

**BEFORE THE PUBLIC SERVICE COMMISSION
FOR THE STATE OF MISSOURI**

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
)	

NOTICE

COME NOW Evergy Metro, Inc. d/b/a Evergy Missouri Metro (“Evergy MO Metro”) and Evergy Missouri West, Inc. d/b/a Evergy Missouri West (“Evergy MO West”) (collectively, the “Company”) and respectfully state as follows to the Missouri Public Service Commission (“Commission”):

1. On September 28, 2021, the Commission held an on-the-record presentation pursuant to its *Order Adopting Procedural Schedule and Setting On-The-Record Presentation* (“Order”) issued in the above-captioned dockets on August 18, 2021. The presentation, as presented by the Company, is attached hereto as **Exhibit A**.

WHEREFORE, Evergy Missouri Metro and Evergy Missouri West respectfully submit the attached presentation.

Respectfully submitted,

/s/ Roger W. Steiner

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**Counsel for Evergy Missouri Metro and Evergy
Missouri West**

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 28th day of September 2021.

/s/ Roger W. Steiner

**Attorney for Every Missouri Metro and Every
Missouri West**



Time of Use (TOU) Rate Design Plan On the Record MPSC Presentation

For Evergy Missouri Metro &
Evergy Missouri West

September 28, 2021



Safety Tip – National Preparedness Month

September is National Preparedness Month, which promotes community and family disaster planning. [Make A Plan | Ready.gov](#)

Step 1: Make A Plan

Talk to your friends and family about how you will communicate before, during, and after a disaster.

Step 2: Build A Kit

Gather supplies that will last for several days after a disaster for everyone living in your home.

Step 3: Low-Cost, No-Cost Preparedness

Start today by signing up for alerts, safe-guarding important documents, and taking other low cost and no cost preparedness actions to lessen the impact of disasters and emergencies for you and your family.

Step 4: Teach Others About Preparedness

Talk to your family about preparing for emergencies.





Evergy Rate Design Proposal

Evergy's Opt-In TOU rate has been successful in terms of participation, load shift and customer satisfaction



Evergy plans to continue but modify its three-part TOU design and add a two-part TOU design to serve the needs of additional customers.



TOU is recognized as a cornerstone in our Rate Modernization Plan among other customer choice rate plans



Evergy's Rate Plan Strategic Intent

- TOU remains an important part of Evergy's plans for today and in the future and allows the Company to extract additional benefit from AMI deployment and CIS upgrades
- Utility research supports it is appropriate to offer a broad selection of rates to meet the customer where they are
- The Opt-In TOU approach is working, alongside customer education
- Alignment of rate designs across Evergy is an appropriate goal
- TOU rate designs present challenges, and some issues cannot be resolved – it cannot be a “one size fits all” approach

Evergy's Rate Plan supports goals and initiatives set forth with the merger of Great Plains and Westar, as well as with our Sustainability Transformation Plan.

Background: 2018 Rate Case S&A and Commission Order

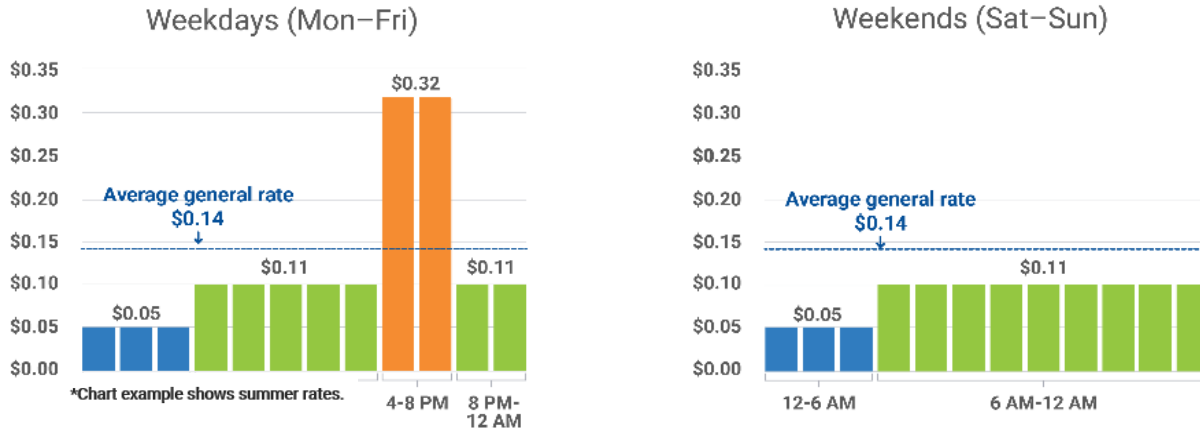
- On September 25, 2018, a Non-Unanimous Partial S&A Concerning Rate Design Issues was filed which included the stipulation that:

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.

- On June 15, 2020, the Company filed a request for an extension of the TOU Rate Design Case
- 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
- On June 15, 2021, Evergy filed a "Time of Use Rate Design Case Report"
- On August 18, 2021, the Commission ordered a Procedural Schedule which included an opportunity for response to the Company report and an on-the-record presentation

Evergy's Current TOU Rate

Current 3-Period TOU Rate



Enrollments

5,629 as of 9/25/21

(161% of target)

Benefits

- Average 3-10% annual bill savings
- Average 4-9% reduced demand at peak

Acceptance

- High satisfaction
- Driven by savings
- Appreciate choice

	Missouri Metro		Missouri West	
	Summer	Winter	Summer	Winter
Customer Charge	\$11.47	\$11.47	\$11.47	\$11.47
Energy Charge Per Pricing Period (\$/kWh)				
Peak 4-8 pm	0.32498	0.26575	0.26577	0.21629
Saver 6 am-4 pm, 8 pm-12 am	0.10833	0.10422	0.08859	0.08727
Super Saver 12-6am	0.05416	0.04495	0.04429	0.03667

Role of Customer Research, Education and Outreach



Extensive customer research plan

Six qualitative in-person focus groups to assess reaction to the TOU rate plan, tools, and customer segmentation

(Un) Enrollment surveys to understand expectations and awareness

Behavior surveys to measure customer satisfaction and effectiveness of tools



Education tools

Before participation - Rate Education Report and Online Rate Analysis Tool

42% unique open rate

61% interaction rate with the rate analysis tool

After participation - Rate Coach Report and Self-Service AMI Data Analytics

57% unique open rate

Over 63k views of hourly usage and costs on web

Objectives of Education Plan

- Inform all customers on the TOU rate option and how time of day affects electricity pricing
- Educate interested customers on where to find information about the TOU option and how the rate plan works
- Enroll customers in TOU through targeted, data driven marketing
- Assist customers who have enrolled by creating tools and an ongoing communication campaign



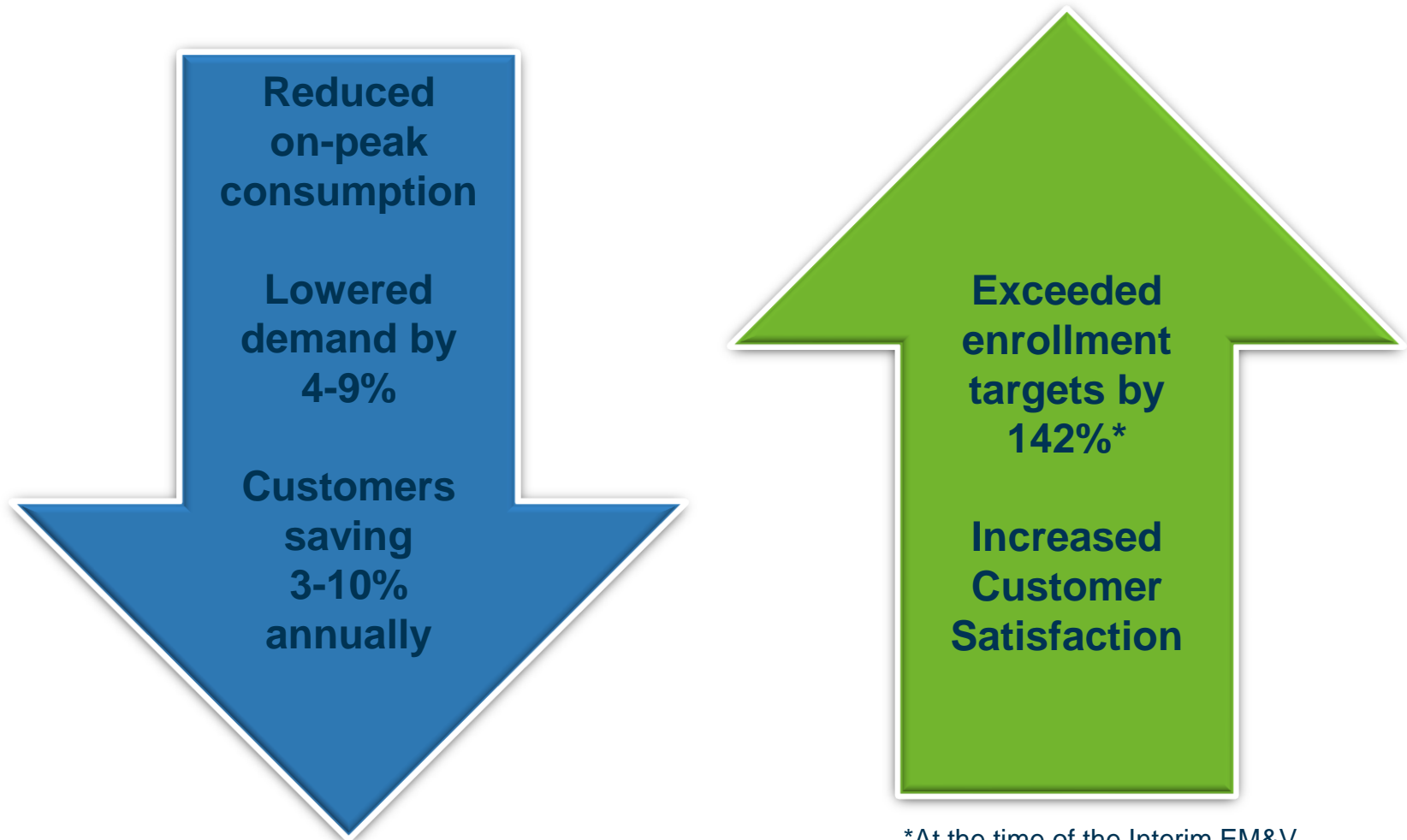
Marketing Plan

- Simple tagline of “Wait ‘til 8” - helps customers understand the plan and what times they needed to shift their usage to save money
- Multi-channel approach to provide large-scale awareness and enrollment
 - Website, video, digital, social, radio, email
- Connected with Innovators and Early Adopters to build greater awareness with large customer base



Evaluation, Measurement and Verification (EMV)

Interim EM&V Report completed and shared in December 2020 with a final report to be completed by December 31, 2021

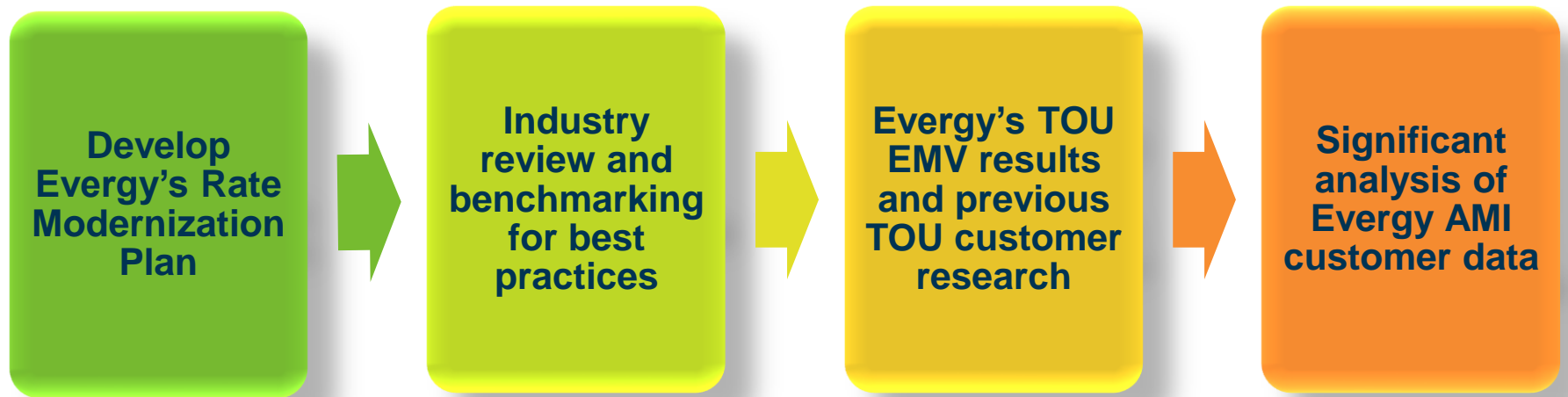


*At the time of the Interim EM&V

TOU Rate Design Plan



Process to Inform Rate Design Report Recommendations



Industry View – Key Learnings

TOU enrollment rates are still very low nation-wide

Few utilities have substantial (i.e., >10%) TOU participation

TOU pilot analyses worldwide indicate that customers do respond by shifting consumption and reducing peak demand

Most TOU rates are offered on an opt-in basis, but a few are opt-out (default)

Solar PV adoption has necessitated some utilities to realign TOU pricing periods and differentials

Deployment Approaches

Opt-In

- Lower adoption
- Slightly higher retention
- Higher per customer performance
- Aligns with Evergy's customer feedback

Opt Out

- Much higher adoption
- Retention still relatively high
- Lower per customer performance
- Utility customer price satisfaction drops by 10%



Evergy Customer Research

Studies

Sample Key Insights

Previous TOU rate studies (EPRI, B&M) and 2019 TOU rate focus groups

- Demographics are more important drivers than TOU features for estimating preferences. The success of TOU depends on the characteristics and lifestyle of the customer it is offered to.
- Target TOU to HH with flexible schedules: e.g. working adults with no kids, EV drivers
- Overcome customer peak rate price hesitations by focusing on total benefits and clear, personalized messaging around cost impact

TOU rate post-enrollment / un-enrollment and behavior change surveys and 1:1 interviews (2019-2021)

- Majority of TOU participants feel they have been successful in shifting usage to non-peak times and have been able to save money on the TOU rate plan.
- More than half said their favorability of TOU would decrease if it was mandated to be on the TOU rate plan.
- Most customers feel that the TOU enrollment was easy and the tools provided were helpful.

Quantitative Missouri customer research (2021)

Quantitative survey exploring TOU features, value of rate choice, rate change motivation such as:

- How important is it that electric utilities provide customers with choices in electric rate plans?
- What considerations are most important to customers when choosing a different rate plan?
- How interested are customers in the new TOU rate plan being considered?



Missouri Jurisdictional Factors



Ameren transitioned to a portfolio of TOU rates in Docket No. ER-2019-0335

Empire proposing optional TOU in Docket ER-2021-0312



Ameren portfolio includes 5 options: Anytime Users rate, Morning/Evening Savers rate, Overnight Savers rate, Smart Savers rate, and Ultimate Savers rate

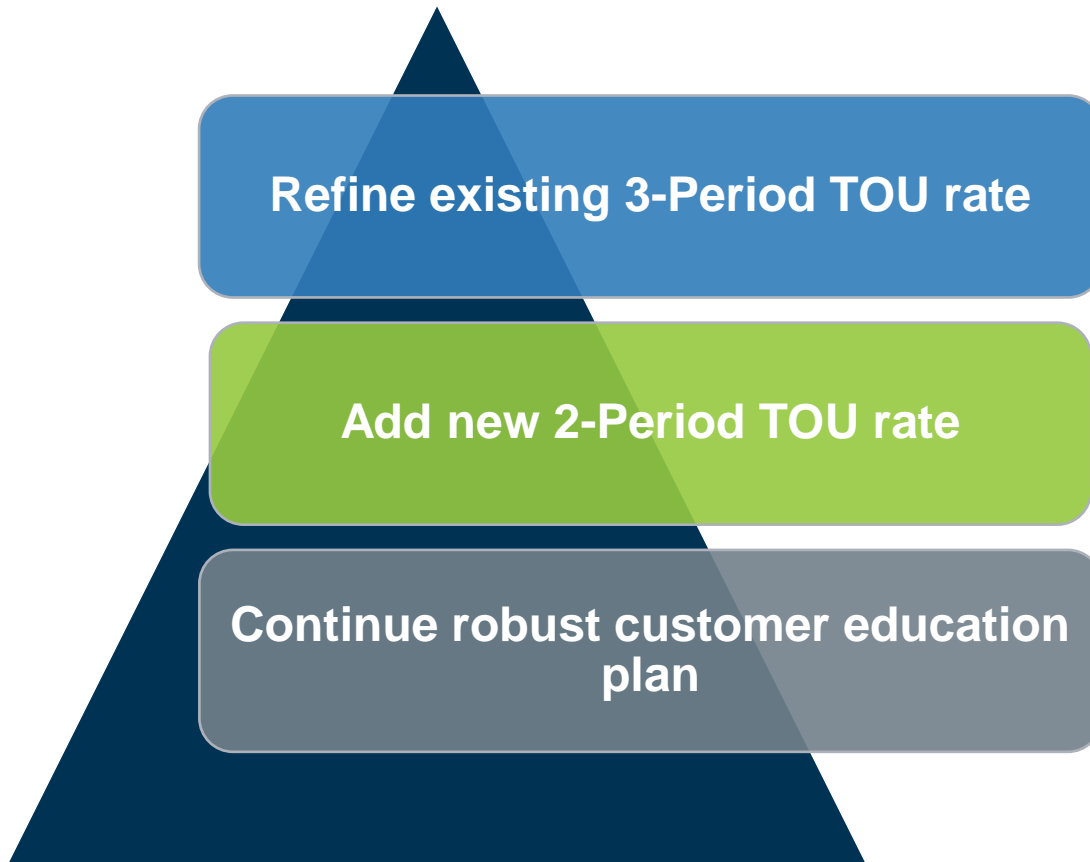
Empire rate proposed as limited, optional two-part design



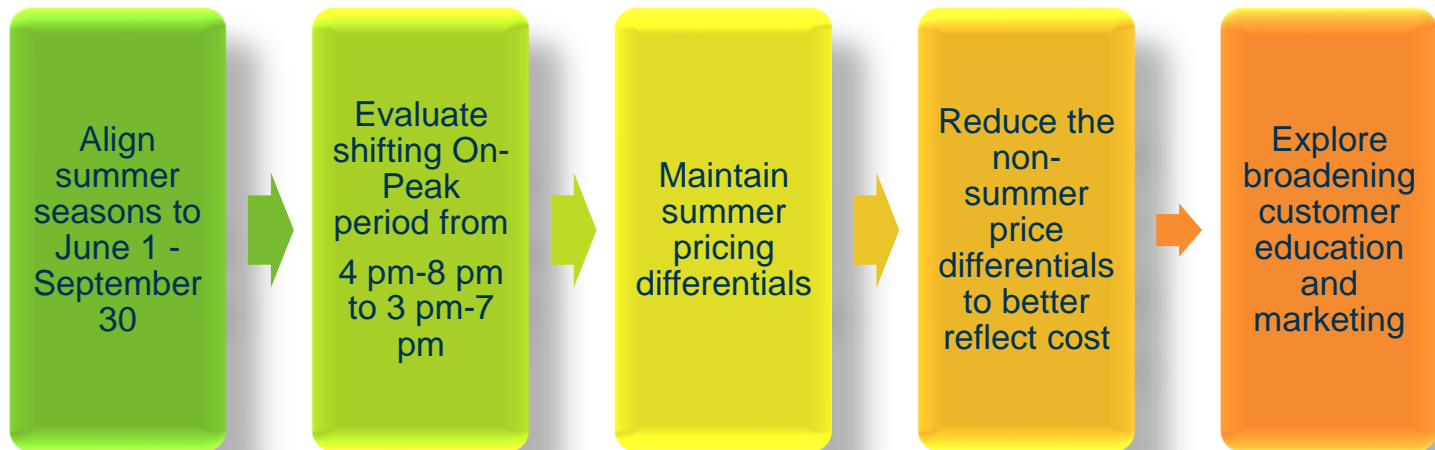
Both Ameren and Empire have differing factors than Evergy

Time of Use Rate Design Recommendations

Building on the success of the current TOU rate, Evergy will expand its Residential TOU offerings

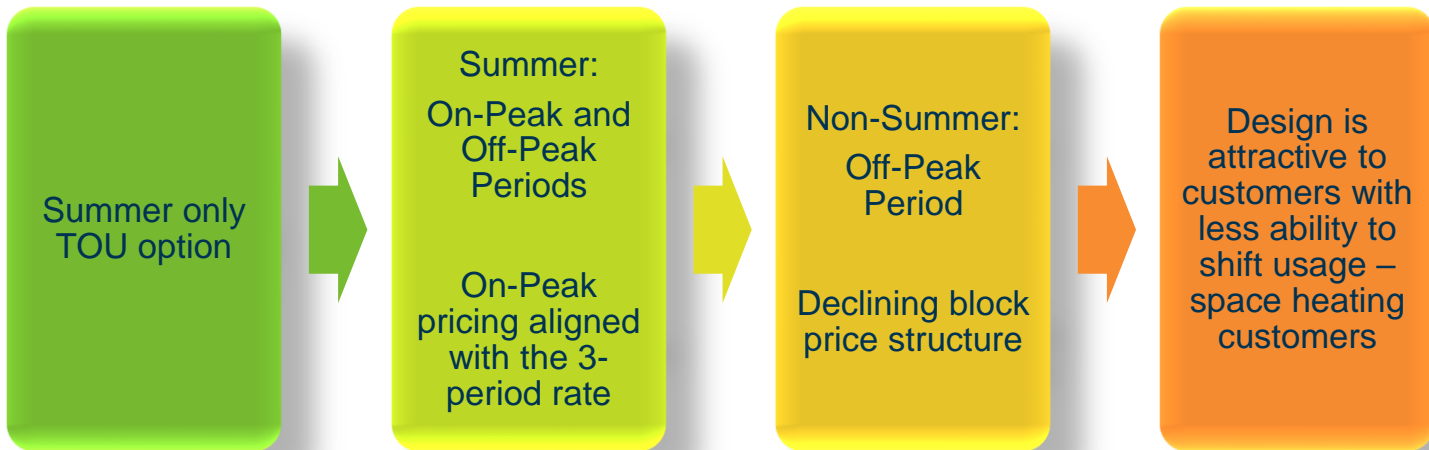


Refine Existing 3-Period TOU Rate



TOU Period	MO Metro Price		MO 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 orange text						

Add New 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

Continue Robust Customer Education Plan

Simplify

Deliver education in a clear, concise manner using streamlined visualizations of key information when possible.

Develop personalized, data-driven education, leveraging existing Company technology and infrastructure.

Connect

Deliver education across an integrated mix of channels proven to be successful in reaching and resonating with new and additional customer segments.

Consistent

Implement a consistent, centralized message on Evergy's website.

Explain

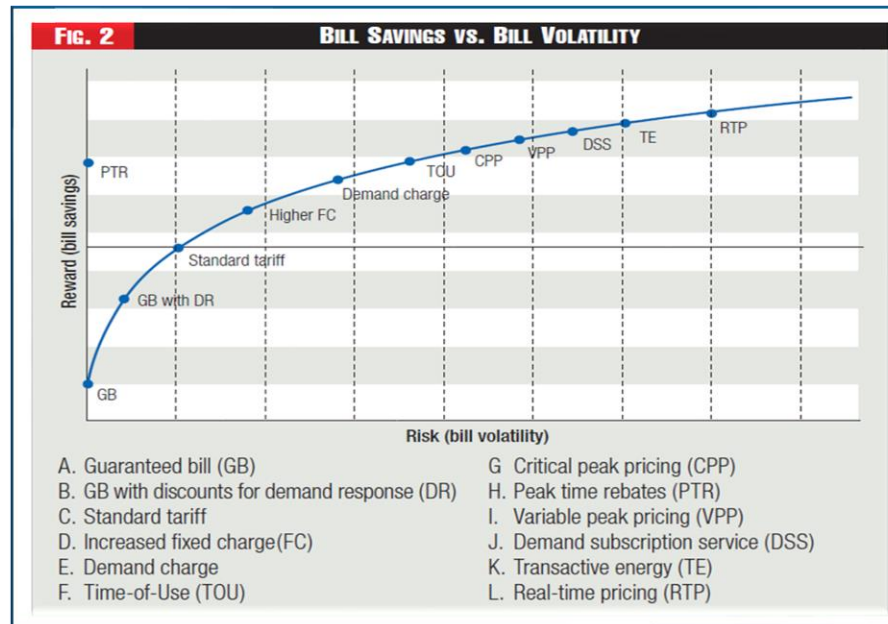
Continue to help customers understand the important impacts of TOU and the community and grid benefits the rate structure delivers.

Rate Modernization Plan

Portfolio Approach to Support Customer Choice

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. – Brattle, Ahmad Faruqui*

Further, TOU rates allow the Company and Customers to extract additional benefit from recent upgrades in metering and billing systems. S&A ER-2018-0145/0146**



Evergy's Rate Modernization Plan

Objectives

Drivers

Multiple service territories in MO and KS

Customers want choice

Implicitly promote beneficial electrification and grid benefits

Proper price signals that enable adoption of emerging energy technologies that are most beneficial to the grid

More equitable rates across diverging customer classes and subclasses

Commission interest around time-of-use and distributed generation rates

Create rates independent of end use requirements

Bring rate structures closer together across jurisdictions

Enable business growth

Simplify rates and increase pricing transparency

Provide greater customer choice

Increase customer satisfaction

Leverage CIS and AMI infrastructure

Develop price signals to increase grid efficiency



Rate Modernization Plan Elements

Consolidation

Move to eliminate unproductive differentiation within the rates.

Includes rate clean up, streamlining, review of "frozen" rates to determine which rates can be eliminated.

Jurisdictional alignment will be sought where possible.

Subscription +

Customers pay a fixed monthly bill for energy use.

Price is custom to each customer, for a specific term, based on historic usage

Rate is paired with savings sharing, load control or green energy options.

Prepay

A billing option that allows customers to pay in advance for their electric service.

Gives a customer the freedom of choice and ability to manage their energy costs.

Provides potential benefits to the utility.

Low Income Solar

A program designed to offer access to solar energy to low-income customers.

Design to be influenced by benchmarking other program designs and seeking to overcome cost and cross subsidization concerns.

Will address Evergy Stipulation and Agreement commitments.

Closing



Evergy Rate Design Proposal

Evergy's Opt-In TOU rate has been successful in terms of participation, load shift and customer satisfaction



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Questions or Comments



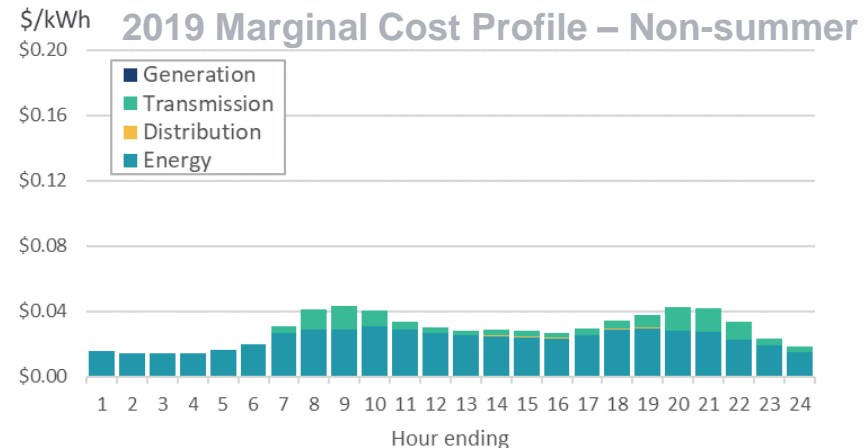
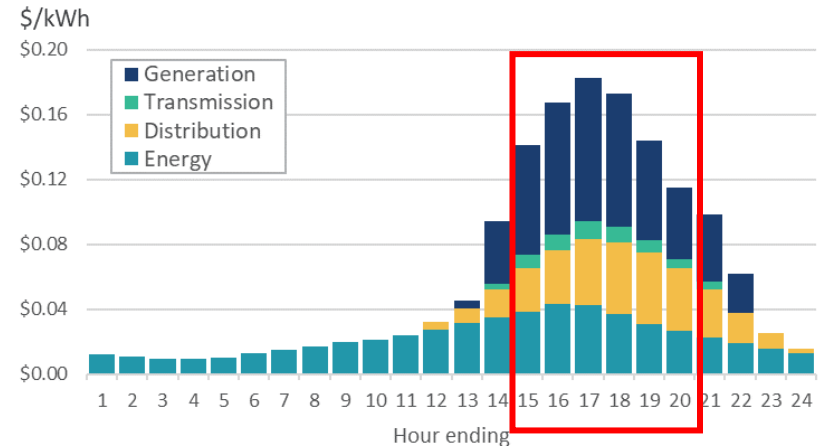
Appendix

Supporting Data

TOU Rate Design Plan Prep - Research & Analysis

Evergy's TOU time period analysis

- Evergy's analysis of SPP energy prices supports the current **super off-peak period** definition of midnight to 6 am
- Evergy's analysis of the **annual system peak** indicates that the peak hour occurred between 4 pm and 5 pm in 2012 to 2019, except for 2017 when it occurred between 5 pm and 6 pm
- There is sufficient empirical support for a **peak period** that falls somewhere within a 2 to 8 pm window
- Given the intent to offer residential customers a shorter 4-hour peak period, the **key question** is if the peak period should remain as 4 to 8 pm, or be shifted earlier
- There also is a question of whether the periods should remain unchanged across seasons





TOU Rate Design Plan Prep - Research & Analysis (cont.)

Evergy reviewed the appropriate residential on-peak peak period

- Analysis found that the optimum 4-hr peak period for residential customers was 3-7 pm, based on historical and current system load profiles and SPP Day-Ahead market prices.
- Sensitivity analysis shows that the ‘optimum’ residential 4-hour peak period will shift to 4-8 pm with the addition of planned 2,500 MW of utility and customer solar generation combined.
- The preliminary TOU EM&V study found that participant load increases after the on-peak period (“snapback”) but not before the peak period (“pre-cooling”). With an earlier peak period, the snapback could increase system costs given that system marginal costs remain relatively high during 7-8 pm.
- The non-summer on-peak period leverages customer response to minimize residential peak load impacts on the local distribution grid.
- Retaining the 4-8 pm on-peak period ‘future proofs’ the TOU periods.
- Additional customer research is desired by Evergy to understand customer favorability of peak periods.



TOU Rate Design Plan Prep - Research & Analysis (cont.)

TOU pricing differential analysis - 3 Period Pricing Review

Using an embedded cost allocation method for setting the prices, the resulting rate design has a strong summer peak price and a significantly discounted super-off-peak price, with modest price differences in the other periods.

		Current TOU Rate	Rev. Neutral TOU Rate	Embedded Cost Method
Customer Charge	\$/mo	\$11.47	\$11.47	\$11.47
TOU Charges				
Summer				
On-Peak	\$/kWh	\$0.325	\$0.372	\$0.428
Off-Peak	\$/kWh	\$0.108	\$0.124	\$0.123
Super-Off-Peak	\$/kWh	\$0.054	\$0.062	\$0.074
Non-Summer				
On-Peak	\$/kWh	\$0.266	\$0.304	\$0.209
Off-Peak	\$/kWh	\$0.104	\$0.119	\$0.122
Super-Off-Peak	\$/kWh	\$0.045	\$0.051	\$0.076
Price Ratios				
Summer		6.0 : 2.0 : 1	6.0 : 2.0 : 1	5.8 : 1.7 : 1
Non-Summer		5.9 : 2.3 : 1	5.9 : 2.3 : 1	2.7 : 1.6 : 1

Generation costs – residential class's share of generation capacity allocated based on system load duration curve:

- 20% to summer peak
- 40% to peak and off-peak
- 40% to all hours

Energy costs are allocated proportional to average SPP energy prices in each period.

Transmission costs are allocated to the peak period in each month of the year

Distribution costs are allocated to reflect that the peak period drives a proportionally higher share of costs.



TOU Rate Design Plan Prep - Research & Analysis (cont.)

TOU pricing differential analysis - 2 Period Pricing Analysis

Using the same embedded cost allocation as with the 3 Period TOU analysis, we analyzed a 2 Period TOU structure that aligned the summer non-peak period and the non-summer super off-peak periods.

		Embedded Cost Method
Customer Charge	\$/mo	\$11.47
TOU Charges		
Summer		
On-Peak	\$/kWh	\$0.428
Off-Peak	\$/kWh	\$0.114
Non-Summer		
Off-Peak	\$/kWh	\$0.138
Super-Off-Peak	\$/kWh	\$0.076
Price Ratios		
Summer		3.8 : 1
Non-Summer		1.8 : 1

Summer On-Peak Price

set equal to the 3 Period TOU price

Summer Off-Peak price

solved for remaining summer revenue requirements

Non-Summer Off-Peak price

solved for remaining non-summer revenue requirements

Non-Summer Super Off-Peak

set equal to the 3 Period TOU price



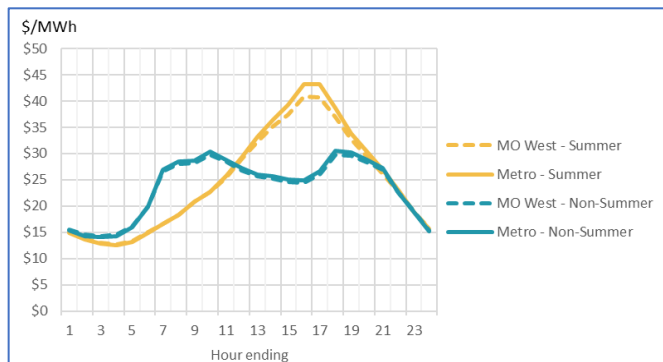
Residential 3 Period TOU Rate Option

Further analysis confirms the majority of the existing TOU rate constructs

Proposed 3 Period TOU Refinements

- Align Summer Season to the four (4) high-load months June 1 – Sept 30
- Reduce Non-Summer Season price differentials
 - Reflective of embedded cost allocations
 - Improved alignment with SPP day-ahead market prices

2019 Average Day-Ahead SPP Energy Prices (2017-2019 Avg.)



TOU Period	MO Metro Price		MO West Price		New Price	Time Period
	(¢/kWh)	Delta	(¢/kWh)	Delta		
Summer	May 16-Sept. 15		June 1-Sept. 30			June 1-Sept. 30
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Residential 2 Period TOU Rate Option

Summer only TOU focuses on summer peak reduction

Proposed 2 Period Summer Only TOU Rate Option

Designed for customers with less ability to shift usage and address bill impact of TOU for space heating customers identified by EM&V.

- Summer
 - On Peak – 4-8 pm M-F
(same as 3 Period TOU Rate)
 - Off Peak – all other hours
- Non-Summer
 - Declining energy blocks

TOU Period>	Price	Price	Time Period
	(¢/kWh)	Delta	
Summer			June 1-Sept. 30
On-Peak	= TOU On-Peak	3.25 X	4 pm - 8 pm, M-F excl. holidays
Off-Peak		1.0 X	All other hours
Non-Summer			Oct. 1-May 31
Block 1	0-600 kW		All hours
Block 2	Next 400 kW		
Block 3	> 1000 kW		



Observations from Evergy's TOU EM&V

Level of participant response is consistent with other utility service areas

- Evergy's two TOU efforts (current TOU and the SmartGrid TOU pilot) have shown that residential customers do understand and respond to TOU rates.
- The results highlight the value of having short peak periods and of significantly discounting prices in the lower priced periods compared to the higher priced periods.
- Analysis for MO-Metro showed that summer usage during the on-peak period fell by 11.3% and usage in the off-peak period fell by 3.1%. Winter results were lower.
- Customers were able to lower their bills by changing their load profiles.
- Customers with EVs and smart thermostats responded at a higher rate than customers without those technologies.
- Lower income customers and customers living in rental properties responded at a lower rate.

