

MINUTES
Jun 13, 2024
2:00 P.M.

Present:

COMMISSIONERS:

Larry Mills, President

Roger Chapin, First Vice President

Britta Gross, Immediate Past President

Linda Landman Gonzalez, Commissioner

Buddy Dyer, Mayor

Clint Bullock, General Manager & Chief Executive Officer

Attila Miszti, Chief Operating Officer

Mindy Brenay, Chief Financial Officer – Ex Officio

Christopher McCullion, Chief Financial Officer

W. Christophér Browder, Chief Legal Officer

Linda Ferrone, Chief Customer & Marketing Officer

Latisha Thompson, Chief Employee Experience Officer

Michael Murtagh, Chief Transformation & Technology Officer

LeMoyne Adams, Luz Aviles, Wade Gillingham Jenise Osani, & Ken Zambito, Vice Presidents

Frances Johnson, Recording Secretary

The June 13, 2024 Pricing Roadmap Workshop was held in person at the Orlando Utilities Commission's Reliable Plaza Commission Chambers.

Refer to the Appendix for OUC Pricing Roadmap Workshop Presentation.

* * *

The Safety and Security protocols were provided at the meeting.

* * *

Call to Order

The Pricing Roadmap Workshop was called to order at 2:01 P.M. President Mills acknowledged a quorum was present and noted that no official action would be taken at this public meeting.

* * *

Clint Bullock welcomed everyone to the workshop and thanked them for attending. Mr. Bullock provided opening remarks, highlighting the Pricing Roadmap Framework and OUC PeakSHIFT program. He also detailed the alignment of the PeakSHIFT program with OUC's Path to Clean Energy, including the four key attributes of reliability, affordability, sustainability, and resiliency. He also provided the meeting agenda. He informed the public that there would not be any action as this is an informative workshop.

Energy & Pricing Fundamentals

Mindy Brenay provided a high-level review of the energy system components that work seamlessly together to allow energy to reach customers. She described how costs correspond to these systems through four pricing components: fuel, non-fuel energy, demand, and customer. She explained peak demand and OUC's obligations as a utility to serve peak demand for our customers, in addition to meeting reserve margin as an integral part of the energy grid. President Mills asked if OUC's competitors are also obligated to meeting reserve margin. Ms. Brenay confirmed this, explaining that the State of Florida requires a minimum of 15 percent reserve margin for municipalities and 20 percent for investor-owned utilities. Linda Ferrone highlighted an area of opportunity



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for OUC, stating that OUC must serve at peak demand, resulting in underutilized assets during non-peak time; therefore, reducing peak demand would also reduce the need to build future underutilized assets. Ms. Brenay continued discussing the cost and billing components while also reiterating OUC's pricing principles and the increasing challenges of recovering fixed costs through a variable customer pricing model. President Mills confirmed that OUC's pricing designs are reviewed and approved by the Florida Public Service Commission in addition to Board approval.

Drivers & Enablers of Pricing Structure Changes

Ms. Ferrone provided an overview of the foundational drivers influencing industry and pricing structure changes, including new challenges the industry is facing in order to deliver affordable and reliable power.

Ms. Brenay expanded on the cost drivers and the forecasted impact of increasing electricity demand and inflation, highlighting that reshoring, reindustrialization, electrification, and the rise in artificial intelligence (AI) data centers have the potential to drive a higher demand for energy. She explained that supply chain constraints have also added to inflationary pressure as rising demand, coupled with post-COVID effects have driven higher prices and extended equipment and supply lead times. She also addressed the cost trends for renewable energy resources and natural gas commodity prices, particularly noting that while natural gas costs, a passthrough cost, rose during the post-COVID period, since this time natural gas costs have decreased and OUC has appropriately reduced prices to share these savings with its customers.

Ms. Ferrone highlighted the importance of solar generation, but demonstrated how it does not coincide with peak demand due to the timing of the setting sun and when people use the most electricity. Weather impacts further complicate this challenge. Commissioner Chapin observed that coal is currently the most affordable and reliable energy source available to OUC, Ms. Ferrone concurred. Ms. Brenay added that natural gas is the second most affordable, depending on the market price, and is a reliable energy source. Ms. Ferrone demonstrated how residential customers differ in their electricity usage, depicting the typical differences between multi-family, single-family, and large single-family homes, and comparing the average monthly consumption versus average annual peak for these segments, highlighting the role they play in energy burden disparities.

Ms. Brenay also shared how rooftop solar customers use the electric grid and OUC's services differently, causing a challenge to fairly recover their cost to serve. She explained the current net metering pricing design excludes the recovery of fixed costs which enable grid access and as such the cost differential is recovered by residential customers without rooftop solar. Ms. Brenay described how net metering causes a cost shift between customers, highlighting that from 2017 to 2023, residential customers without rooftop solar paid a cumulative amount of \$18.6 million on behalf of rooftop solar customers. .

OUC PeakSHIFT

Ms. Ferrone provided an overview of the enablers of the OUC PeakSHIFT program, which includes investments in digital meters and data management, growing energy management technology, impact of time-of-day (TOD) rates, increased rooftop solar adoption, and declining energy storage costs. Ms. Ferrone explained the importance of OUC's investment in its digital metering infrastructure. She highlighted the customer tools and electric and water conservation programs and rebates offered by OUC to promote energy efficiency. President Mills added that OUC provides a free home energy audit that he took advantage of and found to be very useful. Ms. Ferrone also illustrated smart appliances and energy management systems currently used by customers that enable good energy use behaviors. She highlighted a couple of studies related to industry adoption of TOD rates and stressed the importance of customer education and outreach. She provided background and results of OUC's TOD pilot that was completed between April 2021 through March 2022, and customers' 98% positive responses regarding their 1-year participation. Ms. Ferrone announced that OUC is ranked as the top Sunriser in SACE's most recent Southeast Solar Report.

Ms. Brenay provided an overview of the enablers associated with rooftop solar noting that solar costs have declined significantly, and a similar trend is occurring with energy storage with 528 residential customers having installed energy storage systems. Commissioner Gross inquired if the 528 batteries installed in OUC's service territory are associated with residential solar, Ms. Brenay and Ms. Ferrone confirmed this, stating there might be more batteries installed that are not associated with solar and this number does not include utility-level



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batteries.

Ms. Brenay also provided insight into the cost decrease for both, rooftop solar and utility-scale solar.

OUC PeakSHIFT Programs

Ms. Brenay presented four new programs proposed within PeakSHIFT to modernize OUC's pricing structures to be implemented over the next several years. These include DemandLevel, Shift & Save, SunChoice and TrueNet Solar. She stated these programs were designed to help OUC reduce peak demand while also achieving OUC's Path to Clean Energy utilizing the four key attributes of reliability, affordability, sustainability, and resiliency. For each program, an overview of current pricing structure was provided, along with the proposed pricing design changes and examples of expected impact to each residential home segment.

- The DemandLevel pricing design is proposed to recover fixed distribution costs by establishing a new three-tiered pricing component in tandem with lowering the non-fuel energy variable per kilowatt hour price for an average revenue-neutral price change. Ms. Brenay shared the design was developed to align customer pricing with average home sizes shared earlier in the presentation thereby enhancing customer pricing equity. She stated 90 percent of residential customers will see a change ranging from \$5 increase to \$15 decrease in their monthly bill. Ms. Brenay provided DemandLevel bill examples representing typical homes per segment based on proposed pricing effective October 1, 2024. Commissioner Gross asked for clarification that the fixed tier charge is based on a rolling 12-month peak and impact when there is unusually high activity, such as when family is visiting in the summer. Ms. Brenay clarified that while some customers may set a high peak due to unusually high activity at their home at a point during the 12-month period, they may not see a bill increase as there is a corresponding non-fuel kWh price reduction.
- Ms. Brenay explained the Shift & Save TOD pricing program which is designed to launch in the fall of 2026. The program expands and simplifies the current TOD pricing structure to accommodate all customers, offering new ways to save and conserve. This program is also a revenue-neutral program that has been designed to enable peak demand reductions by promoting conservation beyond the kilowatt hour used. Currently, the average residential customer utilizes 30 percent of their monthly energy use during peak time. She presented a rate comparison that shows bill savings ranging from \$3.30 to \$5.15 when an additional 10 percent of energy use is shifted to non-peak hours. Ms. Ferrone clarified that if in cases where energy usage remains unchanged for reasons such as medical equipment, free home energy audits will be promoted to help those customers identify other ways to lower their peak demand. Mayor Dyer asked if the proposed 10 percent energy shift applies to total energy use or to the current 30 percent energy used during peak time. Ms. Brenay clarified it is based on the average customer shifting energy use to 20 percent during peak time and 80 percent off-peak. Commissioner Chapin inquired about the percentage shift under the TOD study. Ms. Ferrone stated single-family homes reduced their usage by 10.6 percent, but multi-family homes did not see a significant change.
- Ms. Brenay described the current OUC Community Solar program, which is closed to new participants and proposed to reopen with modifications as SunChoice Community Solar in 2024. In the SunChoice Community Solar Commercial program, customers can subscribe up to 100 percent of their monthly consumption in 10 percent increments with tiered pricing. The subscriptions include the retirement of Green-e certified Renewable Energy Certificates (RECs) in the customer's name. The SunChoice Community Solar Residential program would be available mid-2025.
- Ms. Brenay detailed the current rooftop solar pricing and net metering policy. She explained that in 2008, OUC adopted a net metering policy that aligned with the Florida Public Service Commission's policy to promote and advance emerging rooftop solar. Currently, bills for rooftop solar customers are netted at the meter at retail price. Under TrueNet Solar, the components are proposed to be separated, and customer-supplied electricity will be decremented to retail fuel price over a seven-year period,



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providing a path to equitable cost recovery of customer infrastructure costs. She illustrated net metering changes by other FL municipalities and stated OUC is one of the last municipalities in the state to address the growing costs of net metering and propose changes to the program.

* * *

Commissioner Comment

Commissioner Landman Gonzalez interjected, apologizing for her early departure. She expressed appreciation for the extensive information and data presented, stating it's important to acknowledge how the changing environment is affecting the delivery and pricing of energy. She will tune in to the YouTube meeting recording to hear the public concerns. She appreciates the response from the community and their attendance to help the board understand all sides of the proposed changes. Commissioner Landman-Gonzalez exited the meeting at 3:45 PM.

* * *

OUC PeakSHIFT Programs- cont'd

Ms. Brenay illustrated TruNet Solar bill examples, indicating average monthly bill increases ranging from \$5.00 in 2025 to \$34.07 by 2030. She explained conservation programs and energy storage rebates will be expanded to empower residential and small commercial customers to leverage the full value of their rooftop solar systems. Mayor Dyer inquired about the cost of battery storage and the type of rebate that will be offered. Ms. Ferrone provided insight into the cost of battery storage and Ms. Brenay explained OUC is still finalizing the details of the rebate program. She continued with an overview of the TrueNet Solar bill example with energy storage, which shows bill savings of \$5.72 in 2030 rather than an increase of \$34.07.

Ms. Brenay further discussed the timeline in OUC's proposal to provide a balanced path for the PeakSHIFT program consisting of a multi-year program that will provide bill stability. This path reflects a framework for pricing changes which will be brought to the Board annually for approval. Commissioner Gross asked if rebates for energy storage programs were a common component across other utilities in Florida or nationwide. Ms. Brenay stated she is currently not aware of any programs among other Florida municipal utilities, but stated the leading Large Public Power Council utilities do. Ms. Ferrone added that utilities located on the west coast and northeast of the country, where energy is more expensive, have similar programs. President Mills reaffirmed OUC is monitoring best practices to incorporate into the programs. Commissioner Chapin asked whether OUC or the City have given an indication that OUC's solar program would remain the same indefinitely. Ms. Brenay confirmed that there have been no contracts and that OUC's pricing is approved by the Board. Discussion ensued on what solar companies disclose to their customers regarding paying down a solar system installation.

Communication & Stakeholder Outreach

Ms. Ferrone explained that OUC intends to empower its customers with information and tools to help manage energy use. She provided a brief overview of OUC's communication objectives, and short and long-term customer outreach. Ms. Ferrone highlighted the results of the initial customer outreach in preparation for this workshop, as well as the new website that provides information and a mechanism for customers to provide feedback. She showed examples of stakeholder feedback received to date on each program. President Mills challenged OUC to proactively collaborate with the City of Orlando and use its resources to connect with groups and organizations representing vulnerable customers and educate them on OUC's programs. Ms. Ferrone confirmed those measures are currently occurring and will continue. Mayor Dyer added his team has a robust neighborhood and communications department with close to 200 neighborhood associations that can be leveraged for these educational efforts. Commissioner Chapin acknowledged that although some customers may be concerned about changes, many will not see significant changes on their bills. Ms. Ferrone acknowledged most of the negative customer feedback has been on TruNet Solar and provided examples of customer concerns. Commissioner Gross requested information on studies that indicate solar rooftop customers cost less to serve than non-rooftop solar customers, as referenced in the customer feedback examples. Ms. Ferrone agreed to send the information.

Closing & Next Steps

Mr. Bullock provided closing remarks, thanking public attendees who sat through the presentation. He emphasized the pricing structure will need to change and OUC would like to work with customers to reduce their usage during peak periods allowing for savings for all customers with enhanced customer choice. He further stressed that it is a continuous balance to manage reliability, affordability, sustainability, and resiliency as OUC moves on its Path to Clean Energy and its net zero CO₂ emissions goal. He concluded by highlighting the next steps, including a Pricing and Budget Workshop to be held at the July 9, 2024 Commission meeting, and the potential approval of the pricing and budget, and OUC PeakSHIFT at the August 13, 2024 Commission meeting.

Break (4:18 P.M. – 4:30 P.M.)

Public Comments

Patty Sheehan, an OUC customer, spoke in opposition of the net metering proposal.

Michael Cohen, an OUC customer, spoke about net metering and grandfathering existing solar customers.

Keval Fox, an OUC customer, spoke about EV charging and solar disincentivizing.

Charles Behrens, an OUC customer, spoke about net metering rates and residential solar owners.

Kelly Semrad, an OUC customer, spoke about the overdevelopment of the electric grid that cannot keep up with demand.

Mary Dipboye spoke on behalf of the League of Women Voters of Orange County to support to retain the existing net metering policy.

Bill Gallagher spoke about net metering fairness for solar investments.

Brian Miller spoke about the energy produced by residential and commercial solar customers and the existing electric infrastructure.

Tim Delcavo spoke about the proposed changes disincentivizing rooftop solar.

Kasey Harbison spoke about the effects of net metering on the working class.

Thad Cully spoke on the regulatory perspective of the rate design related to net metering.

Janet Bowman spoke in representation of The Nature Conservancy in objection to the proposed changes citing it disincentivizes net metering.

Juan Pesante, an OUC customer, spoke about fair compensation for electricity produced by solar customers.

Matthew Grocholske, an Associate Soil and Water supervisor for the Sunrise Movement Orlando spoke about affordability for the working class during peak demand.

Eugene Stoccardo, an OUC customer, spoke on the distribution of electricity produced by solar customers, the energy market costs, and partnering together.

Bill Johnson spoke in representation of the FL Solar Energy Industry Association about the impacts of the proposed changes on solar contractors and the elimination of net metering.



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Dan Helm, an OUC customer, spoke about the proposal discouraging the community from participating in reaching the NetZero goal.

Anna Eskamani, proud OUC customer, voiced her concerns about the proposed net metering changes.

Val Mobley, proud OUC customer, spoke about solar customers giving energy back to the electric grid and helping other non-solar customers.

Susanna Randolph, an OUC customer and Chapter Director for Sierra Club FL, asked to revisit the proposal before moving forward and voiced concern over the economic and equity reasons shared.

Guy English, an OUC customer, spoke about how the proposed changes will significantly increase his bill.

Lee Perry, a local climate activist, spoke about diversifying the energy grid with renewable energy and how the proposed changes will disincentivize solar.

Justin Winkler, an OUC customer, expressed his disappointment with the proposed net metering plan.

* * *

General Manager Comments

Mr. Bullock expressed heartfelt appreciation to all the members of the community who participated in the meeting. He provided final closing remarks and reiterated that no official action would be taken at this meeting. He emphasized that solar is an intermittent resource, OUC has an obligation to provide electricity to each customer, and reliable service is expected of OUC regardless of weather conditions. He stressed the importance of peak demand, price equity, and the struggle to continuously balance affordability, reliability, sustainability, and resiliency; and acknowledged the challenges all customers face across all income brackets. He concluded by stating OUC is open to continuing the conversation.

* * *

Commissioners' Comments

Mayor Dyer thanked OUC for their hard work and due diligence in creating the plan. He stated he is not completely sold on the proposed net metering changes, does not believe the timing is right for this proposal, and is willing to have additional discussions. He stated that while OUC and the City have been leaders in all things green, OUC does not have to move forward with these changes because other municipalities have. He expressed appreciation for the information provided to date.

Commissioner Chapin thanked OUC for the in-depth presentation, stating he learned a lot from the workshop. He understands the need to smooth out peak load and added that he likes that OUC is the longest, most supportive of solar of all the municipalities in Florida. He noted the comments on studies related to the cost to serve solar customers and would like to understand if the studies contribute to reliability, as well as the impacts other cities have experienced from changes to net metering. He stated he anticipates a market correction for EV users not paying gas tax, which contributes toward infrastructure costs. He concluded by stating he looks forward to better understanding the responsibilities solar users have related to infrastructure.

Commissioner Gross thanked everyone for participating and offering their helpful input. She emphasized her priorities are the 2030 goal and the 50 percent achievement of carbon reduction. She expressed enthusiasm for battery storage and TOU, but is also aware of the problems on the electric grid, EV, and intermittent renewables. She had hoped to hear more about best practices and how to deal with net metering, acknowledging there is a problem that must be solved that needs additional studies. She stated that working with many utilities across the country, she commends OUC for having such heart and caring and worrying about these decisions. She emphasized OUC is open to understanding what has been said and assured the public that the comments expressed had been heard.

President Mills echoed everyone's sentiments and thanked the public for staying through the meeting to allow the Board to hear their viewpoints. He emphasized this was an information gathering meeting for all and appreciates the public's trust of the Board. He encouraged the public to continue to send data, challenge, and



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turn to elected officials in order to reach an equitable conclusion. He commended OUC for being a future focused organization and expressed his appreciation to the public for their feedback.

The Pricing Roadmap was adjourned at 5:55 P.M.

Refer to the Appendix for OUC Pricing Roadmap Workshop Presentation.

APPENDIX

Pricing Roadmap Workshop



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**Empowering people with new ways
to think about and use energy**
A Community-Optimized Energy System

OUC PeakSHIFT Public Workshop

June 2024

The Pricing Workshop

The objective of today's workshop is to present Management's recommendation for a "Pricing Roadmap Framework" that helps advance the effective use of energy while ensuring customer equity.

- *No action will be taken today.*
- *Board approval will be presented on August 13, 2024.*
- *Pricing recommendations are brought to Board for approval annually.*



OUC PeakSHIFT Program

A multi-year program to better align costs equitably with how we all use electricity, empowering our customers with better information and more choices to create a more affordable, reliable, resilient, and sustainable grid.

OUC Continues on the Path to Clean Energy



Energy & Pricing Fundamentals

Drivers & Enablers of Pricing Structure Changes

OUC Peak*SHIFT* Recommendation Details

Communication & Stakeholder Outreach

Closing & Next Steps

Energy & Pricing Fundamentals

Power Production & Delivery System

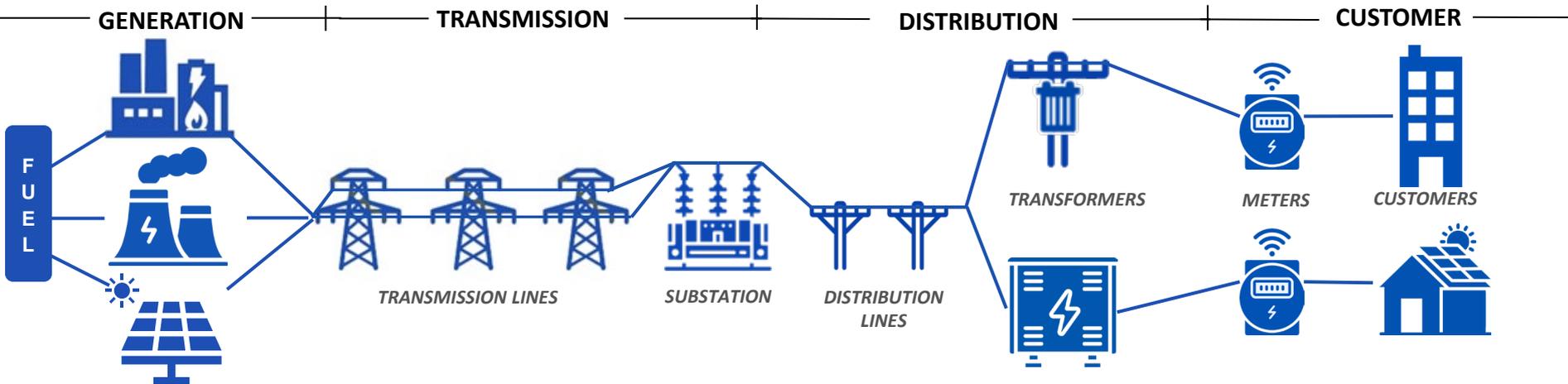
A “flip of the switch” requires energy system components to work seamlessly together

Generation creates energy.

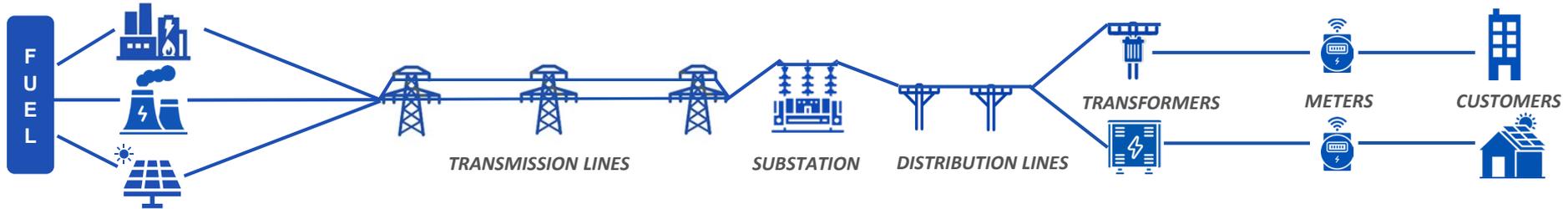
Transmission transmits high voltage energy over long distances to substations, which step down energy for safe distribution.

Distribution delivers energy through neighborhoods to transformers, which step down energy for safe use for homes and businesses.

Digital meters measure customer energy use.



How Costs Correspond to System



Fuel Costs

Customer Costs

Non-Fuel Energy Costs

Demand Costs



Fuel

- Fuel includes fuel commodity and transportation costs and is a pass-through charge.



Demand

- Demand includes fixed generation, transmission and distribution costs.



Non-Fuel Energy

- Non-fuel energy includes generation, transmission and distribution costs not recovered through demand.

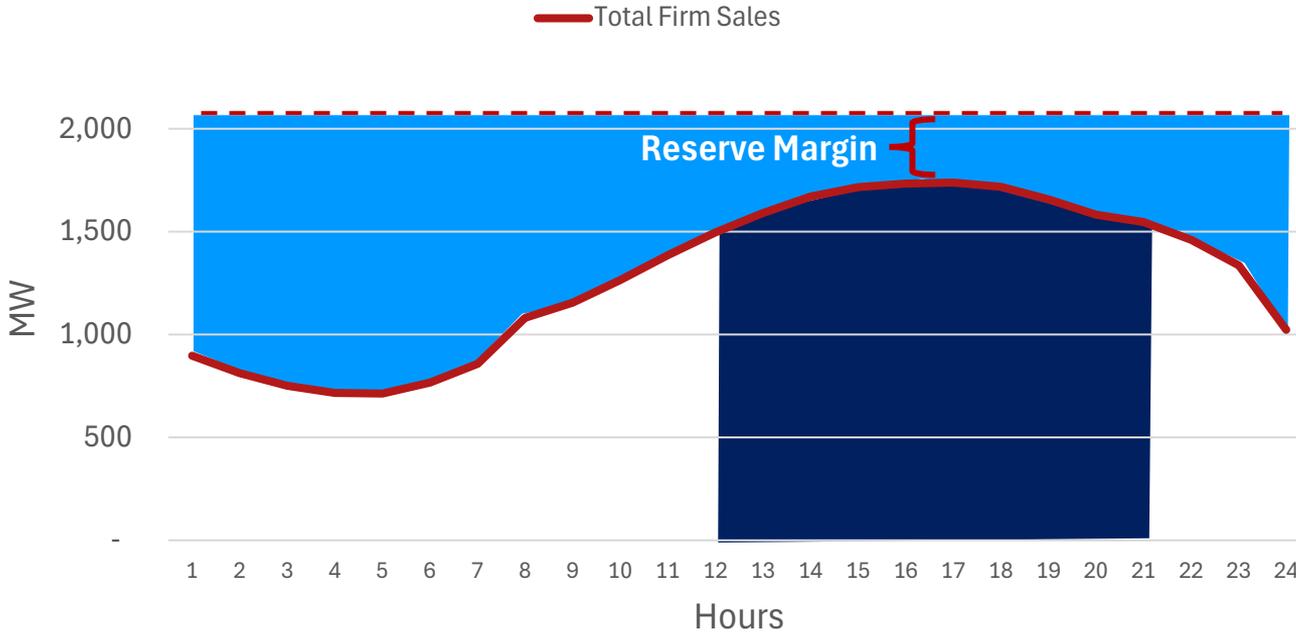


Customer

- Customer includes meter installation, reading and customer service.

OUC has a Duty to Serve Peak Demand

Forecast Peak Day - August 2024



OUC must maintain generation and delivery infrastructure to meet **peak demand plus a reserve margin**

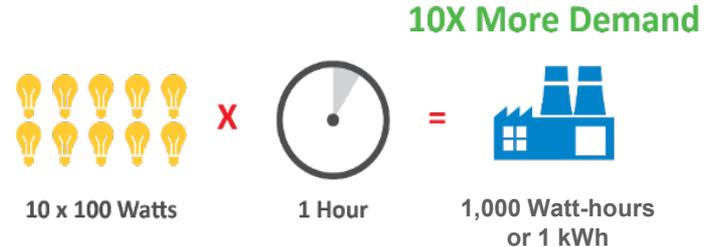
Infrastructure is **unused** when demand is lower

Reducing peak demand can reduce investment costs and result in a more efficient system

Ways that Power is Measured

- kWh – kilowatt hour – the **amount** of power used over one hour.
- kW – kilowatt – the rate of power (**demand**) an electrical device uses at a specific point in time.

1,000 Watts (W) = kilowatt (kW)



One 100-watt bulb burning for ten hours uses the same energy (kWh) as 10 bulbs burning simultaneously for an hour but has 1/10th the demand (kW).

For the last 100 years, residential and small commercial customers have been billed based on kWh (amount) because the customers demanded power similarly. Medium and large commercial customers have been charged a demand rate in addition to paying for their usage over time.

Mid-Large Commercial Customer Cost and Billing Components



Non-Fuel Energy

- Non-fuel energy includes generation, transmission and distribution costs not recovered through demand.



Demand

- Demand includes fixed generation, transmission and distribution costs.



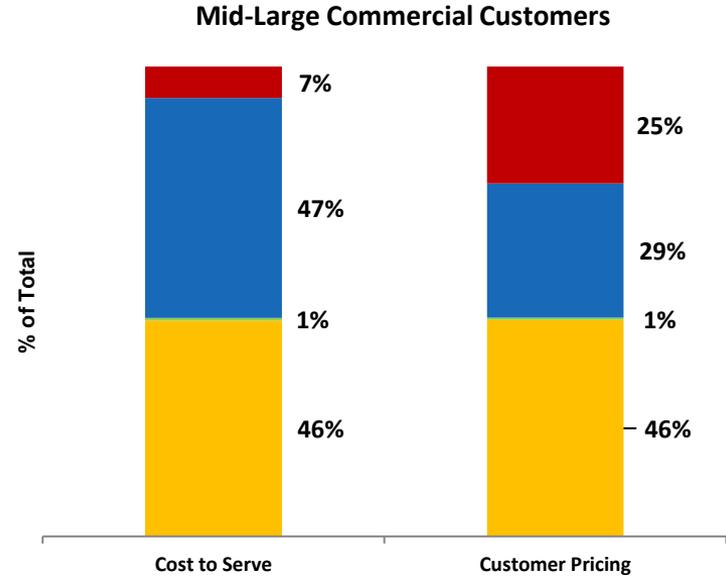
Customer

- Customer includes meter installation, reading and customer service.



Fuel

- Fuel includes fuel commodity and transportation costs and is a pass-through charge.

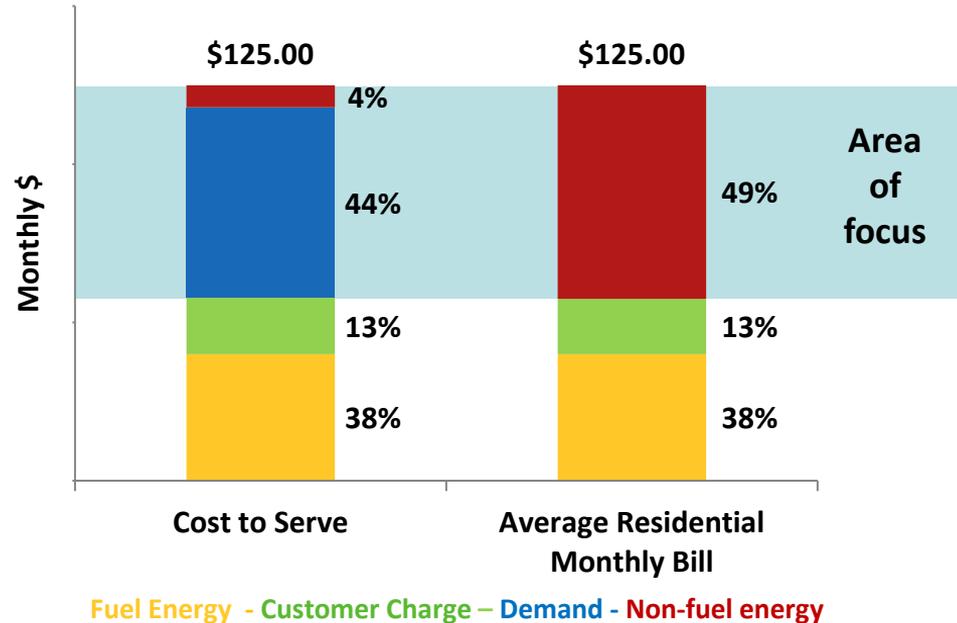


Fuel Energy - Customer Charge - Demand - Non-fuel energy

Adherence to Pricing Principles & Designs is Challenged by How Costs are Recovered

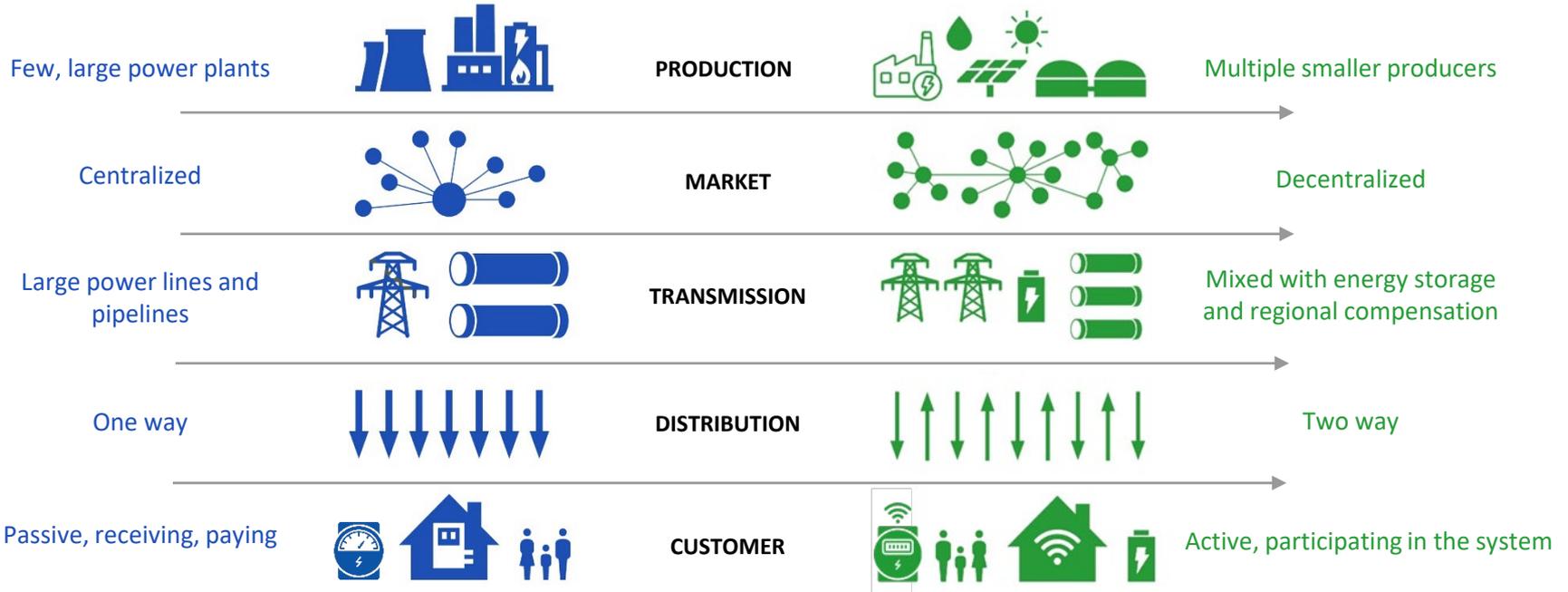
- Core principles for customer pricing include **equity**, **bill stability** and **conservation signals**
 - Customer pricing is reviewed annually and pricing changes, when made, are reviewed by the Florida Public Service Commission to ensure appropriate cost recovery
- The existing price structure of recovering fixed demand costs through **variable** kilowatt hour pricing no longer delivers effective price equity
 - Additional conservation signals are needed to drive down overall use, especially during peak times

Customer Cost and Pricing for the Average Residential Customer using 1,000 kWh per month



Drivers and Enablers of OUC PeakSHIFT Program

Foundational Drivers Influencing Industry Change



The way energy is generated and delivered is evolving thanks to new technologies. Complimentary, enhanced pricing signals are required to support this clean energy transition equitably.

Drivers Influencing Pricing Structure Changes

Demand for electricity is rising sharply after a period of slower growth.

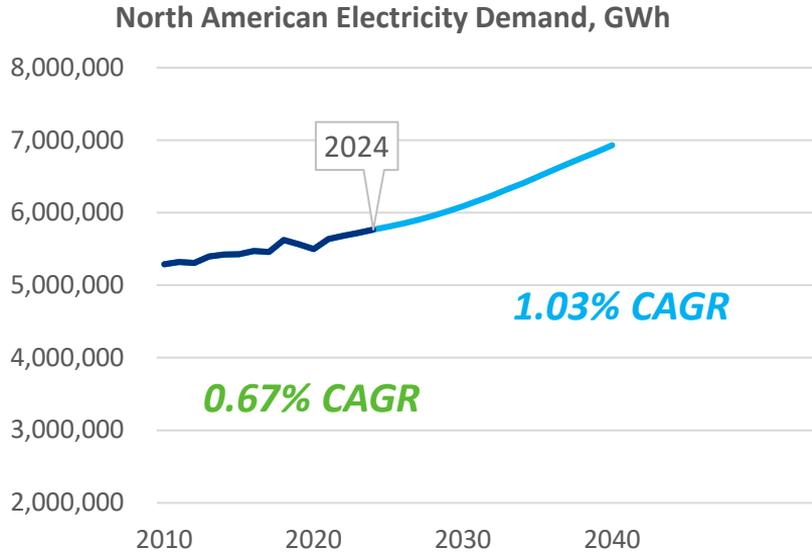
Supply chain issues, extreme weather events & cyber threats are increasing costs as we work to meet demand.

CO₂ emission reduction goals require new, cleaner, renewable energy resources while addressing intermittency.

Residential customer usage patterns are diverging which is impacting energy burden.

Our increasingly electrified world presents **new challenges** for delivering affordable and reliable power every minute of the day, all year long.

Dramatic Increase in Forecasted Electricity Demand



CAGR – Compound annual growth rate
Source: Bloomberg New Energy Finance (BNEF) data

Bloomberg

Data Centers Now Need a Reactor's
Worth of Power, Dominion Says²
- May 2, 2024

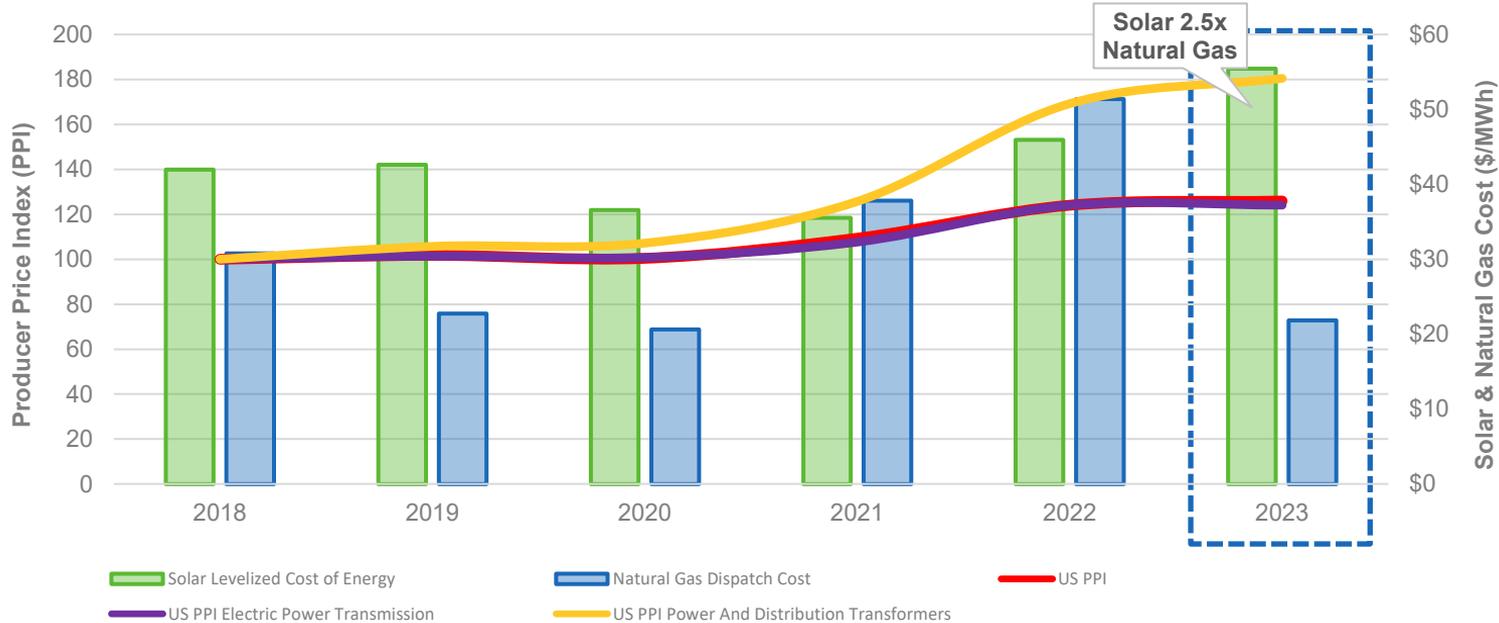
“Over the past year, grid planners nearly doubled the 5-year load growth forecast. The nationwide forecast of electricity demand shot up from 2.6% to 4.7%...”

– “The Era of Flat Power Demand is Over,”
Grid Strategies, December 2023

Electricity demand growth is projected to increase 50% more than the prior 14 years. Reshoring, reindustrialization and the rise in AI data centers could drive even higher growth.

Inflation and Demand Drives Prices Higher

Producer Price Index (PPI), Solar & Natural Gas Generation Cost (\$/MWh)



Drivers of Increased Prices & Demand:

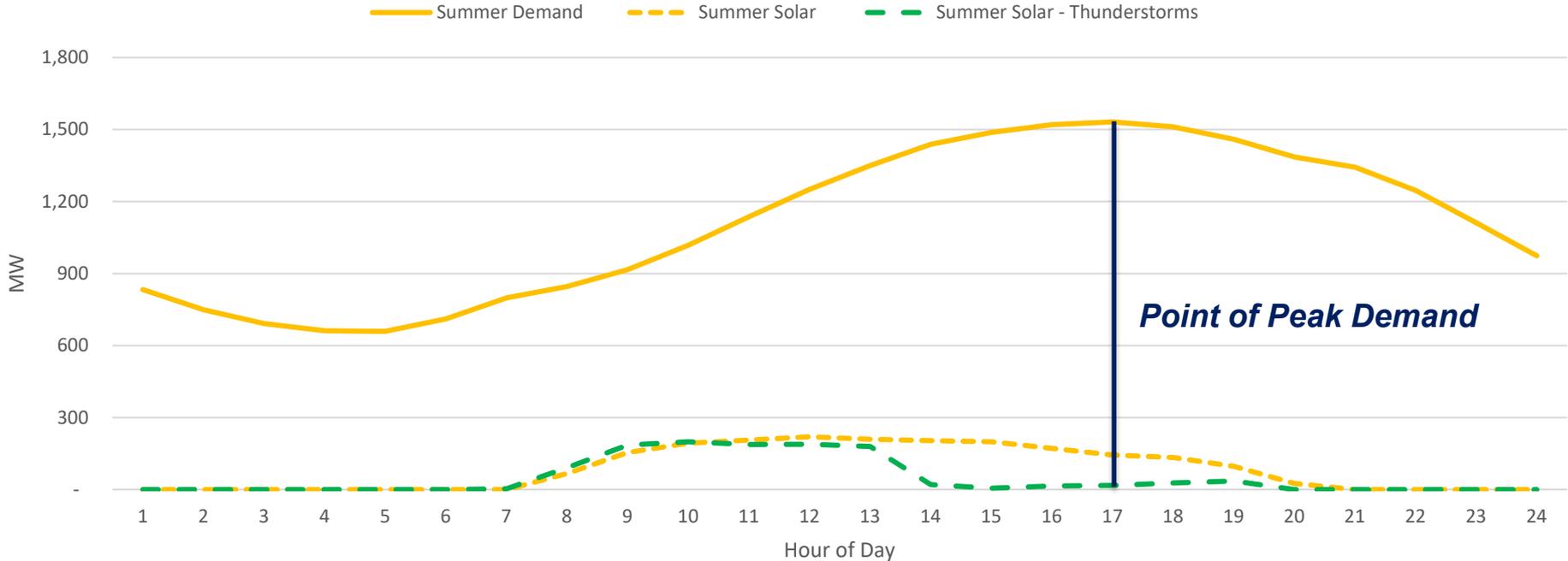
- China Import Tariffs
- Population Growth
- Reshoring
- Data Center/AI
- Electrification

1. Bureau of Labor Statistics
2. Bloomberg New Energy Finance

Electric infrastructure components have outpaced U.S. inflation in recent years. Continued increases are likely due to supply chain pressures, new applications, and the overall energy transition.

Solar Generation & Peak Demand Do Not Coincide

Demand and Solar Supply – Projected Summer 2025

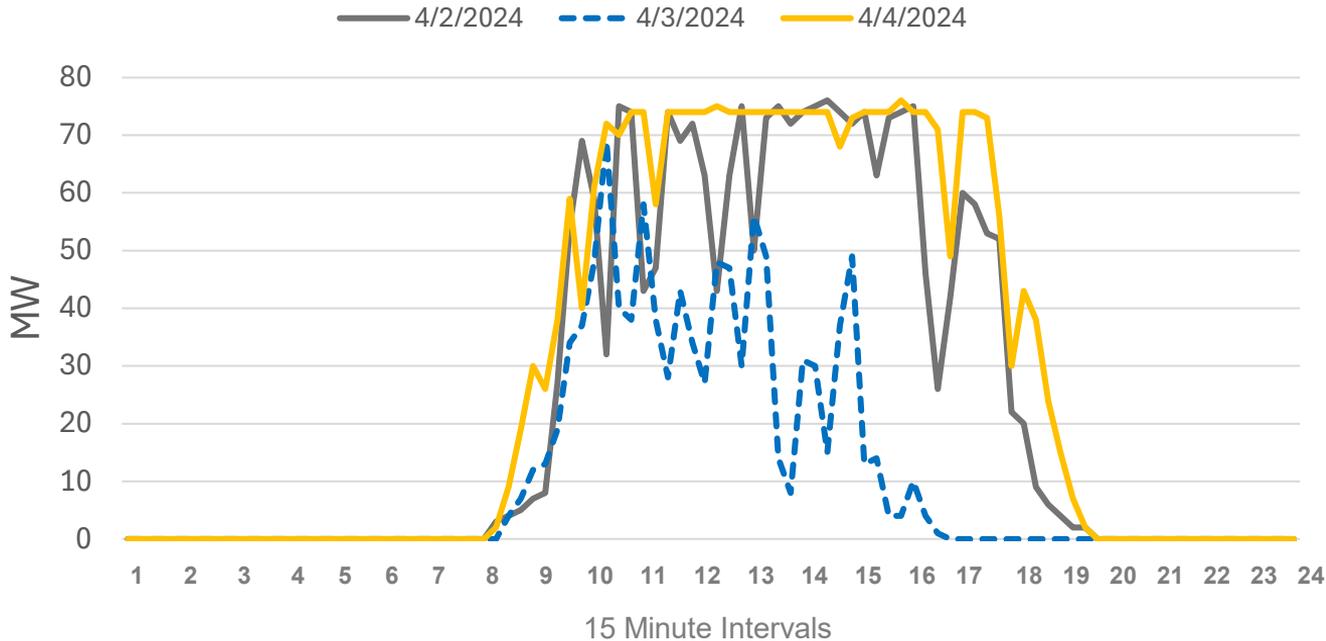


Solar is currently the only viable renewable resource in Florida.

Central Florida has 277 days a year — 76% of the calendar — that are cloudy or partly cloudy.

Solar Generation is Impacted by Weather

Harmony Solar 15 minute interval MW - Recent 3 days

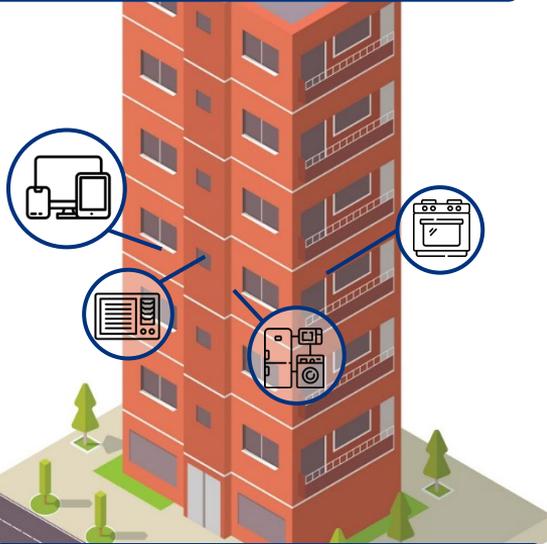


- Typical Florida summer day **cloud cover creates solar farm output intermittency**, which can impact reliability
- Extended **(multiple cloudy days)** cover can impact resiliency

Leveraging the value of solar generation requires alignment with load management programs and enhanced energy storage solutions to deliver long-term solutions.

Residential Customer Electric Usage Is Diverging

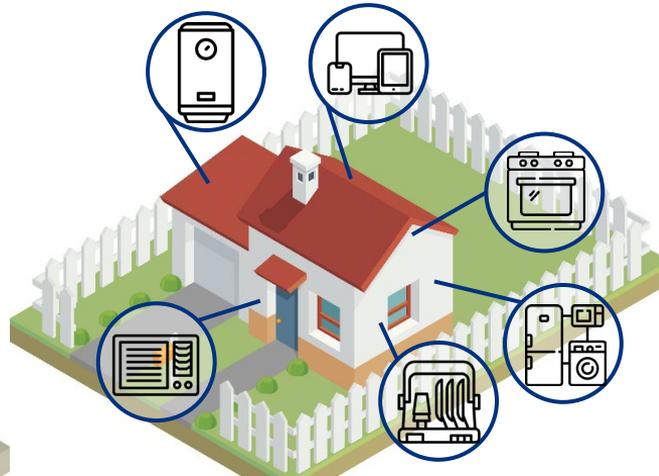
Multi-family Home



Average monthly consumption: 700 kWh

Average annual peak demand: 10 kW

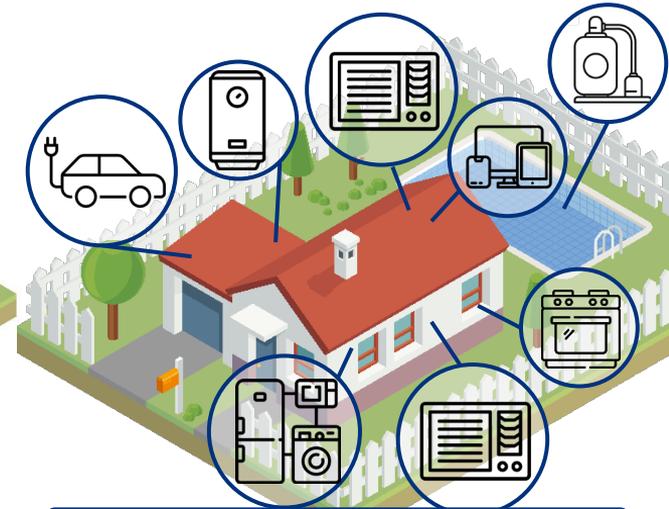
Single-Family Home



Average monthly consumption: 1,150 kWh

Average annual peak demand: 13 kW

Large Single-Family Home



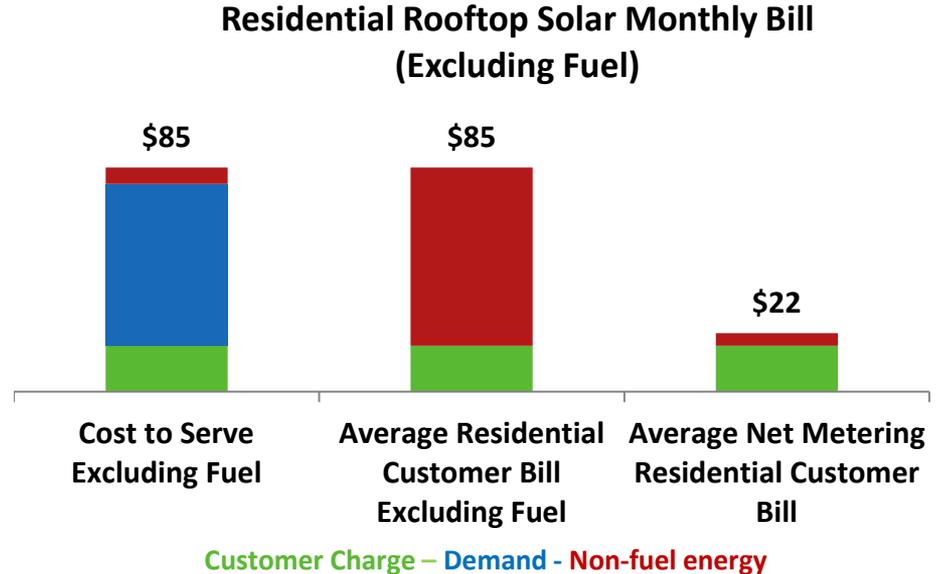
Average monthly consumption: 1,700 kWh

Average annual peak demand: 19 kW

Today's pricing structures are not capturing costs in the residential and small commercial customer segment which plays a role in energy burden disparities.

Rooftop Solar Customers Use the Electric Grid Differently Causing a Pricing Differential

- Current net metering pricing design excludes the recovery of fixed costs which enable grid access
- Cost differential is recovered by residential customers without rooftop solar
 - The lack of a demand charge for residential customers shifts the burden of these costs within the customer segment

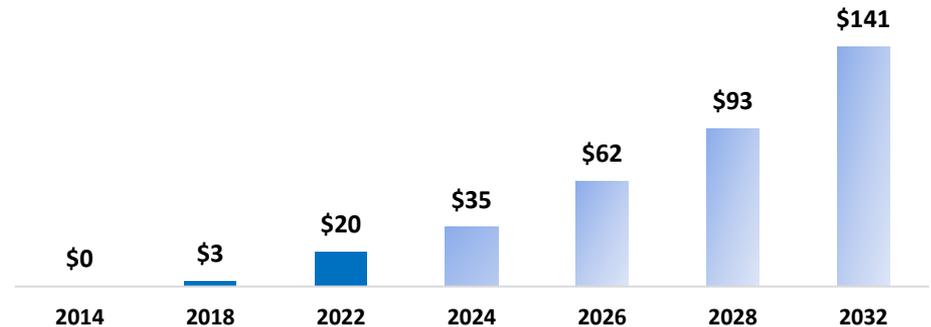


Rooftop solar customers use the full electric delivery system on cloudy days and at night unless they have an energy storage system.

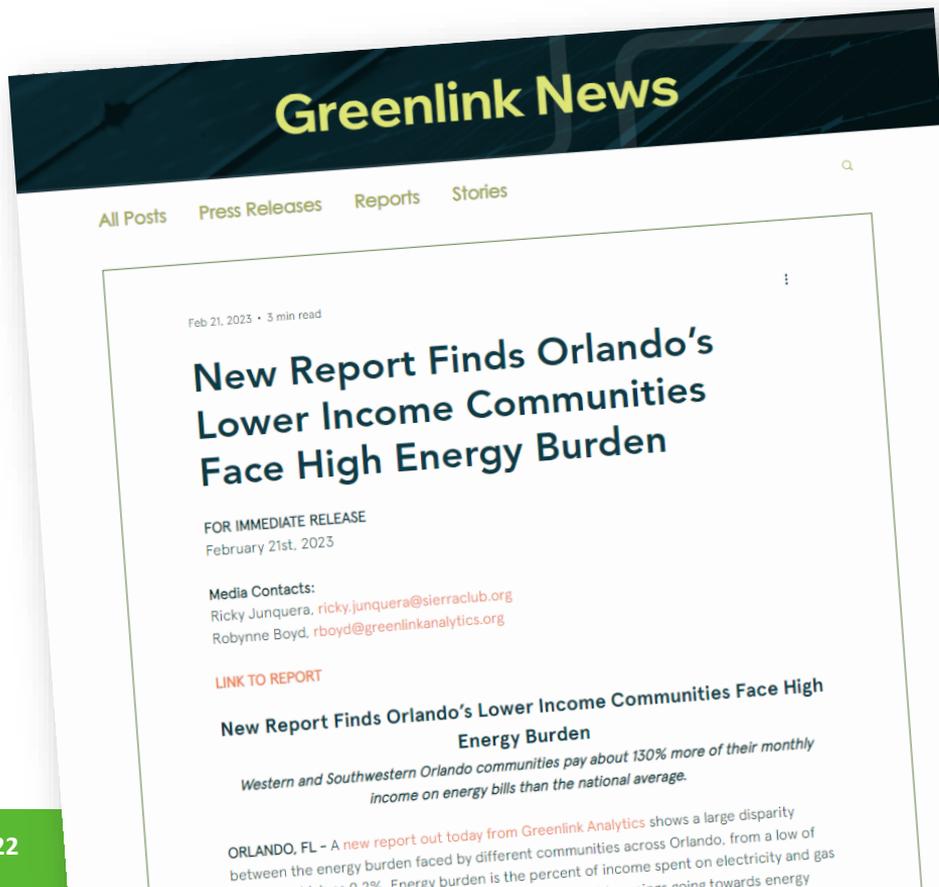
Net Metering Causes a Cost Shift Between Customers

- From 2017 - 2023 residential customers without rooftop solar paid a cumulative amount of \$18.6 million on behalf of rooftop solar customers
 - For 2024 the amount is projected to be approximately \$9 million (About \$35 per year for each non-rooftop solar customer)
 - Left unchanged, the projected cumulative amount through 2032 will be about **\$240 million**

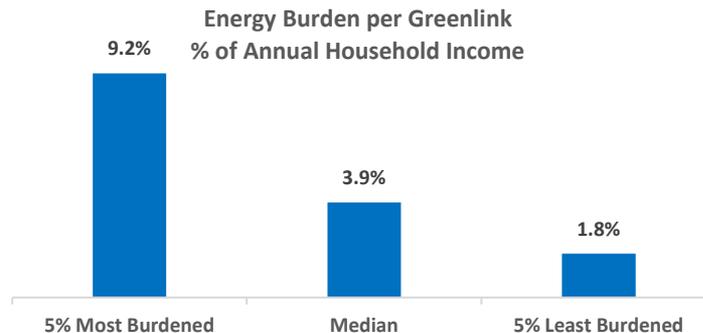
Annual Infrastructure Costs Paid by Non-Rooftop Solar Customers on behalf of Rooftop Solar Customers*
(Annualized based on net metering customers as of December)



*Calculation is based on the number of residential rooftop solar customers times estimated annual subsidy divided by number of residential customers including an average 21% annual growth rate based on OUC's actual growth in rooftop solar.



“A [new report out today from Greenlink Analytics](#) shows a large disparity between the energy burden faced by different communities across Orlando... **Energy burden is the percent of income spent on electricity and gas bills.**”



Enablers of OUC PeakSHIFT Program

Investments in *digital* meters and *data* management support awareness and behavior change.

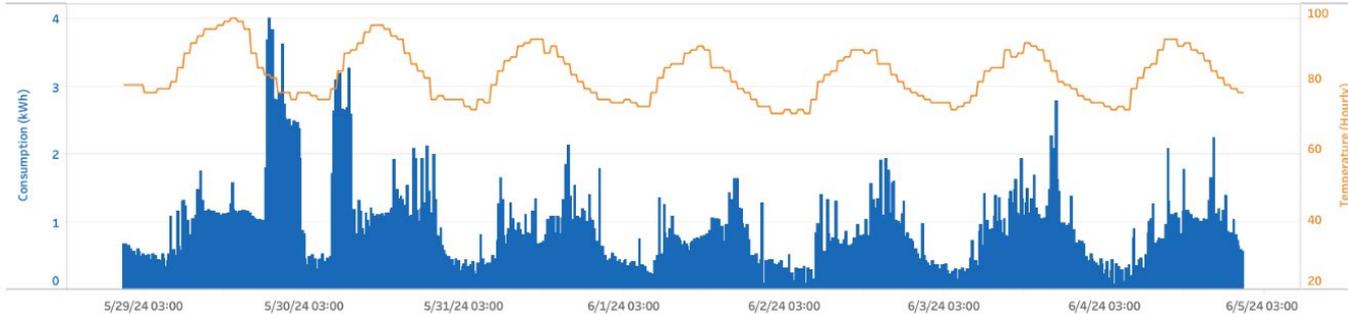
Programmable appliances and in-home and business *energy management* technology is growing.

Time-of-day rates are proven to move peak and enable savings – OUC's TOD pilot showed the same.

Rooftop solar adoption has increased while the *cost of customer sited generation has declined*.

Energy storage costs are declining and will help offset peak demand to meet CO₂ reduction goals.

Digital Meter Investment Enables New Pricing and Behaviors



15-Minute Interval Data

Digital Meters



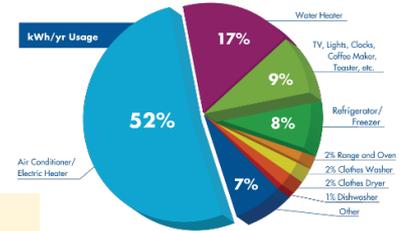
Usage Dashboard



Advanced metering technology provides billing data and information to enable a more equitable pricing structure that improves the precision of pricing electric usage with how customers use the grid.

A Strong Conservation Program Exists to Build Upon

- Today's residential pricing design promotes conservation through tiered rates that increase as more energy is consumed.
- Beyond providing price signals, OUC offers customer tools and dozens of electric and water conservation programs and rebates to promote energy efficiency.



Conservation Education & Rebates



Energy Audits

OUC remains committed to energy efficiency programs and achieving 1% of retail sales or more as measured in OUC's strategic plan with demand and supply side programs.

Growth of Smart Appliances & Energy Management Systems Enables Good Energy Use Behaviors



Close to half the US population use smart technology which enable control of when energy is used.
49,000 Smart Thermostats are installed in OUC's Service Territory.

Industry Adoption of Time-of-Day Rates



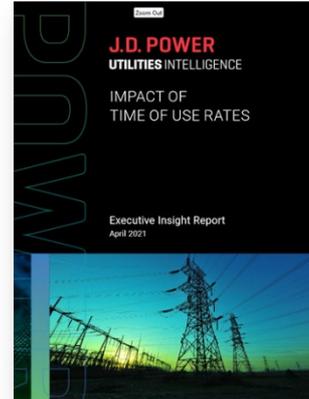
Moving Ahead with Time of Use Rates - American Public Power Association --2020
<https://www.publicpower.org/system/files/documents/Moving-Ahead-Time-of-Use-Rates.pdf>

Moving Ahead with Time of Use Rates - American Public Power Association

“...more than 300 utilities offer some type of time variable rate”

*“...studies continually show that **TOU rates lead to decreased electric usage, both at peak periods and overall.**”*

*“**some low-income SCE customers had higher than average bill increases... low-income customers often have a flatter usage profile, implying that any rate design structure with higher rates during peak hours could benefit them...**”*



Impact of Time of Use Rates - J.D. Power - May 2021
https://www.jdpower.com/sites/default/files/file/2021-05/JDP_US_2021_TimeofUse_WhitePaper_FINAL_051721.pdf

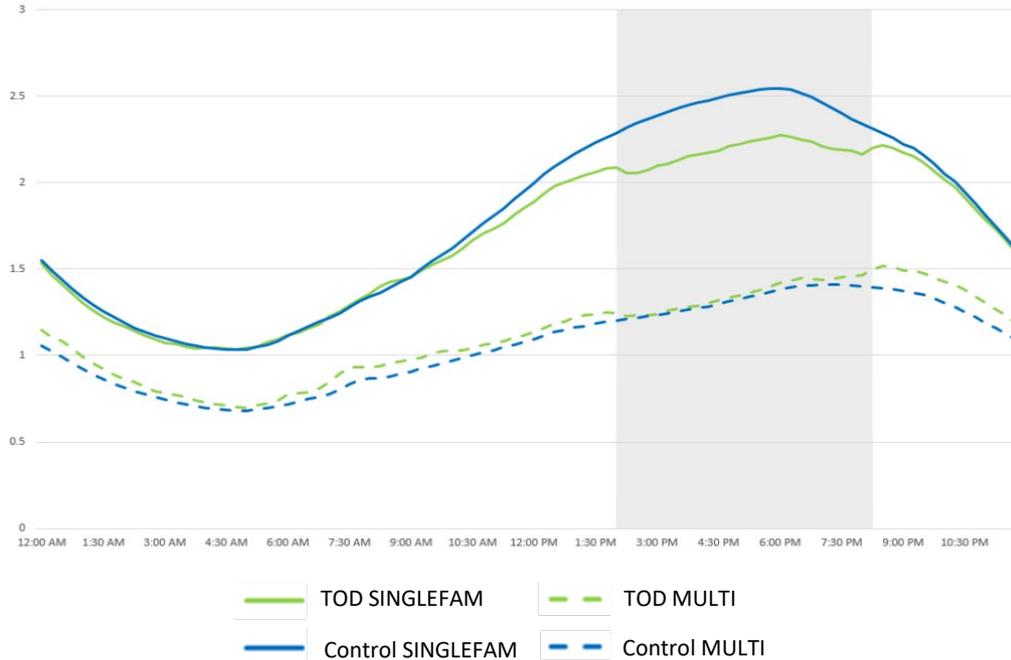
Impact of Time of Use Rates – J.D. Power

*“**Customers who actively select a TOU rate plan are more satisfied than customers placed into a utility’s default TOU plan.**”*

*“**When the rollout of the new rates started, there was a spike in average monthly bills... higher bill awareness triggered customers who haven’t paid attention to respond...and change behaviors.**”*

Customer education and outreach will be key in the transition to Time-of-Day Rates. Ensuring customers are aware that they can Opt-Out is critical.

Residential TOD v. Control (April 2021-March 2022)



Pilot Peak Changes

- Single-family:
 - Peak demand reduced 10.6%
- Multi-family:
 - Peak demand shifted to ‘off-peak’

Pilot Pricing

- To encourage and incentivize customers, the price differential between on- and off-peak was 7 cents per kWh

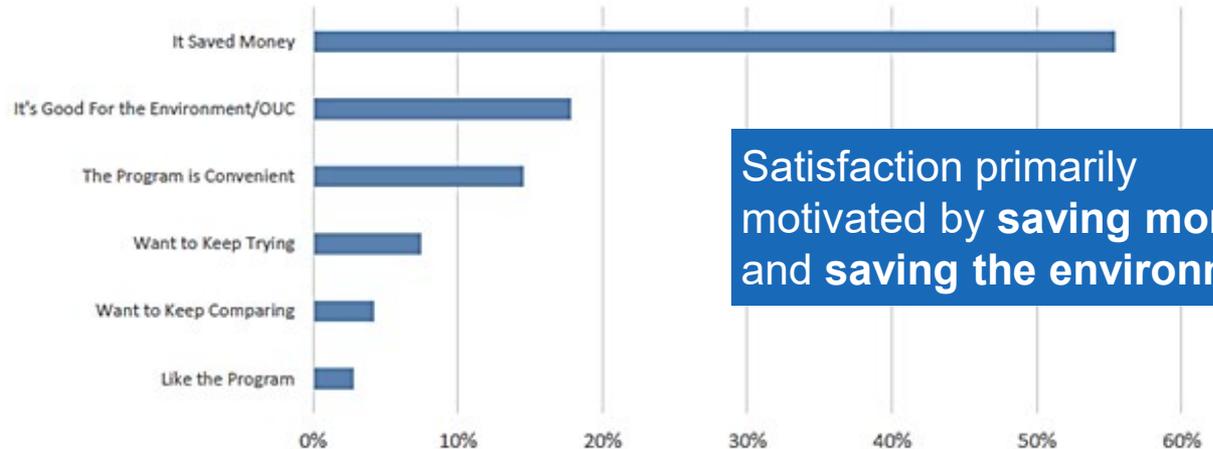
OUC’s Time-of-Day pilot confirmed assumptions about peak usage and aligned to industry findings.

Customer Retention

- Only 2% of participants (15 people) opted out from the pilot after trying TOD pricing.

Customer Satisfaction

- 98% of participants Satisfied or Very Satisfied
 - Satisfaction increased 10.8% over the term of the pilot



Satisfaction primarily motivated by **saving money** and **saving the environment**

* OUC's Time-of-Day Pilot ran from April 2021 through March 2022 and included 700 customers.

OUC is State Leader in Solar Adoption

FLORIDA SOLAR WATTS PER CUSTOMER

UTILITY	2022	2026
Tampa Electric	1,322	2,110
 Florida Power & Light	752	1,972
 Orlando (OUC)	662	1,763
Florida Average	626	1,511
Duke Energy Florida	641	1,466
 Lakeland	208	1,400
Southeast Average	580	1,217
Gainesville (GRU)	278	1,106
Jacksonville (JEA)	125	745
Tallahassee	585	610
Seminole	92	600
PowerSouth	89	139

2024 Solar Watts Per Customer: 1,573

- OUC will have more than **272 MW of utility-scale solar** by December 2024
- As of April 1, 2024, OUC has **9,976** residential rooftop solar interconnections representing:
 - **109 MW of distributed solar**
 - 4% of metered residential accounts
 - 6.5% of single-family homes
 - 11.6% of single-family homes in Osceola County

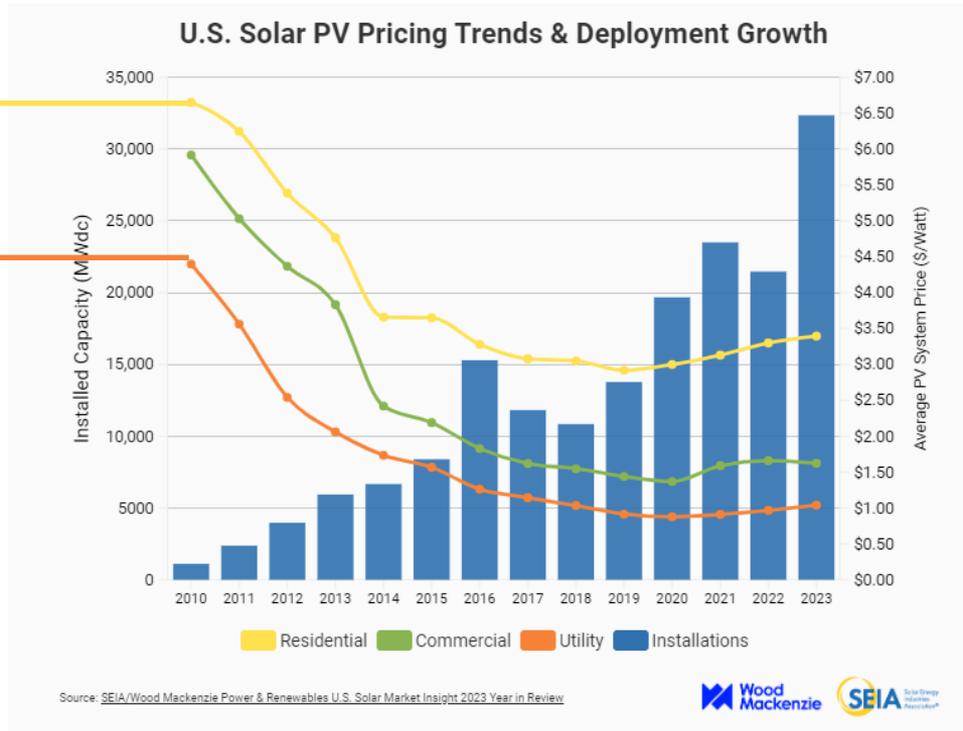
Includes Distributed Solar and utility-Scale Solar

Source: Southern Alliance for Clean Energy, 2023 Solar in the Southeast Report

Solar Costs Have Declined Significantly

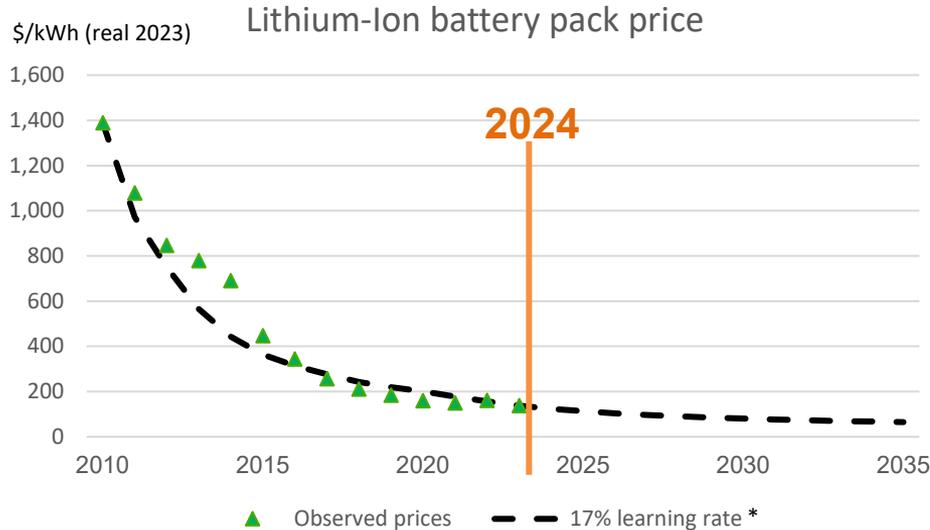
Residential solar has decreased 50% from **\$6.65/watt** to **\$3.40/watt**

Utility-scale solar has decreased 80% from **\$4.40/watt** to **\$1.00/watt**



- The cost of solar installations across all sectors has declined
- Incentives originally established to promote the installation of rooftop solar are no longer needed
- Federal incentives remain available as a one-time tax credit
- Battery storage will likely follow a similar pattern

Energy Storage Costs are Declining



*Learning rate defined as relative price decline associated with each doubling of battery adoption

1. BloombergNEF, New Energy Outlook 2024
2. [U.S. residential solar prices drop, strong interest in storage – pv magazine USA \(pv-magazine-usa.com\)](https://www.pv-magazine.com/2024/01/10/u-s-residential-solar-prices-drop-strong-interest-in-storage/)

Key Demand Drivers

- Investments in capacity expansion remain critical to make storage cheaper
- Prices expected to fall as manufacturing improves, and alternative chemistries reduce volume-weighted average battery prices
- However, upward fluctuations remain possible as input costs or supply-and-demand dynamics can change

Reasons for Adoption²

- Customers are interested in energy storage for:
- 1) Savings on Utility Costs
 - 2) Self Supply
 - 3) Back Up Power

OUC PeakSHIFT Program Recommendation Details

OUC PeakSHIFT Programs

DemandLevel

Fixed Distribution

OUC will **reduce the variable cost per kWh of electricity** and begin charging residential or small business customers \$5, \$10, or \$15 per month **based on each customer's use of the grid.**

Shift & Save

Time-of-Day Pricing

OUC will introduce **Shift & Save, an industry-proven time-of-day pricing plan** that enables customers to **save money** by shifting electricity use into “off-peak” periods.

SunChoice

Community Solar

OUC will relaunch an **optional community solar program** that helps build new utility-scale solar generation and **gives everyone access to solar energy.**

TruNet Solar

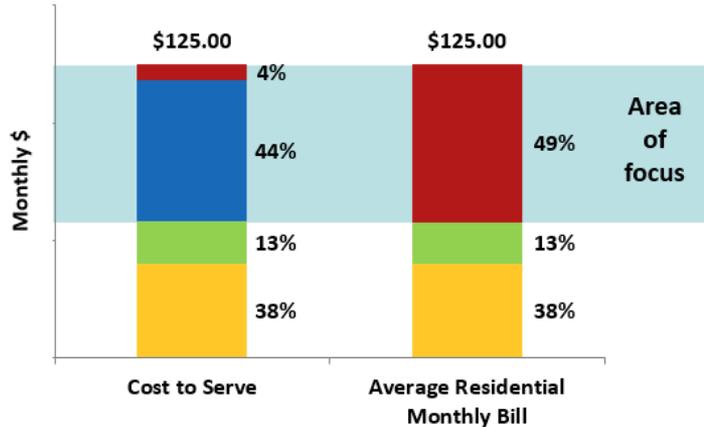
Net Billing

OUC will **change the billing process for rooftop solar array owners to address demand cost inequalities** created by net metering.

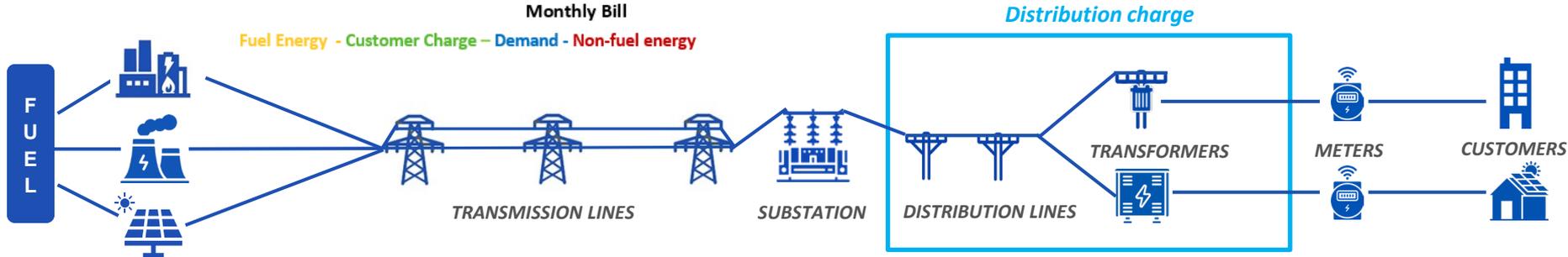


Distribution Prices Today

Customer Cost and Pricing for the Average Residential Customer using 1,000 kWh per month



Residential distribution charges today are collected in the variable per kilowatt hour charge (Non-fuel Energy)



Propose: DemandLevel Fixed Distribution Charge

- Lowers the non-fuel energy charges
- Carves-out the distribution charges collected through the variable per kilowatt hour
 - Charge reflects costs for customer-driven infrastructure requirements
 - Enhances bill stability and cost recovery
 - Supports advancing grid modernization requirements
 - Aligns fixed charges with municipal and investor-owned utility peers
- Three tiers aligned with home and electrical panel size
 - Multi-family home – majority Tier 1
 - Single-family home – majority Tier 2
 - Large single-family home – primarily Tier 3

Non-Fuel Energy Reduction @ 1 cent/kWh



Average Customer using 1,000 kWh/month
will see a bill reduction of \$10

DemandLevel Tiers

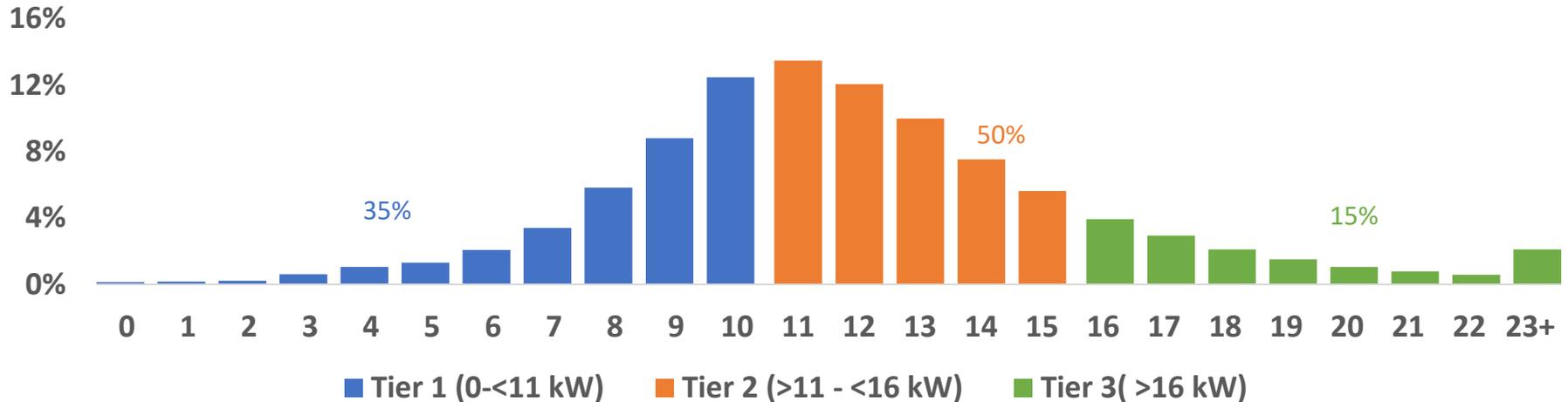


Tier 1: 0 to 10 kW - \$5/month
Tier 2: 11 to 15 kW - \$10/month
Tier 3: 16+ kW - \$15/month

Designed to be “Revenue Neutral”

Demand Level Distribution in OUC Service Territory

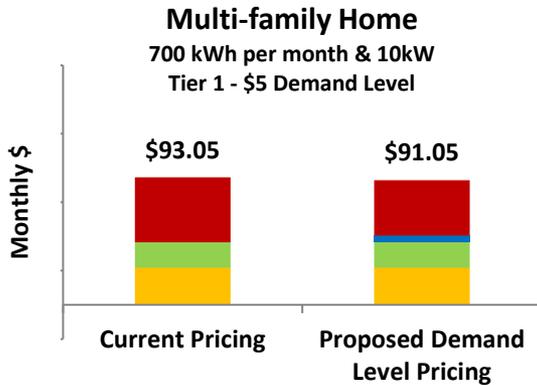
Maximum Demand (kW) Frequency
(Calendar Year 2022)



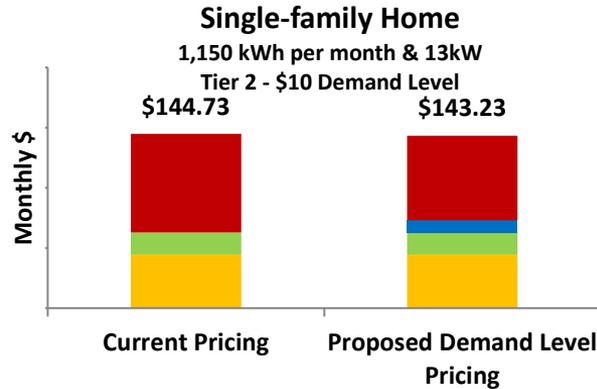
90% of residential customers will see a change ranging between a \$5 increase and a \$15 decrease in their monthly bill.

DemandLevel Bill Examples*

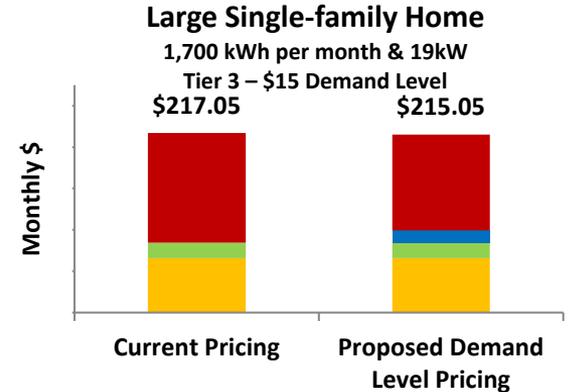
\$2 Bill Savings or 2.1%



\$1.50 Bill Savings or 1%



\$2 Bill Savings or 0.9%



Fuel Energy Customer Charge Demand Level Non-Fuel Energy

* Represents typical home in segment and is based on proposed pricing effective October 1, 2024

Moving costs from variable price to fixed rate should help lower bills as large energy users such as A/C units will consume at a lower rate while the demand will remain fixed.

- Time-of-Day pricing currently limited to mid-large commercial customers
 - Pricing structure requires programming
 - Designed to align with OUC's system peaks recognizing seasonality
- Pricing structure is complex
 - Limited participation based on cost to manage complexity

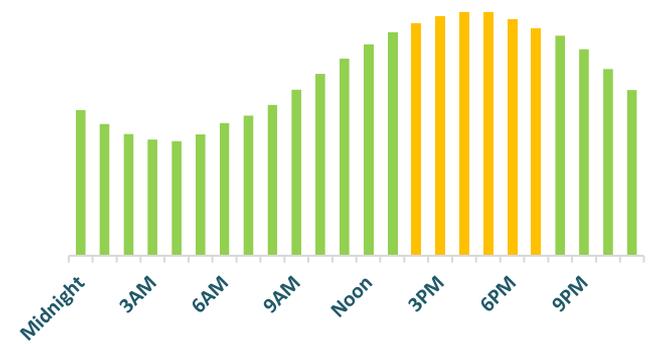
Mid-Large Commercial Customer Optional Pricing



Propose: Shift & Save Time-of-Day Pricing

- Expands, modifies and simplifies pricing structure to accommodate all customers offering new ways to save.
 - *Opt-out provisions and educational tools will be available.*
- Delivers another way for customers to conserve.
 - Average residential customer utilizes 30% of their monthly energy usage during this period.
- Aligned to reduce peak demand requirements and promote conservation and energy efficiency while being revenue neutral.
 - Supports long-term clean energy goals with maximized infrastructure usage.

OUC Average Summer Day Energy Usage Pattern



Off Peak

On Peak

2 cent differential between On and Off peak.
Peak period 2PM- 8PM, 7-days a week
Super Off-Peak Period to be added as customers adapt

Rate Comparison

Based on October 1, 2024 pricing

Effective Date	Description	First 1,000 kWh (Plus 2.5¢ for all kWh over 1,000)	On Peak kWh	DemandLevel Charge
10/1/2024	Energy Rate (Fuel & Non-Fuel)	10.650¢	n/a	n/a
10/1/2026	Energy Rate (Fuel & Non-Fuel)	9.065¢	2.000¢ premium	\$5/\$10/\$15

- The addition of DemandLevel allows for the non-fuel energy rate to decrease while also enhancing customer bill stability
 - Value is particularly recognized during periods when weather is warmer and/or colder than normal
- Tiered pricing is tariff based and does not “surge”
 - Pricing remains consistent during the defined periods of 2PM – 8PM

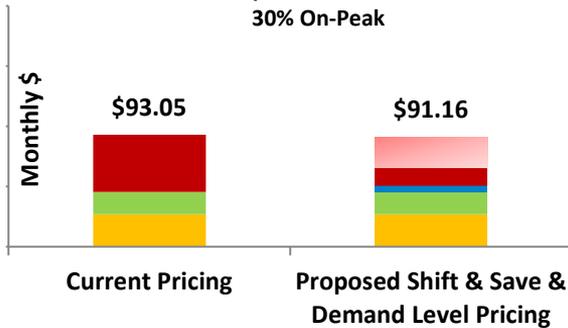
Shift & Save Bill Examples*

Bill impacts if usage remains unchanged

\$1.89 or 2.0% Bill Savings

Multi-family Home

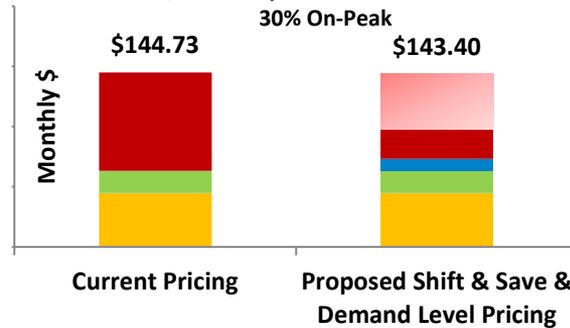
700 kWh per month & 10 kW &
30% On-Peak



\$1.33 or <0.1% Bill Savings

Single-family Home

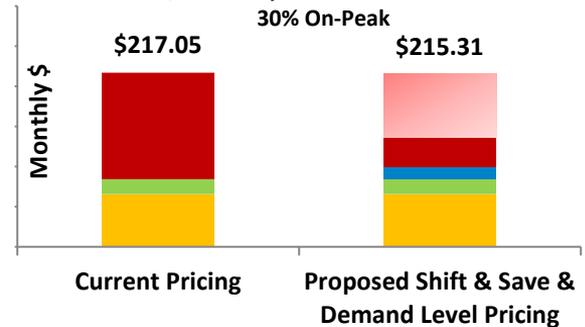
1,150 kWh per month & 13 kW &
30% On-Peak



\$1.74 or <0.1% Bill Savings

Large Single-family Home

1,700 kWh per month & 19 kW &
30% On-Peak



Fuel Energy Customer Charge Demand Level Non-fuel Energy On-Peak/Off-Peak

* Represents typical home in segment using 30% on peak and is based on proposed pricing effective October 1, 2024

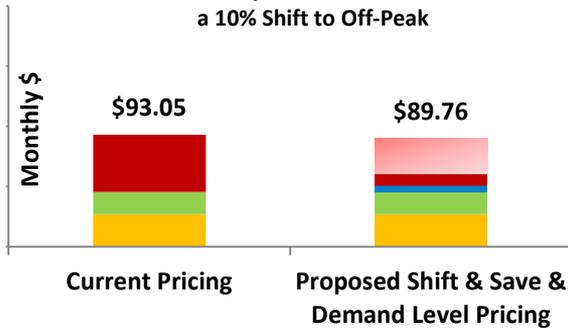
Shift & Save Bill Examples*

Opportunities to Save if 10% of energy is shifted

\$3.30 or 3.5% Bill Savings

Multi-family Home

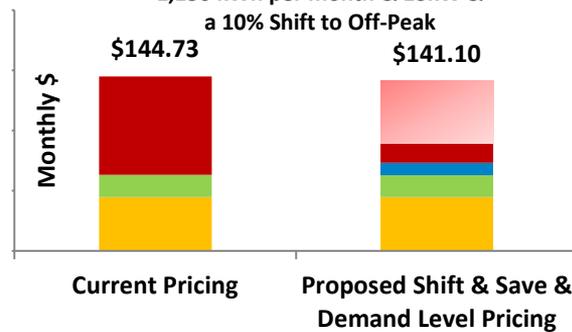
700 kWh per month & 10kW &
a 10% Shift to Off-Peak



\$3.63 or 2.5% Bill Savings

Single-family Home

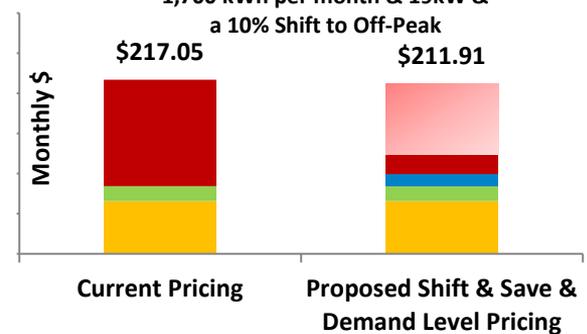
1,150 kWh per month & 13kW &
a 10% Shift to Off-Peak



\$5.15 or 2.4% Bill Savings

Large Single-family Home

1,700 kWh per month & 19kW &
a 10% Shift to Off-Peak



Fuel Energy Customer Charge Demand Level Non-fuel Energy On-Peak/Off-Peak

* Represents typical home in segment and is based on proposed pricing effective October 1, 2024

OUC Community Solar Today

- Customers opted for a percentage of their electric usage in 10 percent increments at a fixed solar rate of 4.5 cents per kWh in lieu of the normal fuel charge portion of their bill
- Features include:
 - No up-front expenses, installation or equipment maintenance costs
 - No rooftops required
 - Ability to move with you to another residence or business in OUC's service territory
- The program was closed to new subscribers in September 2022 to allow for all customers to benefit from the lower solar fuel cost savings



Propose: SunChoice Community Solar Options

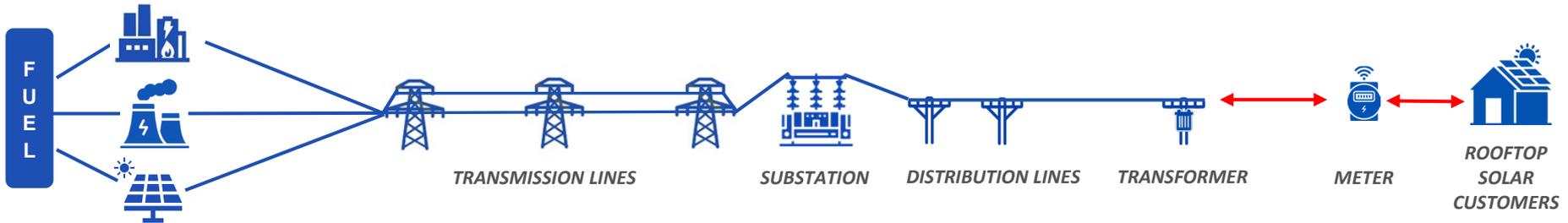
- Customers subscribe up to 100% of their monthly consumption, in 10% increments with tiered pricing
- Subscriptions include the retirement of Green-e® certified Renewable Energy Certificates (RECs) in the customer's name



Rooftop Solar Pricing Today

- In 2008, OUC adopted a Net Metering policy aligned with the Florida Public Service Commission's policy to promote and advance emerging rooftop solar
 - Designed to energize a new industry with high-cost barriers to entry

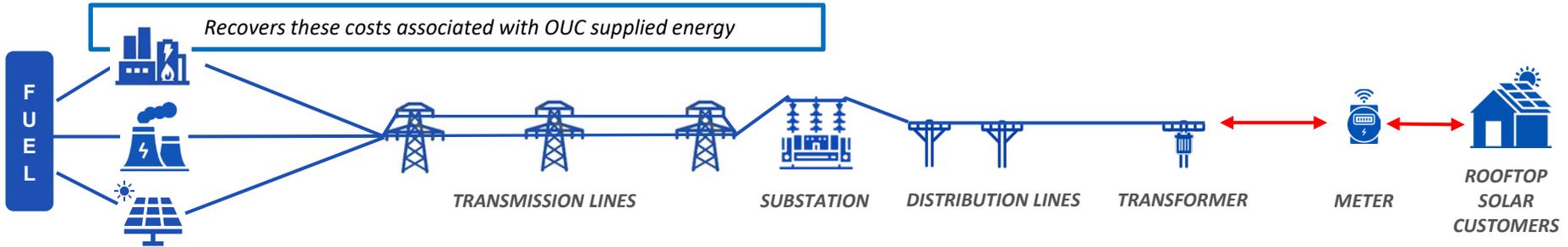
	kWh	Current Pricing
OUC supplied energy to rooftop solar customer	1,100	
Rooftop solar customer supplied energy to the OUC Grid	(450)	
Net amount charged to customer	650	Retail ¢/kWh (Fuel and Non-fuel)



Proposed: TruNet Solar

- *TruNet Solar* separates the billing of OUC and customer-supplied electricity allowing for separate billing rates for energy source

	kWh	Proposed Pricing
OUC supplied energy to rooftop solar customer	1,100	Retail Energy & Fuel ¢/kWh
Rooftop solar customer supplied energy to the OUC Grid	(450)	Retail Fuel ¢/kWh



Florida Municipal Net Metering Changes to Address Growing Costs



City of Tallahassee
Your Own Utilities™



	JACKSONVILLE	GAINESVILLE	TALLAHASSEE	LAKELAND	KISSIMMEE	PROPOSAL
METERED SERVICES	506,581 LARGEST FLORIDA MUNI 8 th LARGEST MUNI IN US	101,050 5 th LARGEST FLORIDA MUNI 31 st ^h LARGEST MUNI IN US	122,045 4 th LARGEST FLORIDA MUNI 27 st ^h LARGEST MUNI IN US	133,118 3 rd LARGEST FLORIDA MUNI 24 st ^h LARGEST MUNI IN US	85,744 6 th LARGEST FLORIDA MUNI 37 st ^h LARGEST MUNI IN US	269,172 2 nd LARGEST FLORIDA MUNI 14 th LARGEST MUNI IN US
MONTHLY 1,000 kWh BILL	\$116 (May 2024)	\$141 (Apr 2024)	\$133 (Mar 2024)	\$104 (Apr 2024)	\$118 (Mar 2024)	\$125 (Jul 2024)
EXCESS SOLAR CREDIT	Retail Fuel Rate	Fuel Adjustment Rate	Small to moderate-sized PV units (up to 100 kilowatts) credited at the full retail value, including taxes	On-Peak Demand rate required kWh credit for excess generation up to a maximum of 12 months	Before May 2023: Avoided cost + Demand credit After May 2023: Avoided cost	PROPOSED: Retail fuel rate after seven-year step down period

Propose: TruNet Solar Net Billing

- Transition period over 7 years provides a glide path to an equitable cost recovery of customer infrastructure costs
 - October 2025: change is limited to billing methodology
 - Beginning in 2026: the price OUC pays for customer-provided energy begins to decrease to the retail fuel rate
 - By 2030: customer supplied energy will be purchased at the retail fuel rate
- Energy storage allows for energy produced by rooftop solar to be optimized

Pricing for Customer Supplied Electricity (Existing and New Customers)

Year	% of Retail Non-Fuel Energy Price ¹	% of Retail Fuel Price ²
October 2025	100%	100%
October 2026	80%	100%
October 2027	60%	100%
October 2028	40%	100%
October 2029	20%	100%
October 2030	0%	100%

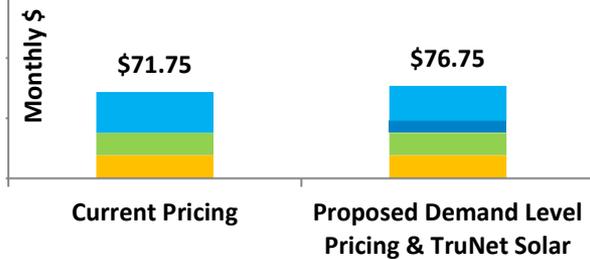
¹ Residential: Block 1 Levelized Non-fuel energy price

² Published retail customer fuel price

TruNet Solar Bill Examples*

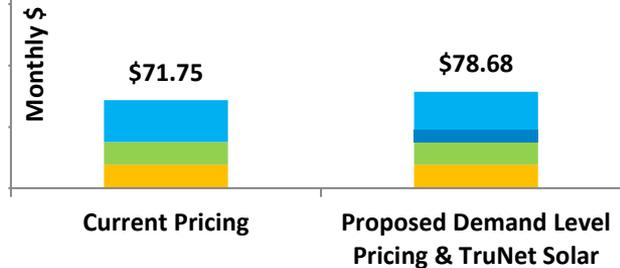
\$5.00 or 7.0% Bill Increase

2025 Average Rooftop Solar Bill
500 kWh net per month & 13kW demand
(1,000 kWh provided by OUC & 500 kWh sold
back to OUC – Tier 2 - \$10)



\$6.93 or 9.6% Bill Increase

2026 Average Rooftop Solar Bill
500 kWh net per month & 13kW demand
(1,000 kWh provided by OUC (70% Off-Peak) &
500 kWh sold back to OUC On-Peak – Tier 2 - \$10)



\$34.07 or 47.5% Bill Increase

2030 Average Rooftop Solar Bill
500 kWh net per month & 13kW demand (1,000
kWh provided by OUC (70% Off-Peak) & 500
kWh sold back to OUC On-Peak– Tier 2 - \$10)



Fuel Energy Customer Charge Demand Level Net Non-Fuel Energy

* Based on proposed pricing effective October 1, 2024, excluding impacts from energy storage

Billing methodology recovers a portion of the infrastructure reflecting the diverging use of energy.

Expanding Conservation Programs

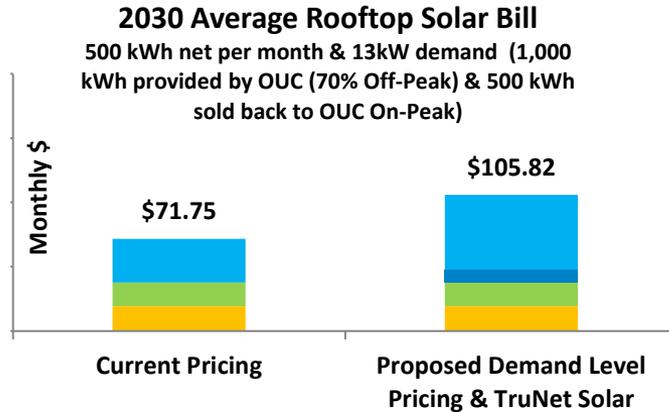
Energy Storage Rebate

- To empower residential and small commercial customers to leverage the full value of their rooftop solar new rebate programs are being developed
 - Beginning in late 2024, existing rooftop solar customers will be offered a premium level rebate
 - In late 2025, a secondary rebate offering will be extended to new rooftop solar customers
 - In late 2026 in conjunction with the Shift & Save pricing program, a rebate offering will be extended
- OUC will earmark a designated amount to support this new rebate offering in alignment with Path to Clean Energy initiatives

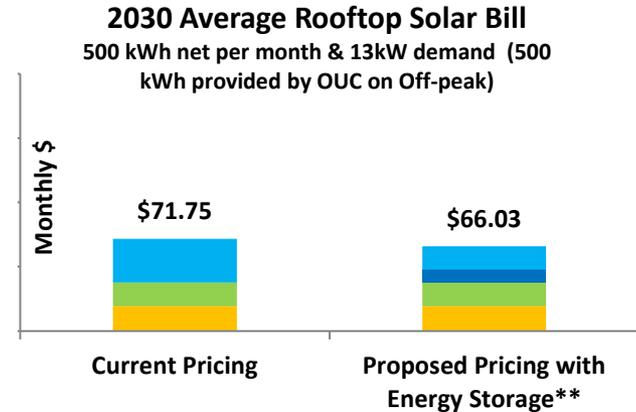


TruNet Solar and Energy Storage Bill Examples*

\$34.07 or 47.5% Bill Increase



\$5.72 or 8.0% Bill Savings



Fuel Energy Customer Charge Demand Level Net Non-Fuel Energy

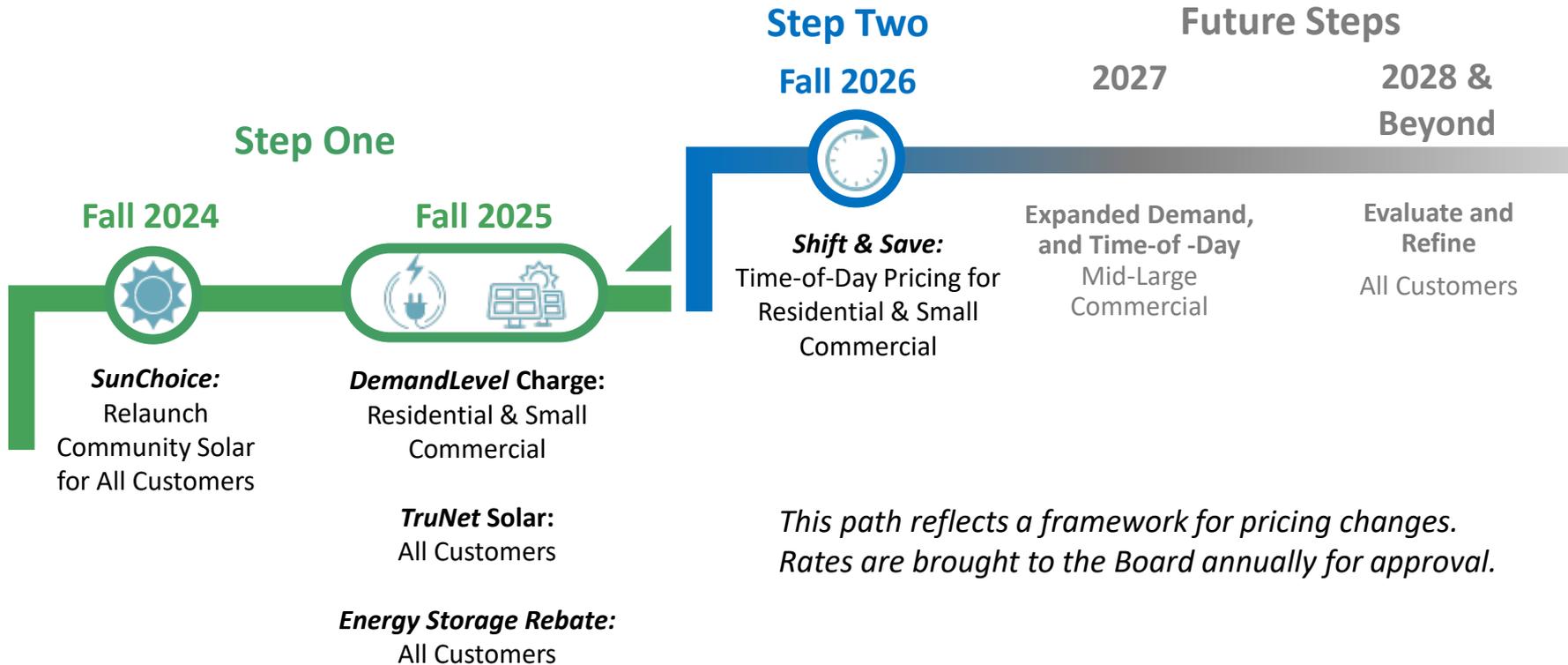
* Based on proposed pricing effective October 1, 2024

** Energy storage value was determined based on excess customer energy stored and utilized to eliminate on-peak energy supplied by OUC

Energy Storage provides customers with the opportunity to receive the full retail rate for the energy they produce

Balanced Path of OUC PeakSHIFT

A Multi-Year Program Provides Bill Stability



Communication & Stakeholder Outreach

Empower OUC customers with timely information and tools to thoughtfully manage energy use to save money, while collectively improving equity and grid sustainability by reducing peak demand.



Objectives

- Evolve the relationship between OUC and its customers through education and enhanced consumer access to their energy usage data
- Increase customer knowledge base to promote more efficient use of energy
- Demonstrate how Time-of-Day pricing and better-informed customers can cost-effectively “add capacity” by changing demand profile

Short & Long-Term Outreach

Short-Term
March 2024 – Sept 2024

Inform all relevant (internal and external) stakeholders of upcoming pricing changes and initiate collaborations to empower their constituencies.



Long-Term
Oct 2024 – Dec 2026

Multi-channel, branded information campaign with messaging to empower customers with information, tools, and incentives to save money by using energy smarter.



Initial Outreach & Communication

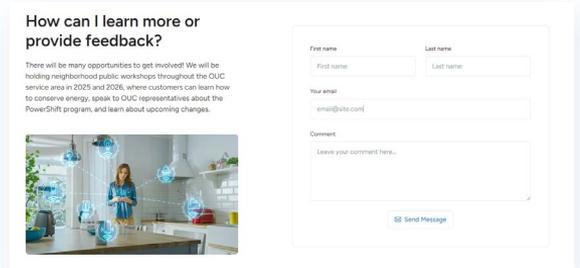
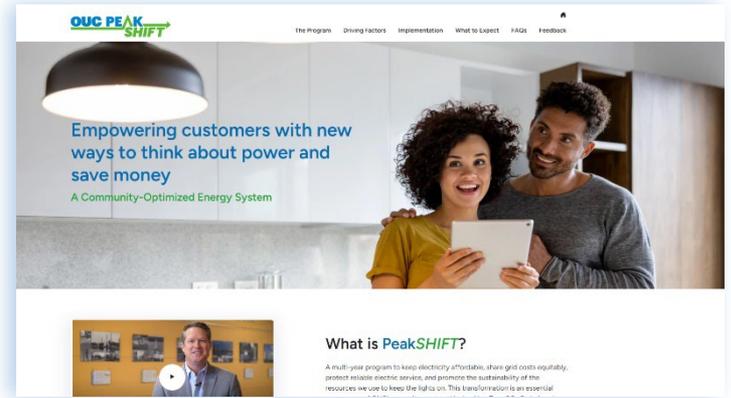
Pricing Workshop Announced in May Bill
Insert and On-Bill Message

187,800 customers received OUC
PeakSHIFT announcement emails

25M+ media impressions from OUC
PeakSHIFT announcement

92K+ website visits in 24 hours of launch

40 web form submissions in first 24
hours of launch



www.OUCPeakSHIFT.com

OUC's Diverse Stakeholder Groups

As a municipal utility, we have a diverse set of stakeholders. All of their perspectives are important and desired.



Multi-family customers



Medium single-family residential customers



Large Single-Family residential customers



Small Commercial



Large commercial



Residential solar customers & solar advocacy groups



Community and social justice groups



Environmental advocacy groups



EV Owners

OUC has gathered diverse, local viewpoints through 20 stakeholder conversations, web form feedback, and letters to the Commission

- Many understand the need to lower peak demand and feel it is a necessary change for our energy future and sustainability
- Expressed interest in participation
- Changes could empower the customer to enjoy savings derived from their usage/behavior
- Peak*SHIFT* lays the foundation for demand response programs
- Robust and diverse customer education and outreach is necessary
 - Leverage local partners to ensure outreach to diverse customer segments
 - Hold meetings and focus groups in the evenings and on weekends in local community spots
 - Provide information in multiple languages

As expected, stakeholders and customers are eager for details and concerned for vulnerable populations

Validate Recommendation

- Share models and studies used to make decisions
- Demand, fixed charges and time-of-day rates have hurt low-income customers in some implementations
- Share the details of the proposed rates
- Many believe the program will increase their bill

Understand Impacts to Vulnerable Groups (Unintended Consequences)

- Understand how heat and rising temperatures will impact some groups more than others
- Ensure that senior, disabled and other customers who cannot shift their usage understand the impacts to their bill and options available to them
- Support renters who cannot make upgrades

Generate more awareness of the conservation programs OUC already has in place and increase their adoption especially in low-income areas

- Provide current conservation programs as “wrap-around” services to the pricing changes
- Achieve more than 1% of retail sales in energy efficiency
- Provide timers and other low-cost tools to help customers in their homes
- Engage landlords to help improve dwellings
- Repurpose savings into low-income programs
 - Create low-income programs with the savings from reducing the solar incentive such as community solar arrays or building envelope improvements

Majority of negative feedback has been about solar proposal

- Opposed to TruNet Solar (net billing)
 - Changes to net metering will cause a decline in rooftop solar sales impacting businesses and killing jobs
- Customers made an investment with an expected return
- Many customers installed solar to help the environment
- Would prefer grandfathering to the seven-year step down
- Point to studies that indicate solar rooftop customers cost less to serve than non-rooftop solar customers, therefore reducing everyone's costs
- Support battery storage rebate
- Recommend allowing local solar vendors to bid on utility-scale solar projects
- Voiced that OUC is the only state and Central Florida option for solar incentive

Closing & Next Steps

- We're all **working together** to adapt to the changing energy landscape, control rising costs and assure reliability as we move to a cleaner, greener electric system
- By making progressive changes that **encourage our customers to be more mindful of their electricity use**, we embrace values of conservation and sustainability while providing options to save
- To reach this goal, we must **level the playing field** through fixed charges and net-billing
- This will result in a **better optimized OUC** – and a more affordable system without sacrificing reliability

Net Zero CO₂ Commitment

In 2020, OUC was the **first utility in Florida** to announce a commitment to achieve **Net Zero CO₂ emissions by 2050** with interim goals of **50% by 2030** and **75% by 2040**.

OUC PeakSHIFT Launches in Fall 2025

To allow time for awareness and education, the announcement is a full-year in advance of the first change in a multi-year plan.

OUC Continues on the Path to Clean Energy



Summary & Next Steps

- OUC's electric pricing roadmap, OUC PeakSHIFT, proposes pricing designs that are equitable, conservation focused and deliver customer and utility value
- Next Steps
 - Continued proactive stakeholder outreach
 - July 9, 2024: Pricing and Budget Workshop
 - Aug 13, 2024: Pricing and Budget approval, OUC PeakSHIFT approval