

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Alternate Ratemaking Methodologies : Docket No. M-2015-2518883

**Comments of the Pennsylvania Utility Law Project
to the March 2, 2017 Tentative Order**

I. INTRODUCTION & BACKGROUND

On December 31, 2015, the Pennsylvania Public Utility Commission (Commission) initiated this proceeding by Secretarial Letter to explore Alternate Ratemaking Methodologies. On March 3, 2016, pursuant to the Secretarial Letter, the Commission held an *en banc* hearing, at which it heard from invited experts regarding the general efficacy and appropriateness of alternative ratemaking methodologies, such as revenue decoupling. Other interested stakeholders were invited to submit comments to be filed March 16, 2016.

The Pennsylvania Utility Law Project (PULP) filed comments on behalf of its low income clients on March 16, 2016. In relevant part, PULP's comments focused on the need to carefully consider the impact of alternative rate methodologies on low and moderate income customers. PULP also provided a detailed assessment of the impact that certain alternatives (including decoupling mechanisms, straight fixed variable pricing, and incentive-based ratemaking) would have on low income communities, and the corrosive effect that such ratemaking tools would have on the considerable investments made to date by residential ratepayers to adopt comprehensive energy efficiency measures through Act 129 programming. Comments were also filed by a number of other interested stakeholders, including public utilities, consumer advocates, environmental groups, and industrial customer groups.

On March 2, 2017, the Commission issued a Tentative Order, seeking additional comments from interested stakeholders on several alternative ratemaking methodologies, including revenue decoupling; lost revenue adjustment mechanism (LRA); straight fixed / variable (SFV) Pricing; cost trackers (surcharges or riders); choice of test year; multiyear rate plans; demand charges; standby and backup charges; and DSM performance incentive mechanisms. (TO at 6-12). The Tentative Order requested that comments address whether any regulated electric, gas, or water/waste water utilities are currently using the identified alternative rate methodologies, and/or whether utilities should adopt any such methodologies in the future. (TO at 15-18) In relevant part, the Commission requested that commenters specifically address whether these methodologies would affect low income or income-challenged consumers. (TO at 15-18).

Accompanying the Commission's March 2, 2017 Tentative Order were separate substantive statements from Commissioner David W. Sweet and Vice Chairman Andrew G. Place. Commissioner Sweet's statement generally underscored the need for specific comments regarding the impact of alternative rate methodologies on low income and income-challenged customers, and emphasized that **alternatives must "provide real, not just theoretical, benefits to ratepayers without harming the most vulnerable portion of the population."** (Stmt. of Comm'n'r Sweet at 1(emphasis added)).

Vice Chairman Place's statement was more detailed, and set forth two proposed rate designs: one for electric and one for natural gas distribution companies. For electric utilities, he proposed a three-part rate design for residential electricity customers that would insert a demand charge in addition to the standard customer charge and volumetric charge. (Stmt. of Comm'n'r Place at 2). For natural gas utilities, Commissioner Place proposed the introduction of a decoupling mechanism, which would be subject to adjustment using a "revenue per customer" model. (Stmt. of Vice Chairman Place at 3-4).

PULP is a specialized project of the Pennsylvania Legal Aid Network that provides information, assistance, and advice on low income residential utility and energy matters. PULP acts in coordination with legal aid programs across the state, as well as and other non-profit agencies and community groups to assist Pennsylvania's low-income residential utility and energy consumers connect to and maintain affordable utility and energy services within their home.

As mentioned above, PULP submitted comments on March 16, 2016 which provided a detailed overview of the challenges faces by low income consumers, and

an assessment of the potential impact of decoupling, straight fixed / variable, and incentive-based rate structures would have on low and moderate income individuals. We will not reiterate those comments here, but nevertheless incorporate those comments by reference. Rather, the following limited comments are responsive to the combined requests contained in the Tentative Order and the Statements of Vice Chairman Place and Commissioner Sweet regarding the impact and implications of introducing residential demand charges on low income and income-challenged customers. As explained more fully below, PULP asserts that residential demand charges would be particularly harmful to low-income and income-challenged consumers, and should not be adopted in Pennsylvania.

II. COMMENTS: Residential Demand Charges

The Commission summarized demand charges briefly in its Tentative Order, explaining that the specific design of demand charges can vary, but that the methodology generally “establishes distribution system rates base on the distribution system capacity used by the customer.” (TO at 10). The Order explained: “The objective behind the use of demand charges is to send desired price signals to influence customer behavior by encouraging customers to consume less usage during peak demand periods and more usage during off-peak demand periods.” In theory, this rate design would enable utilities to “defer investments in additional system capacity” and “more closely approximates cost incurrence.” (TO at 10-11).

Vice Chairman Place went a step further in his accompanying statement, proposing a specific rate design for electric customers that would introduce a residential demand charge based on a customer’s coincident peak usage intervals during the day, month, season or year. He noted that smart meters and coordinating back-office systems would need to be fully deployed before implementation of this ratemaking structure. He also recognized that education programs would also be necessary to ensure that customers could understand the advanced rate structure. (Stmt. of Vice Chairman Place at 2).

PULP respectfully asserts low income and income-challenged consumers would be disproportionately harmed by residential demand charges. Indeed, as explained below, there is little evidence that residential consumers can appropriately respond to residential demand charge price signals – even with extensive education – and the relationship between individual residential peak demand and cost causation is tenuous at best. As a recent report on electric demand charges concluded: “Imposing demand charges to which customers cannot properly

respond and that have no relationship to controlling utility costs would be ineffective and punitive.”¹ For low income and income-challenged customers, the punitive effect of residential demand charges could undermine vulnerable consumers’ already-tenuous ability to connect and maintain electricity service, and would have lasting and detrimental impact on their health and housing.

A. Residential Demand Charges are Disproportionately Harmful to Low Income and Income Challenged Households

Across the residential class, usage diversity varies widely. Some households turn on lights, run showers, use hair dryers, and cook breakfast at 6 am, while others roll out of bed, brush their teeth and head out the door at 10 am. Still others sleep through the morning and work the graveyard shift – while many are homebound or caretakers, and are home all day. As a result, demand charges based on *individualized* usage often inequitably assigns costs on residential customers, whose “maximum loads usually do not occur at the same time as the peaks on the system as a whole.”² At the same time, residential consumers have relatively little flexibility when compared to large commercial and industrial customers, and are often unable to shift or curtail their usage. As a result, demand charges based on designated or forecasted peak usage can have a similar detrimental impact on residential customers because – even if they know about a residential demand event – they are less able to plan for or respond to the price signals compared to larger commercial and industrial customers.³ This dichotomy has led some experts to refer to coincident peak demand pricing as “Russian Roulette,” explaining that “it is likely to be difficult for many residential and small commercial customers to understand and respond to this type of system.”⁴

But among the residential class, low income and income challenged households stand to bear the brunt of residential demand charges. As explained in PULP’s March 16, 2016 Comments, low income consumers use less energy than higher income households, as they tend to live in smaller homes and are more likely to live in apartments. (See PULP March 16 Comments at 5-6, n.15)⁵ Low income and

¹ Paul Chernick, John T. Colgan, Rick Gilliam, Douglas Jester & Mark LeBel, Charge Without a Cause? Assessing Electric Utility Demand Charges on Small Customers, Electricity Daily (Aug. 2016) (attached hereto as Appendix A).

² See Chernick et al, supra note 1, at 5.

³ Id.

⁴ Id.

⁵ See Dep’t of Energy, US Energy Information Admin., 2009 RECS Survey Data, Consumption & Expenditures Tables, at CE.1.2, CE 2.2, CE 3.2 (2010). Note that low income households tend to use more energy per square foot, but less energy overall because they live in smaller but less efficient housing.

income-challenged customers also have fewer electronic appliances for which they could curtail their usage: pool pumps, electric vehicles, and other pricey appliances are simply out of their reach. Thus, low income households have the least opportunity to curtail usage during peak periods, and are thus subject to disproportionately high demand charges relative to their overall usage and in comparison to higher-income counterparts.⁶

Low income and income-challenged customers also have little relative control over the hours of the day in which they rely on electricity. Indeed, a disproportionate number of low income households have young children⁷ or members who are disabled or elderly.⁸ These vulnerable households are often reliant on electricity for longer periods of the day, and regularly have added medical electric needs. On the other hand, residential customers – especially poor working families – often work multiple jobs, and navigate irregular shifts and/or inflexible work schedules. These households, likewise, cannot easily shift their usage to non-peak times to avoid the impact of system-wide demand charges.

Regardless of how a residential demand charge is calculated, low income and income-challenged consumers are likely to “lose” because their usage is simultaneously difficult to curtail or control. At the same time, these households are least able to absorb cost spikes, making inherent inequities in this rate structure all the more troubling.

⁶ Apartment dwellers – which make up a disproportionate number of low income and income challenged households -- would be “particularly disadvantaged” by demand charges “because utilities serve the combined diversified demand of multiple apartments in a building or complex, rather than the much higher sum of individual apartment loads.” See Chernick et al., *supra* note 1, at 2, 12-13. To explain:

An electric water heater draws 4.4 kW when charging, but only operates about two hours per day, for a total of about 9 kWh of consumption per day. But each apartment has its own water-heating unit. Combined with hair dryer, range, clothes dryer, and other appliances, an apartment may draw 10-15 kW for short periods, but only about 0.5 to 1.0 kW on average (360-720 per apartment per month). *Id.*

⁷ See Nat’l Ctr for Children in Poverty, Basic Facts About Low-Income Children: Children Under 6 Years, 2014 (Feb. 2016), http://www.nccp.org/publications/pub_1149.html (“Young children under age 6 years appear to be particularly vulnerable, with 47 percent living in low-income and 24 percent living in poor families.”).

⁸ See American Psychological Ass’n, Disability and Socioeconomic Status, <http://www.apa.org/pi/ses/resources/publications/factsheet-disability.pdf> (“Persons with a disability are likely to have limited opportunities to earn income and often have increased medical expenses. Disabilities among children and adults may affect the socioeconomic standing of entire families. It is estimated that over 40 million people in American have some level of disability, and many of these individuals live in poverty (US Census Bureau, 2006)”; see also Am. Council on Aging, Economic Security for Seniors, <https://www.ncoa.org/news/resources-for-reporters/get-the-facts/economic-security-facts/> (“Over 25 million Americans aged 60+ are economically insecure – living at or below 250% of the federal poverty level (FPL) (\$29,425 per year for a single person).”).

B. Residential Demand Charges Do Not Send Effective Price Signals

To be effective, price signals must send information which is easily understood by the consumer. At the same time, consumers must have the capacity to make changes in their consumption based on the information received. As two experts in the field recently noted,

“[T]here is scant evidence that customers could ever understand the difference between kWh versus kW (even industry experts regularly confuse energy and power), much less respond to how each is priced. Innocuous activities, like doing chores (vacuuming while running your washer and dryer) on a cool Saturday afternoon, may result in a significantly higher bill, even though such actions would create minimal grid costs.”⁹

Other experts have come to the same conclusion, explaining that demand charges “do not offer actionable price signals to small consumers without investment in demand control technologies or very challenging household routines.”¹⁰ But low income households, as explained above, have little flexibility to adjust their routines, and advanced technology is out of reach. Low income and income-challenged households have inelastic budgets, which often fall short of meeting life’s most basic necessities – food, water, energy, housing, transportation, child care, medicine, and medical care. (See PULP March 16, 2016 Comments at 1-2). These households cannot afford to invest in additional technologies to help understand and control their load or curtail usage.¹¹

Vice Chairman Place recognized the need for education programs “to help customers understand any such final advanced rate structures approved by the Commission.” (Stmt. of Vice Chairman Place at 2). But PULP respectfully submits that this nod toward education places insufficient emphasis or attention to the deep

⁹ James Tong & Jon Wellinohoff, The Flaws in the Utilities’ Push for Residential Demand Charges, Utility DIVE (Oct. 3, 2016), available at <http://www.utilitydive.com/news/the-flaws-in-the-utilities-push-for-residential-demand-charges/427481/>.

¹⁰ See Chernick et al., *supra* note 1, at 2.

¹¹ It is worth noting that all residential ratepayers – including low income consumers – have already invested a considerable amount of money into advanced energy technology through Act 129 and Low Income Usage Reduction Programming. (See PULP March 16, 2016 Comments at 7). But some conservation efforts through these programs are likely to be frustrated by a shift to residential demand pricing. Programmable thermostats, for example, cycle on and off according to the pre-set temperature. These thermostats can be difficult to override, frustrating efforts by households to save during coincident peak periods.¹¹ At the same time, these thermostats can be difficult to reprogram, frustrating efforts by households to reduce consumption and conserve energy over the long term, and undermining the investment.

knowledge gap which must be bridged to effectively implement residential demand charges in Pennsylvania. Efforts to educate and inform customers would need to be intensive, long-term, and continuous, and would need to be coupled with programs to assist poor households to access advanced usage control mechanisms that could assist households to properly manage their usage to avoid spikes in energy costs as a result of engaging in “innocuous activities” like afternoon chores. One need only look so far as the competitive market to understand the tremendous hurdle that comprehensive and wide-spread education would require. Indeed, few customers have a solid understanding of the various components of their *current* bill. Shifting to an even more complex and unpredictable rate mechanism would only further confuse consumers, placing even more strain on the ability for households to control and manage their electricity costs.

III. CONCLUSION

As explained above, residential demand charges run the distinct risk of imposing inequitable rates on vulnerable, low income and income-challenged consumers. As such, PULP opposes implementation of demand charges in residential electricity rates in Pennsylvania. PULP thanks the Commission for its careful review of these issues and invites any questions that the Commission or staff may have about these comments.

Respectfully submitted,
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On behalf of our low-income clients



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