



April 22, 2025

Via Electronic Filing

Matthew L. Homsher, Secretary
Commonwealth Keystone Building
Second Floor
400 North Street
Harrisburg, Pennsylvania 17120

**RE: IN THE MATTER OF M-2025-3052826: ACT 129 ENERGY EFFICIENCY AND
CONSERVATION PROGRAM - TENTATIVE IMPLEMENTATION ORDER**

Dear Secretary Homsher,

Uplight appreciates the opportunity to provide these Reply Comments to the Tentative Implementation Order issued on February 20, 2025 and Stakeholder Comments filed on April 7, 2025.

Copies have been served to the parties as indicated on the enclosed Certificate of Service.

Respectfully submitted,

/s/ Adam Farabaugh

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Enclosures

cc: Certificate of Service
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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of this filing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

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BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of the Energy Efficiency and Conservation Program)
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Docket No. M-2025-3052826

April 22, 2025

Tentative Implementation Order Reply Comments

Pursuant to the NOTICE TO ALL ELECTRIC DISTRIBUTION COMPANIES AND ALL INTERESTED PARTIES published on March 7, 2025 in the Pennsylvania Bulletin, Uplight appreciates the opportunity to provide Reply Comments on the Tentative Implementation Order and Stakeholder Comments filed on April 7, 2025 regarding Phase V of the Energy Efficiency and Conservation Program. Uplight is an energy efficiency and demand response provider in the U.S. across multiple technologies. We will focus our comments on two elements related to peak demand reduction targets:

1. Uplight recommends permitting time-of-use rates to be a peak demand reduction measure within Phase V of Act 129.
2. Uplight recommends removing the peak demand reduction goals in the Summer Season of 2026.

ALLOW TIME-OF-USE RATES TO BE USED FOR PEAK DEMAND REDUCTION

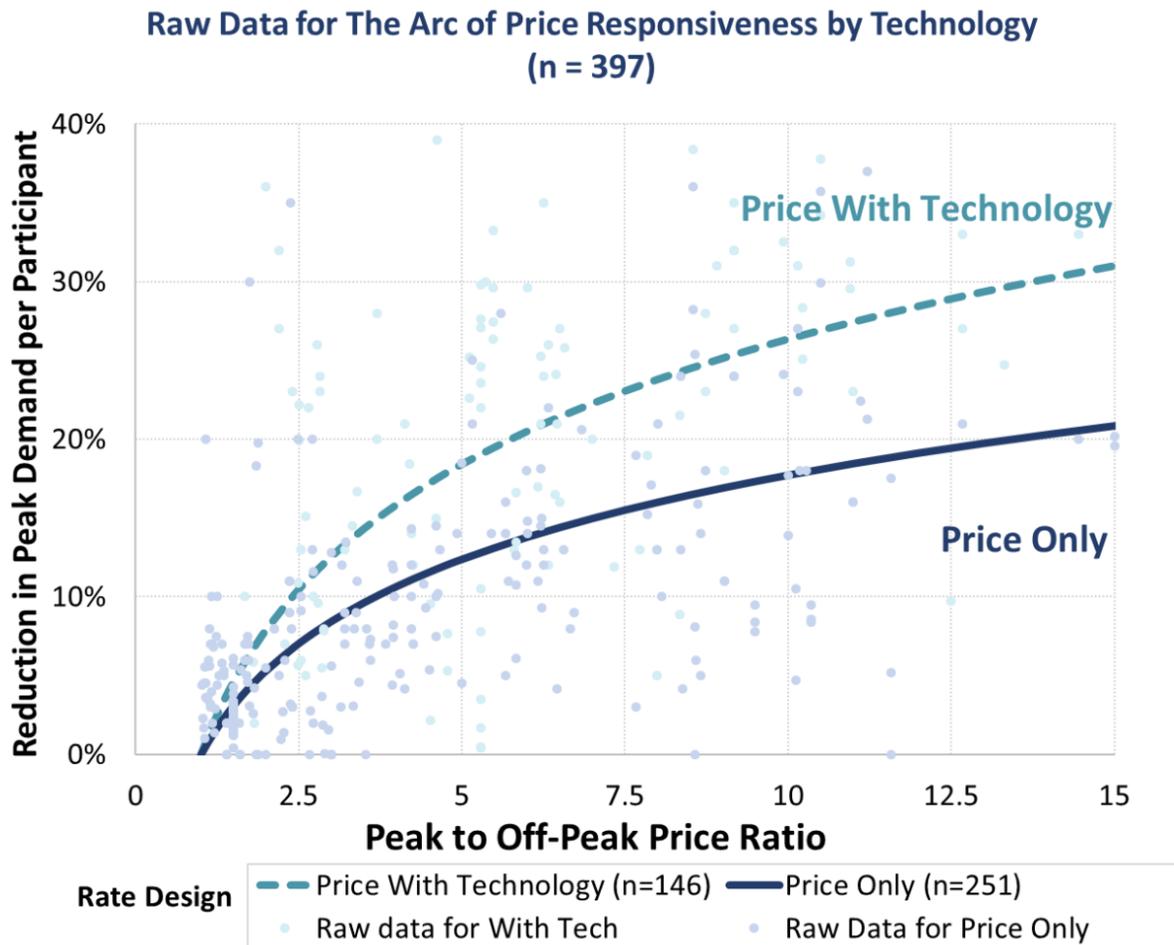
Time-of-use (TOU) rates are a well established approach to managing peak reductions by electric utilities across the country. The EDCs in Pennsylvania have made TOU rates available to their customers, as required by the 2008 Amendment to Act 129¹. However, enrollments in these rates remain low. For example, there are 2,645 of approximately 1.5 million residential customers enrolled in PECO's TOU rate as of May 2024.² Increasing enrollments in the EDCs' TOU rates has the potential to drive substantial peak load reductions.

Moreover, TOU rates alone (i.e., without enabling technology like smart thermostats), are designed with peak to off-peak price ratios of 2.5 to 5, reduce peak demand by approximately 10%. Both the peak demand reduction and the peak to off-peak ratio increase as well as when the TOU rate is paired with enabling technology like a smart thermostat that automates load shift.

¹ <https://www.palegis.us/statutes/unconsolidated/law-information/view-statute?txtType=PDF&SessYr=2008&ActNum=0129.&SessInd=0>

² <https://www.puc.pa.gov/pdocs/1855482.pdf>

This can be seen in the graph below from The Brattle Groups “DO CUSTOMERS RESPOND TO TIME- VARYING RATES: A PREVIEW OF ARCTURUS 3.0” working paper which includes 397 pilots and programs.



Notes: Treatments that have no impact and are non-significant are excluded from the graph. RTP treatments are also excluded.

Figure 1: Comparing Time-Varying-Rates with and without technology enablement.³

Currently there is no requirement from the Commission for EDCs to enroll customers in a TOU rate but there is a requirement to have them available to customers. The primary costs of standing up and implementing TOU rates are: installing smart meters, updating billing systems, getting tariffs approved, updating EDC webpages, and putting marketing, education, and

³ The Brattle Group - DO CUSTOMERS RESPOND TO TIME- VARYING RATES: A PREVIEW OF ARCTURUS 3.0 Brattle Working Paper <https://www.brattle.com/wp-content/uploads/2023/02/Do-Customers-Respond-to-Time-Varying-Rates-A-Preview-of-Arcturus-3.0.pdf>

enrollment pathways in place. All of this has already been completed and thus the incremental costs for adding more customers to these rates will be relatively low.

Uplight recommends and agrees with PECO's recommendation in their Comments⁴ that the Commission permits TOU rates by EDCs to be used as a qualifying measure for achieving peak demand reduction targets, not excluding customers on a TOU rate from participating in other Phase V programs, and also measuring impact from TOU rates the same way as all event based peak demand reduction measures.

TOU rates can not only drive peak demand reduction but can also generate additional efficiencies across Phase V programming, particularly when they are coordinated alongside the broader energy efficiency and demand response programs at a utility. For example, customer enrollment is one of the primary challenges within demand side programs. This is dependent upon a number of factors such as customer awareness and understanding of the program, the level of effort to enroll in the program (i.e. the complexity of the application process), and ongoing satisfaction of the program to retain them. When utilities have multiple programs and customer offerings across segments within the demand side, they are not always implemented in an integrated fashion across utility program teams. This can lead to duplication of efforts and costs, which in turn contributes to confusion as customers seek to parse through multiple programs offerings to determine which is the best fit based on the various eligibility criteria, incentive mechanisms, and operational characteristics. Further, some programs don't allow for participation in program A if enrolled in program B. Customers generally don't understand the reasoning behind this and opt simply to not enroll in either program.

Allowing TOU rates to be a measure within Phase V, along with event based demand response and more traditional energy efficiency measures, allows for a utility to have three segments of demand management. These can then be surfaced to the customer in a unified, coherent fashion. For example, a communication within a Behavioral Home Energy Report could include a smart thermostat energy efficiency rebate, a link to learn more about and enroll in a TOU rate, and also a link to learn about and enroll in a smart thermostat demand response program. These communications can be informed by purchase and program data to drive the most savings across energy efficiency, TOU, and demand response. For example, knowing that

⁴ <https://www.puc.pa.gov/pcdocs/1873482.pdf>

a customer redeemed an efficient central air conditioning purchase rebate two years ago and now has a central AC unit will inform future offers for additional rebates and programs. This type of coordination across energy efficiency, TOU, and demand response means that utility teams need to align on marketing, outreach, and engagement, reducing any program conflicts and confusion while presenting the customer with an easy list of options available to them. This construct aligning energy efficiency, time-of-use rates, and demand response with cohesive design and implementation is called the Demand Stack⁵. Utilizing this framework creates a better customer experience and drives increased enrollment which lowers customer acquisition costs.

The Demand Stack takes multiple programs and ensures that they are thoughtfully implemented together to drive multiple outcomes. This is similar to how supply resources are stacked together by the grid operator. While individual resource reliability is crucial and incentivized through penalty structures, overall system reliability remains the paramount metric for evaluating the entire supply stack. Two primary metrics within Phase V are energy reductions and peak demand reductions for which all programs should be aligned and optimized to ensure that both are achieved opposed to performance of any one program. The Demand Stack approach is advantageous for three primary reasons. The first is that it allows for the demand side to deliver multiple outcomes to the grid: energy reductions across all hours of a year, daily load shaping, critical peak events, and when allowed, minutes to second level control in the form of Ancillary Services. This is commensurate with base load, mid-tier, and peaking supply resources which can be seen in Figure 2 below.

⁵ <https://go.uplight.com/enabling-load-growth-through-demand-stack/>

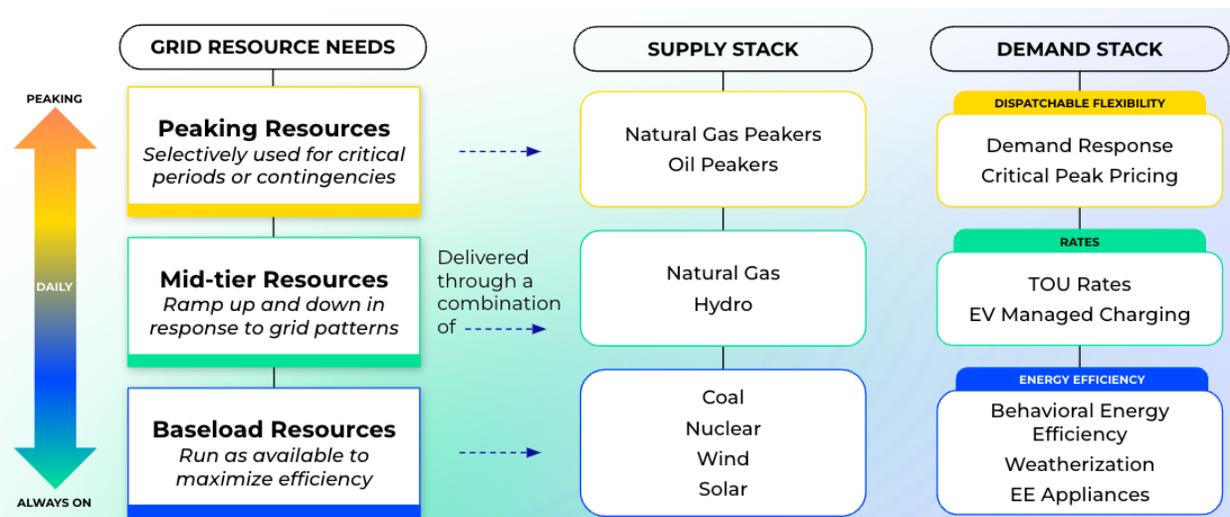


Figure 2: The Demand Stack - Stacking Demand Against Stacked Supply

The second reason the Demand Stack is advantageous is that it can streamline EDC program operations. Traditionally, utilities typically operate energy efficiency, rates, and demand response programs separately and oftentimes with different teams. With all three of these under the Phase V purview, it will encourage EDCs to collaborate across teams and have an integrated approach to customer program offerings in order to achieve the outcomes desired. This alignment will help drive efficiencies in program administration, marketing, and outreach. Also, there are technology providers in the industry, such as Uplight and others, who provide utilities with software solutions that span across customer engagement, efficiency, rates, and demand response further driving cost savings and enabling both a unified customer experience as well as a streamlined utility offering for implementing and managing these programs.

Finally, the Demand Stack helps ensure that program offerings from the EDCs are unified and presented to the customer in a way that allows them to know what is available to them and to choose what they want to participate in. This creates a customer experience that drives enrollment in more than one EDC program offering which in turn lowers acquisition costs while delivering multiple benefits.

Stacking energy efficiency, time-of-use rates, and event based demand response measures together will drive energy efficiency savings and peak demand reduction. Because of Act 129, the Commission can encourage utilities to integrate program offerings in order to reduce costs, improve customer enrollment, and maximize benefits to the grid.

This Demand Stack construct can be visualized in Figure 3 below where the blue line is the baseline, the green line is the effect after the energy efficiency measure, the yellow dotted line is the effect after the energy efficiency measure and the TOU rate, and the red line is the total effect across energy efficiency, TOU, and demand response. Energy efficiency, TOU, and demand response impacts however are typically measured in isolation. These programs oftentimes can cannibalize the impacts of the other reducing individual program impacts and cost effectiveness. The grid however doesn't care about individual program impacts but rather all programs in summation - the solid red line. The Act 129 construct does allow for this to be achieved but only when time-of-use rates are also included in Phase V programming.

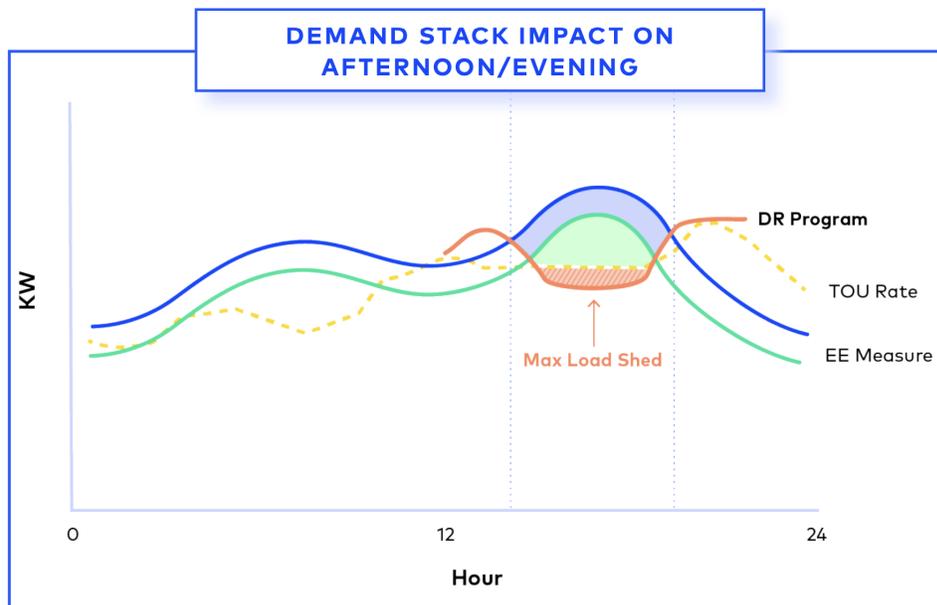


Figure 3: The Demand Stack - Stacked impact during critical peak hours.

REMOVE THE PEAK DEMAND REDUCTION TARGETS IN SUMMER, 2026

Phase V of Act 129 will begin on June 1, 2026 and operates on an annual basis with the year ending on May 31st. This timing presents a challenge for standing up and implementing programs and achieving the peak demand reduction goals set for the first year of Phase V regardless of if the Commission decides on averaging Summer and Winter MW reductions or creating goals for each season or another approach. (Uplight recommends the latter which was described in our Comments on April 7th.)

Uplight recommends removing the Summer 2026 peak demand reduction goals and instead requiring the EDCs to report on program enrollments at the end of the Summer season in 2026. This approach will allow the EDCs time to stand up and enroll customers into peak demand reduction programs and start calling events in the Winter season of 2026.

CONCLUSION

Uplight appreciates this opportunity to provide these comments and looks forward to engaging throughout this proceeding.

OVERVIEW OF UPLIGHT

Uplight is a technology provider to over 80 electric and gas utilities across three continents providing utility customer engagement and grid-edge asset management software solutions to help utilities achieve their goals. Collectively, Uplight manages approximately 5 GWs of flexible capacity across multiple device classes enabling entities to effectively manage their DER assets inside and outside of wholesale markets. Uplight implements solutions including Behavioral Home Energy Reports, Online Energy Usage Portals, Online Utility Marketplaces, Electric Vehicle Charging Data Management, and both residential and commercial demand response programs. Additionally, with utilities across the country, Uplight implements DER management solutions connecting behind the meter resources to the grid control room and other backend utility systems keeping the grid powered up reliably and cost effectively.