

May 27, 2019

Ms. Rosemary Chiavetta, Secretary  
Pennsylvania Public Utilities Commission  
Commonwealth Keystone Building, 2<sup>nd</sup> Floor  
400 North Street  
Harrisburg, PA 17120

RE: 2021 TRM Tentative Order  
**Docket Number M-2019-3006867**

Dear Secretary Chiavetta:

On April 11, 2019, the Public Utilities Commission issued a tentative 2021 TRM Order and requested comments. Please find Oracle Utilities comments enclosed for your consideration.

If we can provide any additional information, please do not hesitate to contact me at [mary.sprayregen@oracle.com](mailto:mary.sprayregen@oracle.com) or 571-227-9761.

Sincerely,

A handwritten signature in black ink that reads "Mary Sprayregen". The signature is fluid and cursive, with the first name "Mary" and last name "Sprayregen" clearly legible.

Mary Sprayregen  
Director, Regulatory Affairs & Market Development

## **Summary**

Oracle Utilities (formerly Opower) is the leading global provider of behavioral energy efficiency. Based on our extensive experience working with over 100 utilities in dozens of jurisdictions, we believe the proposed 2021 Technical Reference Manual's (TRM) approach to persistence for behavioral measures will decrease savings accuracy, customer satisfaction, and equitable access to energy efficiency. We encourage the Commission to apply lessons learned from other jurisdictions by either maintaining the current one-year measure life for behavioral programs, or adopting the more streamlined and straightforward three-year measure life under the "Average Savings Method," which has been tested and proven in Minnesota.

## **Behavioral Energy Efficiency**

For more than a decade, Oracle Utilities has reliably delivered behavioral energy efficiency at scale. One of the greatest attributes of our behavioral energy efficiency offerings is the rigor that we bring to measuring and verifying savings using a Randomized Control Trial (RCT). According to the U.S Department of Energy, the RCT is the most rigorous approach to measuring and verifying energy savings.<sup>1</sup> The RCT is a method that allows one to measure the true energy savings from a program by using control groups to account for the difference between the amount of energy that households in the program use relative to the amount of energy that those same households would have used had they not been in the program during the same time period.

In Pennsylvania, more than 2 million residents have received an Opower Home Energy Report (HER), delivering nearly 2 TWh of electricity savings. That's enough electricity to power over 190,000 Pennsylvania homes for a year.

## **Accounting for Behavioral Energy Efficiency**

In the vast majority of jurisdictions that utilize HERs (29 of 33), regulators have chosen to apply a one-year measure life to the savings accounting of behavioral energy efficiency. California, Rhode Island, and Massachusetts – the ACEEE State Scorecard leaders on energy efficiency – use a one-year measure life for HERs. As has been the case in Pennsylvania, using a one-year measure life has produced reliable savings, best in class customer experience and engagement, and equitable access to energy efficiency. While using a one-year measure life has been the norm, we recognize the desire to account for the difference between new versus persistent savings from a behavioral intervention.

Oracle Utilities operates behavioral programs in four states – Illinois, Connecticut, New Hampshire and Minnesota – that incorporate the notion of behavioral energy savings persistence (the amount of energy savings that continue after a household stops receiving an HER) into its policies. While each state has taken its own approach to persistence, the draft Pennsylvania 2021 TRM does not yet reflect the lessons learned in these states and may undermine the ability of utilities to deliver reliable savings and a stellar customer experience through the behavior program.

By its very nature, a program that drives behavioral changes is not the same as a traditional efficiency measure (such as an LED), which makes it very challenging to compare apples to apples in a TRM. TRMs are intended to provide certainty for efficiency program administrators and are a valuable tool for effective and efficient program implementation. According to the authors of the original TRM ([VEIC](#)), TRMs should result in low variability in results, fewer resources for delivery, lower administrative costs, and greater transparency and consistency in program delivery. Unfortunately, the draft approach at hand contradicts the principles of an effective TRM.

The proposal to adopt a deemed 31.3% decay rate is an overly complicated method that is not followed in any other state. The proposed change will lead to increased risk in forecasting and program delivery, an inconsistent and negative customer experience, and challenges achieving equitable scale. For example, the introduction of deemed persistence will drive program administrators to maximize first year savings and reduce customer experience as households are rotated in and out of the program. Program administrators could also be incentivized to cherry-pick a small selection of customers who are the most likely to save, limiting the scale and equity of the program design.

In addition to issues with the general approach, the draft language is so complex that it leaves a great deal up to interpretation. For example:

1. It appears the TRM makes the reset year the year prior to the year where multi-year measure life (MYML) starts. But the authors don't explicitly specify whether the decay equation they're using for the MYML years applies to that reset year.
2. The TRM equation results in more persistence in the year following savings than we would see under a comparable MYML program with the same decay and attrition factors. This is due to the  $(x - 0.5)$  multiplier that the authors have added into their

equation. That multiplier dampens the measure life and pushes persisting savings towards the year following savings.

3. The proposal incorporates the assumption of a 'linear' decay. This isn't something we've seen in practice as we understand the decay to actually accelerate over time.

4. The authors acknowledge behavioral savings fluctuate but they've failed to apply that logic to MYML in general. Rigidity in decay rates does not match with fluctuating savings.

5. The draft TRM Volume 2, Section 2.7.5 states that neighbor comparisons include businesses. This is not accurate. Neighbor comparisons are only made between similar residential homes.

6. The proposed method is so complex that the draft includes program design and implementation guidance (suggesting program administrators rotate through eligible households), which is not appropriate for a TRM.

### **An Alternative Approach**

Through Oracle Utilities' extensive experience implementing HERs around the country, we have found that the best approach for persistence accounting is found in Minnesota. Minnesota has implemented an approach to HER accounting that balances savings accuracy with ease of accounting, which accomplishes the goals of a TRM that supports transparency and predictability. After conducting an extensive stakeholder process, the Minnesota Public Utilities Commission implemented an Average Savings Method (ASM) for behavioral energy efficiency, which determined that an HER had an effective useful life of three years. First-year savings claimed for any given program year are equivalent to observed in-year savings divided by three, so that after three years, the utility has claimed the annual average measured savings.

As described in ILLUME's, "Behavioral Programs Review, Analysis & Guidelines"<sup>2</sup> report for the Minnesota Department of Commerce (May 2015), savings measured for each year are claimed as follows:

Average Savings Method	Year 1	Year 2	Year 3	Year 4	Year 5
Observed Savings	150	225	281	225 (=80% of previous year)	180 (=80% of previous year)
1st year report savings	50	50	50		
2nd year report savings		75	75	75	
3rd year report savings			94	94	94
Savings Claimed toward CIP Goals	50 (=1/3 of observed)	75 (=1/3 of observed)	94 (=1/3 of observed)	0	0

If the Commission is interested in exploring this option, our team would be happy to collaborate.

**Conclusion**

The energy industry is in a place where utility efficiency savings potential and program scale and equity are increasingly at risk (new appliance standards, pressures on funding, changing lighting standards, etc.). Rather than limiting options through overly complicated accounting, we recommend maximizing the potential of reliable, scalable, equitable and low-risk savings, such as Home Energy Reports.