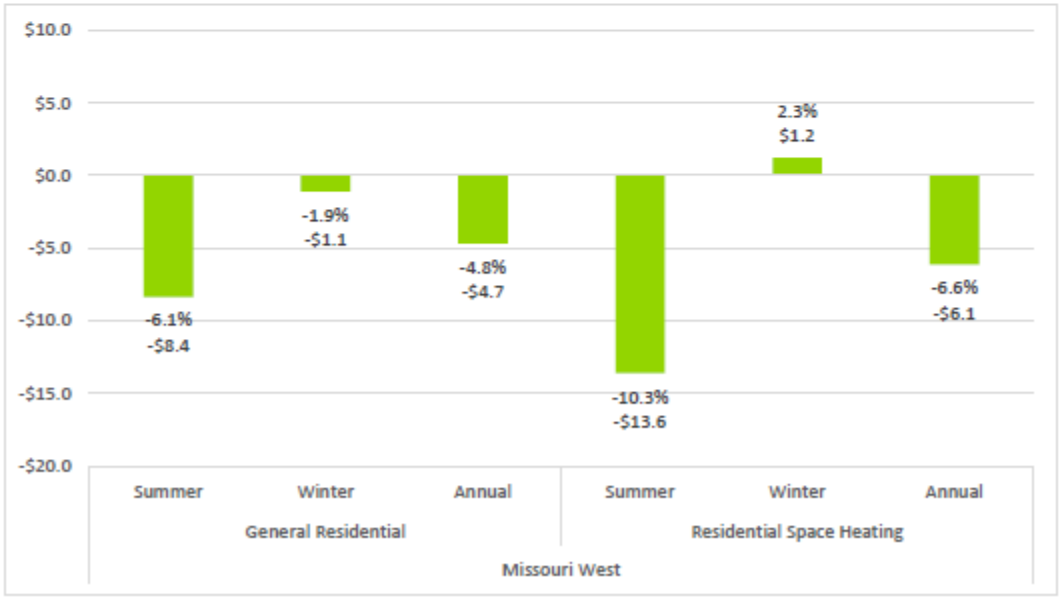
Given that the aggregate level of consumption in the winter is lower than the summer, the magnitude of the kWh impact is lower meaning less energy is shifted out of the on-peak period. For the average participant who was on the space heating rate prior to enrollment, the behavioral changes are not enough to offset the higher-priced TOU rates and hence we see a bill increase during the winter months.

Figure 6. Total Monthly Bill Impacts of TOU Rates – Missouri Metro



Source: Guidehouse Analysis

Figure 7. Total Monthly Bill Impacts of TOU Rates – Missouri West



Source: Guidehouse Analysis

Key Findings

TOU rates were studied in two jurisdictions within Evergy's service territory in the state of Missouri, Metro and West, using an opt-in quasi-experimental design with matched controls. Each jurisdiction has its own TOU rates. Residential customers who were on the general residential or the residential space heating rate were eligible to opt-into the TOU rate.

The key findings can be summarized as follows:

- *The interim results indicate that participants in both jurisdictions did respond to the TOU prices by changing their consumption patterns in both seasons and the patterns are similar across the two jurisdictions.*
- *The summer kWh impacts are greater than the winter, but the percent impacts are closer due the summer consumption being much higher and winter space heating loads being less flexible as compared to space cooling loads.*
- *The system coincident peaks in the summer months occur during the on-peak period while in some winter months it can occur in the morning during the off-peak period and hence the summer / winter system coincident peaks are very similar / slightly lower to the on-peak impacts.*
- *Consistent with the energy and demand impacts, we see higher bill savings in the summer as compared to the winter and the summer savings are the primary drivers of the annual bill savings. Participants who were on the space heating tiered rate prior to enrolling in the TOU rate see a slight increase in their winter bills as compared to those participants who were on the general residential tiered rate.*
- *Approximately half of the summer bill savings for both rates and the winter bill increases for the space heating rate are driven by the rate structure change, i.e. moving from tiered to TOU rates.*

7 APPENDIX B - FUTURE RATE OPTIONS

Below is a summary of future rate options that Evergy has included within its Rate Plan as described in Section 3 of this Report. The following descriptions were presented to stakeholders on March 1, 2021 in its TOU Rate Design Plan Update.

Standard Rate Consolidation

Continued differentiation within the Company's residential rates does not provide significant value and future alignment under more modern rate designs is made more difficult with these variations. The Company has identified the following items to undertake a standard rate consolidation:

- Perform rate clean up and streamlining including review of grandfathered or "frozen" rates to determine which rates can be eliminated. Will potentially require customer impact analysis and feasibility of movement to other rates.
- Look across Evergy jurisdictions and align rate structures where possible to simplify to one standard residential rate. The exact timing of this consolidation is still evolving and will be influenced by customer impact. Consolidation may need to happen over several rate cases and may include tariff revision.
- As rate structures are more aligned, align pricing if/when possible.
- Review tariff differences and align where possible, including potential alignment of operational differences.
- For "new" rates, ensure alignment across Evergy jurisdictions (e.g. structure, pricing, or terms and definitions).

Subscription Pricing

Subscription Pricing offer customers a familiar pricing option so they may choose a level of service and pay according to that level. Subscription Pricing can offer the following attributes:

- Customers pay a fixed monthly bill for energy use
- Price is custom to each customer, based on historic usage and selected perks
- Price is fixed monthly bill for specified term
- In addition to the price, each customer may:
    - Be outfitted with DSM technology giving some level of control of their energy use to the utility
    - Be given increased discounts the more control they give, the more they save
    - Be offered incentives, such as bill credits, to reduce peak demand
- Program can be designed to give middle- and lower-income ratepayers access to newer, more efficient technologies and appliances

Prepay Program

A Prepay Program is a billing option that allows customers to pay in advance for their electric service. A Prepay Program can offer the following attributes:

- Prepay gives a customer the freedom of choice and ability to manage their energy costs
- No deposits, no late charges, or connection fees
- Customers choose when, where, and how often to pay
- Participant consumption is reduced, often up to 10%
- Prepay provides potential benefits to the utility
    - Eliminates customer write-offs
    - Improves cash-flow
    - Reduces call center costs
- Increases customer satisfaction

More than 200 electric utilities across the US, mostly cooperatives and municipals, offer or are planning to offer an AMI-enabled prepay option

Low-Income Solar Subscription Program

The Company will be offering a low-income solar subscription program in its next rate case to meet the 2018 S&A's.

- KCP&L and GMO will propose a low-income component to the solar investment required under section 393.1665 RSMo. no later than their next rate case(s) (Non-Unanimous Stipulation and Agreement filed in these cases on September 19, 2018)

- The Company will consider building SB564-required solar at the same time/place with the understanding that that solar may be used for separate (low-income) projects (Non-Unanimous Stipulation and Agreement filed in these cases on September 25, 2018)

The Company's current work includes:

- Benchmarking other national utility program designs

- Understanding how to overcome any premium of community solar and cross subsidization of a program

8 APPENDIX C - TOU EDUCATION TOOLS

The graphics below include the Welcome Experience and Rate Coach reports, Online Rate Analysis Comparison Tool, and the Rate Education Reports. These are not comprehensive examples of the tools, but are representative examples. These tools have been presented in meetings and presentations identified in Section 2.

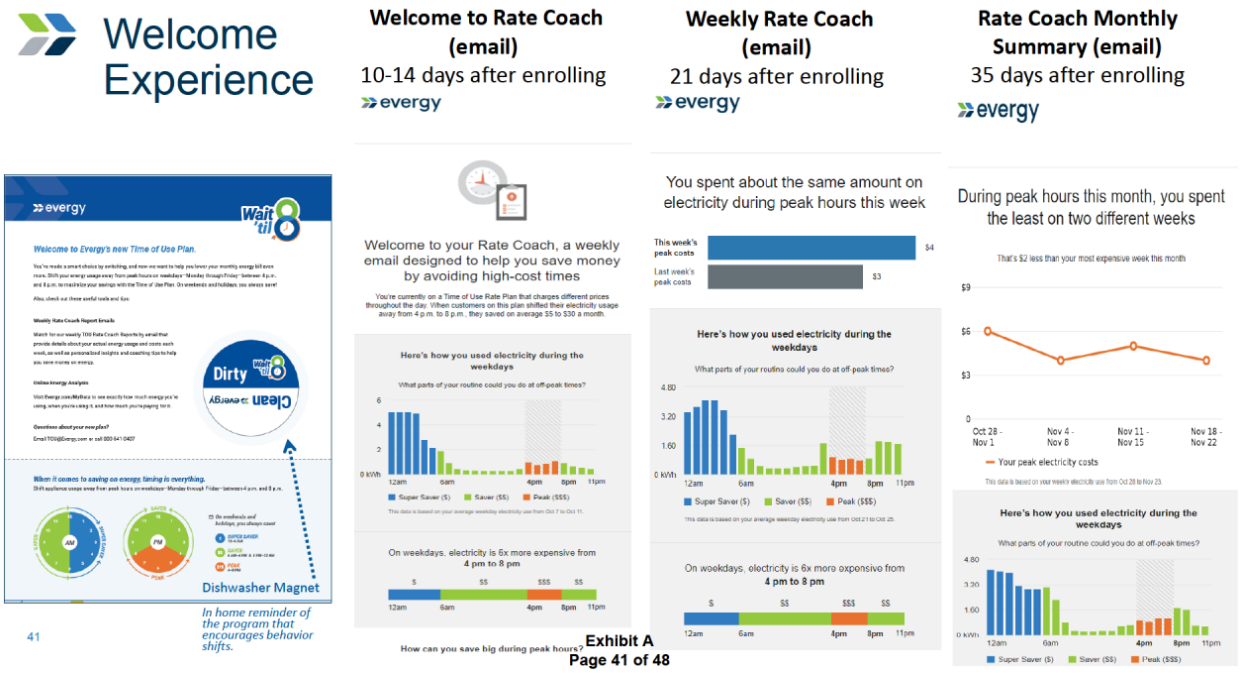


Exhibit A
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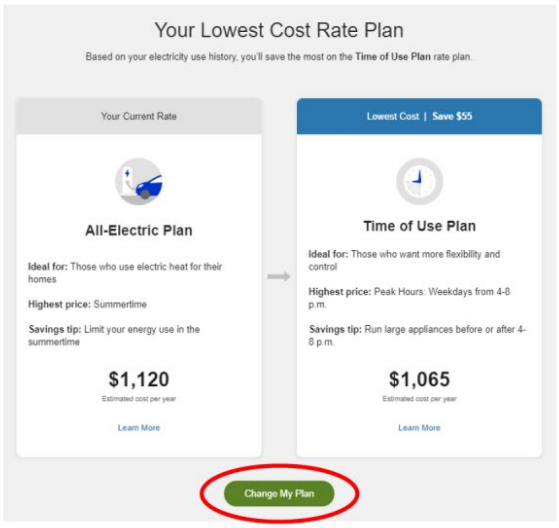
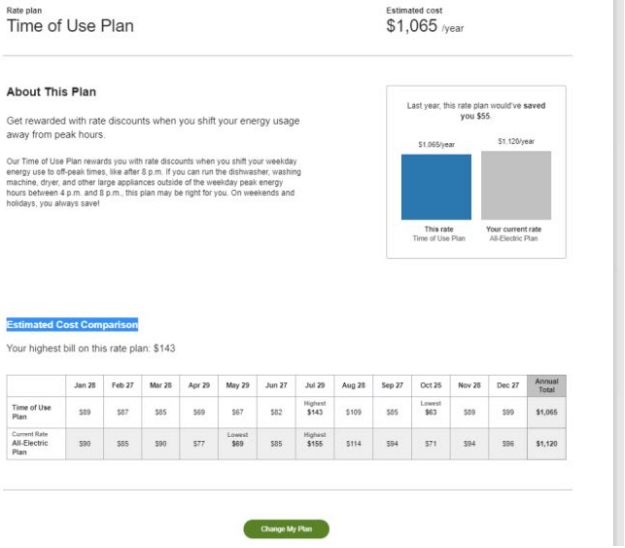
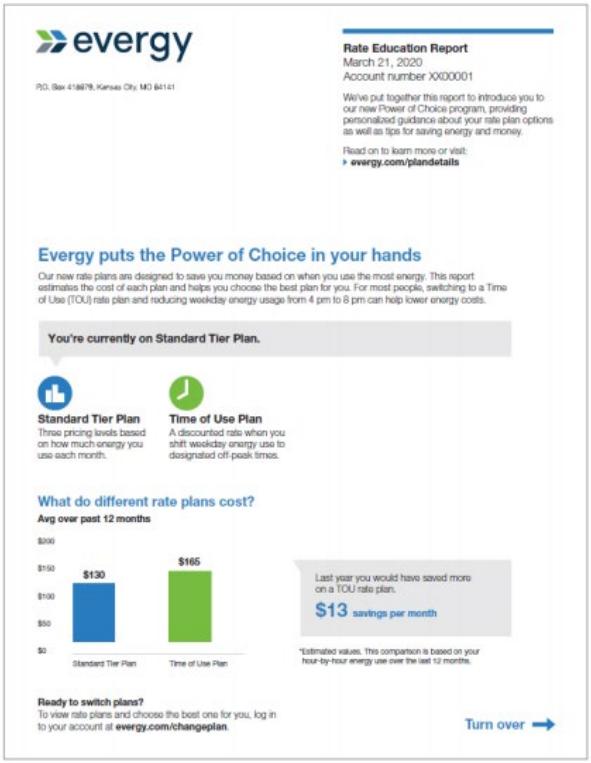
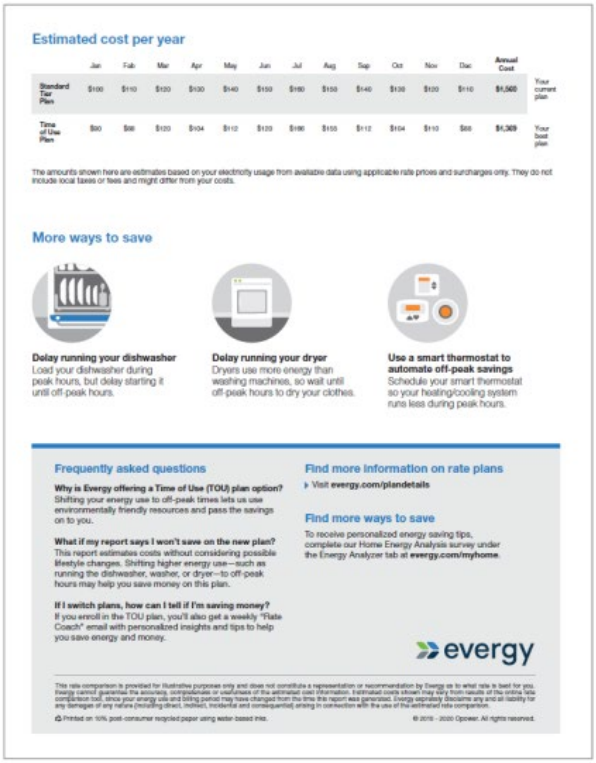
Online Rate Analysis Tool – Rate Comparison & Details





Rate Coach Report





9 APPENDIX D– EXEMPLAR TARIFFS

RESIDENTIAL SERVICE – TIME OF USE ELECTRIC (THREE PART TIME OF USE RATE)

AVAILABILITY

Available to single metered Residential customers receiving AMI-metered secondary electric service to a single occupancy private residence or individually metered living units in multiple occupancy residential buildings, on or after October 1, 2019.

Not available to Customers that own and operate generation connected in parallel with the Company's electric system or that receive service under Net Metering tariff (Schedule NM). Not available for Temporary, Seasonal, Three phase Standby, Supplemental, Resale or single metered multi-occupancy Residential Service.

APPLICABILITY

This rate shall be available as an opt-in option to customers otherwise served under the Company's Residential Service (Schedule R) to encourage customers to shift consumption from higher cost time periods to lower-cost time periods.

A Customer exiting the program, disconnected for non-payment, or on a pay agreement may not be allowed to participate in this rate, at the Company's discretion.

Service shall be provided for a fixed term of not less than one (1) year and for such time thereafter until terminated by either party via (30) day written notice. A Customer exiting the program will be required to wait 12 months before they will be eligible to take service under this rate.

RATE, 1RTOU

A. Customer Charge (Per month) — ***MATCH RESIDENTIAL GENERAL***

B. Energy Charge per Pricing Period (Per kWh)*

	Summer Season	Winter Season
Peak	***Maintain Current Pricing Differential For Summer or 6.0 : 2.0 : 1.***	***Decrease Price Differential for Winter To 3.0 : 1.5: 1.***
Off-Peak		
Super Off-Peak		

****The actual pricing may vary slightly as it will be intended to maintain revenue neutrality.***

PRICING PERIODS
Pricing periods are established in Central Time year-round. The hours for each pricing period are as follows:

On-Peak: 4pm-8pm, Monday through Friday, excluding holidays
Super Off-Peak: 12am-6am every day
Off-Peak: All other hours

Holidays are New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

MINIMUM
Minimum Monthly Bill:

1) Customer Charge; plus
2) Any additional charges for line extensions, if applicable.

SUMMER AND WINTER SEASONS
The Summer Season is four consecutive months, beginning and effective June 1and ending September 30, inclusive. The Winter Season is eight consecutive months, beginning and effective October 1 and ending May 30.

DEMAND SIDE INVESTMENT MECHANISM RIDER
Subject to Schedule DSIM filed with the State Regulatory Commission.

FUEL ADJUSTMENT
Fuel Adjustment Clause, Schedule FAC, shall be applicable to all customer billings under this schedule.

TAX ADJUSTMENT
Tax Adjustment Schedule TA shall be applicable to all customer billings under this schedule.

REGULATIONS
Subject to Rules and Regulations filed with the State Regulatory Commission

RESIDENTIAL SERVICE – TIME OF USE ELECTRIC (TWO PART TIME OF USE RATE)

AVAILABILITY

Available to single metered Residential customers receiving AMI-metered secondary electric service to a single occupancy private residence or individually metered living units in multiple occupancy residential buildings, on or after October 1, 2019.

Not available to Customers that own and operate generation connected in parallel with the Company's electric system or that receive service under Net Metering tariff (Schedule NM). Not available for Temporary, Seasonal, Three phase Standby, Supplemental, Resale or single metered multi-occupancy Residential Service.

APPLICABILITY

This rate shall be available as an opt-in option to customers otherwise served under the Company's Residential Service (Schedule R) to encourage customers to shift consumption from higher cost time periods to lower-cost time periods.

A Customer exiting the program, disconnected for non-payment, or on a pay agreement may not be allowed to participate in this rate, at the Company's discretion.

Service shall be provided for a fixed term of not less than one (1) year and for such time thereafter until terminated by either party via (30) day written notice. A Customer exiting the program will be required to wait 12 months before they will be eligible to take service under this rate.

RATE, 1RTOU 2 Part

A. Customer Charge (Per month)	***MATCH RESIDENTIAL GENERAL***
B. Energy Charge per Pricing Period (Per kWh)*	Summer Season
Peak	***Maintain Current Pricing Differential For Summer or 4.0 : 1.***
Off-Peak	
	Winter Season
Off-Peak	***Decrease Price Differential For Winter to 2.0 : 1.***
Super Off-Peak	

The actual pricing may vary slightly as it will be intended to maintain revenue neutrality.

PRICING PERIODS
Pricing periods are established in Central Time seasonally. The hours for each pricing period are as follows:

Summer-
On-Peak: 4pm-8pm, Monday through Friday, excluding holidays
Super Off-Peak: 12am-6am every day
Off-Peak: All other hours

Winter-

Super Off Peak: 12am-6am every day
Off Peak: All other hours

Holidays are New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

MINIMUM
Minimum Monthly Bill:

1) Customer Charge; plus
2) Any additional charges for line extensions, if applicable.

SUMMER AND WINTER SEASONS
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REGULATIONS
Subject to Rules and Regulations filed with the State Regulatory Commission

VERIFICATION

STATE OF MISSOURI)
) ss.
COUNTY OF JACKSON)

Kimberly Winslow, being first duly sworn, on her oath and in her capacity as Senior Director, Energy Solutions, states that she is authorized to execute on behalf of Evergy Missouri Metro and Evergy Missouri West the foregoing document, and has knowledge of the matters stated in this document, as relevant and detailed within, and that said matters are true and correct to the best of her knowledge and belief.

Kimberly Winslow

Subscribed and sworn to before me this 15th day of June 2021.

Notary Public

ANTHONY R. WESTENKIRCHNER
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 26, 2025
PLATTE COUNTY
COMMISSION #17279952

My Commission Expires: 4/26/2025

VERIFICATION

STATE OF MISSOURI)
) ss.
COUNTY OF JACKSON)

Bradley D. Lutz, being first duly sworn, on his oath and in his capacity as Director, Regulatory Affairs, states that he is authorized to execute on behalf of Evergy Missouri Metro and Evergy Missouri West the foregoing document, and has knowledge of the matters stated in this document, as relevant and detailed within, and that said matters are true and correct to the best of his knowledge and belief.

Bradley D. Lutz

Subscribed and sworn to before me this 15th day of June 2021.

Notary Public

My Commission Expires: 4/26/2025

ANTHONY R. WESTENKIRCHNER
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 26, 2025
PLATTE COUNTY
COMMISSION #17279952

VERIFICATION

STATE OF MISSOURI)
) ss.
COUNTY OF JACKSON)

Brian A. File, being first duly sworn, on his oath and in his capacity as Director Demand-Side Management and Energy Efficiency, states that he is authorized to execute on behalf of Evergy Missouri Metro and Evergy Missouri West the foregoing document, and has knowledge of the matters stated in this document, as relevant and detailed within, and that said matters are true and correct to the best of his knowledge and belief.

Brian A. File

Subscribed and sworn to before me this 15th day of June 2021.

Notary Public

My Commission Expires: 4/26/2025

ANTHONY R. WESTENKIRCHNER
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 26, 2025
PLATTE COUNTY
COMMISSION #17279952

VERIFICATION

STATE OF MISSOURI)
) ss.
COUNTY OF JACKSON)

Ed Hedges, being first duly sworn, on his oath and in his capacity as Consulting Engineer, Energy Solutions Administration, states that he is authorized to execute on behalf of Evergy Missouri Metro and Evergy Missouri West the foregoing document, and has knowledge of the matters stated in this document, as relevant and detailed within, and that said matters are true and correct to the best of his knowledge and belief.

Ed Hedges

Subscribed and sworn to before me this 15th day of June 2021.

Notary Public

My Commission Expires: 4/26/2025

ANTHONY R. WESTENKIRCHNER
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 26, 2025
PLATTE COUNTY
COMMISSION #17279952