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April 27, 2020

VIA ELECTRONIC FILING

Ms. Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
2nd Floor, Room-N201
400 North Street
Harrisburg, PA 17120

Re: **Tentative Implementation Order**
M-2020-3015228

Dear Secretary Chiavetta:

Enclosed please find Duquesne Light Company's Comments for filing in the above referenced proceeding.

Upon receipt, if you have any questions regarding the information contained in this filing, please feel free to contact me or Chris Johnson at 412-393-6496 or cljohnson@duqlight.com.

Sincerely,

Lindsay A. Baxter
Manager, State Regulatory Strategy

Enclosure

cc (w/ Word version of enclosure.):
Joseph Sherrick (josherrick@pa.gov)
Adam Young (adyoung@pa.gov)

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Energy Efficiency and Conservation Program	:	M-2020-3015228

COMMENTS OF
DUQUESNE LIGHT COMPANY

I. INTRODUCTION

On March 12, 2020, the Pennsylvania Public Utility Commission ("Commission" or "PUC") issued a *Tentative Implementation Order* seeking comment and reply comments on a proposed Phase IV of Act 129. In the *Tentative Implementation Order*, the Commission provided for comments to be filed thirty (30) days after publication in the *Pennsylvania Bulletin* with reply comments to be filed forty-five (45) days from the date of publication. The *Tentative Implementation Order* was published March 28, 2020, 50 Pa.B. 1819. Pursuant to the published schedule, Duquesne Light Company ("Duquesne Light" or "Company") hereby submits these comments for consideration.

II. BACKGROUND

Act 129 of 2008, signed into law October 15, 2008, directs the Commission to establish and implement an energy efficiency and conservation ("EE&C") program. Under this law, electric distribution companies ("EDCs") serving at least 100,000 customers must create and enact a plan to reduce energy demand and consumption. Phase III of this program is currently underway and will conclude on May 31, 2021.

In advance of Phase IV of this program, the Commission has updated the *Technical Reference Manual*[1] and the *Total Resource Cost Test.*[2] The *Pennsylvania Act 129 Phase IV*

[1] *2021 TRM Update Final Order*, entered August 8, 2019. Docket No. M-2019-3006867.
[2] *2021 Total Resource Cost (TRC) Test Final Order*, entered December 19, 2019. Docket No. M-2019-3006868.

Energy Efficiency and Peak Demand Reduction Market Potential Study and *Pennsylvania Act 129 Phase IV Demand Response Potential Study* were both released to the public March 2, 2020.[3] The Commission then issued a *Tentative Implementation Order* on March 12, 2020 seeking comments and reply comments on a proposed Phase IV of Act 129.

Duquesne Light[4] is a public utility as the term is defined under Section 102 of the Public Utility Code, 66 Pa.C.S. § 102, and is certificated by the Commission to provide electric distribution service in portions of Allegheny County and Beaver County in Pennsylvania. The Company implements an EE&C program in compliance with 66 Pa. C.S. § 2806.1.

III. COMMENTS

Duquesne Light is passionate about helping its customers achieve energy efficiency savings. The Company's energy efficiency programs are a powerful tool towards meeting the state's and region's environmental goals through reduced energy usage and adoption of clean energy technologies, while helping customers to save money. These benefits are further amplified when applied to low-income populations. Energy efficiency is a meaningful step towards reducing energy burden and increasing self-sufficiency for low-income customers.

With this support for energy efficiency and conservation, Duquesne Light wishes to express its concern with four proposals of the *Phase IV Tentative Implementation Order*: 1) the low-income carve-out target and associated budget; 2) the restrictions on carryover of savings from Phase III to Phase IV; 3) the peak demand reduction target; and 4) the requirement that a portion of demand reduction be bid into the PJM capacity market. The Company believes addressing these issues will allow for a more effective program that focuses resources on the areas of

[3] February 14, 2020 Secretarial letter, Docket No. M-2019-3006866.
[4] Duquesne Light is a member of the Energy Association of Pennsylvania (EAP), which is also submitting comments at this docket. In addition to the positions stated herein, Duquesne Light generally supports the positions articulated in EAP's comments to the extent they are consistent with the comments submitted by the Company.

greatest impact.

A. The proposed low-income carve-out is not achievable.

The *Tentative Implementation Order* proposes a low-income direct install target for Duquesne Light of 5.8% of Phase IV portfolio savings. Duquesne Light asserts that this target is not realistically achievable for two main reasons: 1) the *2018 Pennsylvania Statewide Act 129 Residential Baseline Study*[5] does not accurately reflect the low saturation of electric space heating and water heating in Duquesne Light's service territory; and 2) extensive activity under Duquesne Light's Low-Income Usage Reduction Program (LIURP) over the past ten years has significantly reduced the potential for low-income direct-install energy efficiency. Additionally, the cost calculations included in the *Baseline Study* do not appear to be accurate. Each of these points is discussed in greater detail below.

1. <u>The baseline study saturation numbers are inaccurate.</u>

The *2018 Pennsylvania Statewide Act 129 Residential Baseline Study* describes Duquesne Light as "an urban EDC with the lowest share of electrically heated homes" having "the lowest consumption per customer."[6] According to this study, electric space heating and electric water heating end-use saturations are 18%[7] and 32%[8], respectively, in Duquesne Light's service territory. The Company believes the saturation level percentages are too high based on decades of program activity under Duquesne Light's Low-Income Usage Reduction Program (LIURP), "Smart Comfort." The *2018 Residential Baseline Study* used a sample of 47 and 51 sites for water heating and space heating end-uses, respectively. The Company suggests that the nearly 52,000 jobs shown in Table 1 below

[5] *2018 Residential Baseline Study,* released February 14, 2019, Docket No. M-2019-3006866.
[6] See 5 at 15.
[7] See 5 at 170, Table 201: Primary Heating Fuel by EDC.
[8] See 5 at 183, Table 231: DHW Type and Fuel by EDC.

based on actual program implementation provide a stronger indicator of savings potential than the limited sample size in the potential study.

As described in Duquesne Light's approved *Universal Service and Energy Conservation Plan*,[9] Smart Comfort has evolved from a weatherization program to a more comprehensive strategy to reduce electric end use. Table 1, below, illustrating real data from the past 17 years, supports the Company's assertion that electric space heating and water heating opportunities are very low in the service territory.

Table 1: Duquesne Light LIURP Program Activity[10]

Year	Spending	Total Jobs	Space Heating Jobs	Water Heating Jobs	Baseload Jobs
2003	$1,852,000	1,769	16	4	1,749
2004	$1,021,250	2,120	31	4	2,085
2005	$1,092,425	3,003	20	3	2,980
2006	$1,090,935	3,378	0	0	3,378
2007	$1,393,083	4,688	97	3	4,588
2008	$1,230,237	4,189	3	0	4,186
2009	$2,405,138	4,250	178	0	4,072
2010	$2,265,746	3,637	367	1	3,269
2011	$1,584,272	3,231	3	1	3,227
2012	$1,560,620	3,007	210	0	2,797
2013	$1,707,828	3,466	161	0	3,305
2014	$1,364,600	2,555	100	3	2,452
2015	$2,244,667	2,874	499	0	2,375
2016	$1,700,067	3,202	192	0	3,010
2017	$1,189,179	2,565	16	0	2,549
2018	$2,341,637	3,224	148	1	3,075
2019	$622,772	725	59	7	659
Total	**$26,666,456**	**51,883**	**2,100**	**27**	**49,756**
	Percent of Jobs	**100.0%**	**4.0%**	**0.05%**	**95.9%**

[9] *Duquesne Light Company Universal Service and Energy Conservation Plan Amended Three-Year Plan 2017-2019*, Docket No. M-2016-2534323, Page 22.

[10] This table was compiled by Duquesne Light using the information in the Annual Reports on Universal Service Programs & Collections Performance, 2003-2019, compiled by the Bureau of Consumer Services, available at www.puc.state.pa.us/filing_resources/universal_service_reports.aspx.

2. The proposed low-income target relies on unrealistic penetration levels.

Duquesne Light contends even when using what the company asserts to be inaccurate electric heat saturation levels, the proposed low income target would still be unrealistic as shown below. Table 2 shows the associated and applicable prototypical household measures, along with the *2021 Technical Reference Manual*[11] ("TRM") deemed savings for each. Note that although Duquesne Light finds the penetration levels for electric water heating and space heating to be inaccurate, as described in the preceding section, it has used the Commission's proposed penetration levels in this table.

Table 2: Measures and Savings Potential in Typical Household

Measure	Unit	Saturation	Qty	Unit Savings	Total Savings kWh	Unit Cost	Total Cost
9W LED	Lamp	100%	5	9.6[1]	48.0	$1.90	$9.50
11W LED	Lamp	100%	5	14.6[1]	73.0	$2.89	$14.45
Refrigerator Recycle - Replace	Appliance	100%	0.25	582.0[2]	145.5	$657.90	$164.48
Faucet Aerator	Aerator	32%	2	32.1[3]	20.5	$0.91	$1.82
High Efficiency Showerhead	Showerhead	32%	1	346.3[4]	110.8	$3.22	$3.22
Water Heater Tank Wrap	Wrap Kit	32%	1	100.3[5]	32.1	75	$75.00
Water Heater Pipe Wrap	Linear Ft.	32%	4	8.82[6]	11.3	0.72	$2.88
Smart Strip 7-Plug Tier I	Strip	100%	1	88.8[7]	88.8	$18.40	$18.40
LED Nightlight	Nightlight	100%	1	25.5[8]	25.5	$1.02	$1.02
Insulation - Ceiling (R16-R49) Heating	Sq. ft.	18%	500	0.7181[9]	64.6	1.05	$525.00
Insulation - Ceiling (R16-R49) Cooling	Sq. ft.	61%	500	0.0421[10]	12.8	1.05	$525.00
Total					**633.0**		**$1,340.77**

Sources:
1. 45 lumen/Watt baseline
2. Verified PY10 savings
3. 2021 TRM Table 2-60
4. 2021 TRM Table 2-62
5. 2021 TRM Table 2-54, 40 Gallon
6. 2021 TRM Table 2-57
7. 2021 TRM Table 2-108, Unspecified use Tier 1
8. 2016 TRM value
9. Per 2021 TRM Section 2.6.3
10. Per 2021 TRM Section 2.6.3

[11] See 5.

Per the *Tentative Implementation Order* at 15, Duquesne Light's low-income direct-install mandate of 5.8% of total portfolio savings equates to 20,131 megawatt-hours (MWh). Based on program experience and research on current and future cohorts, Duquesne Light estimates a savings of 2,019,000 kilowatt-hours (kWh) to result from behavior reports,[12] requiring an additional 18,112,000 kWh of savings to be achieved from direct-installs to meet the 5.8% target. Assuming that the typical household results in energy efficiency improvements of 633 kWh, achieving the reduction target would require direct-installs to be completed at 28,612 households. As of March 2018, there were 63,699 low-income households, by Federal Poverty Income Guidelines, in Duquesne Light's service territory.[13] To achieve the 5.8% low-income savings target proposed in the *Tentative Implementation Order*, the direct-install program would need to achieve a 44.9% penetration into a hard-to-reach confirmed low-income population. Duquesne Light's Smart Comfort Program has already reached 81.5% of this same population of customers, over a period of 17 years, further reducing the pool of potential projects available in the five-year period of Phase IV.

Table 1 reflects aggressive installation via the Smart Comfort program of non-space heating and non-water heating measures, including LED lighting, refrigerators, freezers, window and central air conditioners, heat pumps, smart strips, and home insulation. This long-term electric end use strategy has significantly reduced the number of accessible projects available to an Act 129 low-income direct-install initiative.

[12] This potential takes into consideration Duquesne Light's low income population, the size and number of existing treatment and control cohorts, as well as the effects of multiyear behavioral impacts persistence. Cost assumes a budgetary $0.09/kWh acquisition rate.
[13] See 9.

3. The *Tentative Implementation Order's* cost projects for low-income are inaccurate.

While the Company's comments have thus far focused on the size of potential, the estimated costs of achieving the proposed low-income carve-out are also cause for concern. Duquesne Light avers that for its service territory the study's low-income acquisition costs appear to be too low, by a factor of four. As described above, Duquesne Light estimates it will need to implement direct install measures at an estimated 28,612 low-income households to achieve the proposed 5.8% mandate. Given an average cost of $1,340.77 per household,[14] this amounts to a cost of $38,361,851. The behavioral reports have an additional cost of $181,700, for a total cost of $38,543,561 for the low-income program.

This total cost is equivalent to $1,905.61 per MWh saved. Yet the Phase IV *Energy Efficiency and Peak Demand Reduction Market Potential Study Report*[15] states Duquesne Light's low-income residential acquisition cost is $470.41 per MWh, with a budget of $12.5 million. This acquisition cost is too low, by a factor of four, for the service territory Duquesne Light serves.

The Company reiterates its dedication to assisting its most vulnerable customers through improved energy efficiency. However, for the reasons described above, it does not believe the 5.8% reduction target is reasonable or achievable. Duquesne Light suggests that in lieu of a savings target, the Commission instead set an investment target, requiring a portion of the program budget to be spent on the low-income sector. The specific projects used to reach this goal will be outlined in the Company's plan

[14] See Table 2.
[15] *Act 129 Phase IV Energy Efficiency and Peak Demand Reduction Market Potential Study Report*, dated February 28, 2020, Docket No. M-2020-3015229. See Table 11, page 26.

and subject to Commission evaluation to ensure low-income customers are being served appropriately. Such an approach allows for flexibility to truly help a customer, rather than sticking to a strictly prescribed set of measures to hit a defined target. If the Commission believes it must include a savings target, Duquesne Light believes a target of six to seven million kWh to be a more reasonable target, based on more accurate acquisition costs and saturation levels. This target represents approximately 2% of the overall savings requirement.

B. Carryover of low-income carve-out savings should be allowed separately from carryover of the overall portfolio.

Duquesne Light objects to the limitation of low-income Phase III carry-over. The Tentative Implementation Order in Section A.5. page 23 reads "Regarding to [sic] the low-income carve-out savings carryover, the Commission proposes that the EDCs be allowed to carryover low-income carve-out savings only if they have carryover savings for the entire portfolio of programs in Phase III and if they have low-income carve-out savings attained in Phase III in excess of their Phase III carve-out targets for application towards Phase IV targets." Low-income sector performance is not dependent upon or linked to the performance of the remaining market rate portfolio of programs. Low-income and market rate programs are designed and structured differently. Low-income programs have unique marketing, outreach, evaluation, measurement, and verification. Low-income targets are addressed by discrete penalty mechanisms for noncompliance. Duquesne Light fails to understand the Commission's choice to condition low-income carryover to market rate program accomplishments.

If EDCs can achieve savings in excess of their low-income mandate while staying

on budget, they should be encouraged to do so, providing greater benefits to the most vulnerable customers. The proposed change largely removes any incentive for a utility to invest in more comprehensive efficiency projects in the low-income sector that result in savings beyond the targets. Not allowing EDC carryover of low-income carve-out savings could have the unintended consequence of encouraging EDCs to push comprehensive projects to Phase IV, instead of bringing assistance to customers as expediently as possible.

The ability to implement Phase III programming has already been impacted by the need for social distancing as a prevention measure to stop the spread of the COVID-19 virus. While all Phase III programs have been affected, low-income programs have been more greatly impacted due to the in-person work required at a customer premise. Duquesne Light urges the Commission to not put in place any additional barriers or disincentives for EDCs to try to achieve as much energy savings as possible, particularly for low-income customers who are struggling acutely under current circumstances.

C. Demand Reduction target is neither reasonable nor supported

The *Tentative Implementation Order* proposes a 67 megawatt (MW) target for energy efficiency demand reduction. This target is far out of proportion compared to EDCs' historic demand reductions and potential for future reductions. Table 3 shows the savings in MW and MWh for each EDC.

Table 3: Peak Demand Reduction by PA EDCs[16]

EDC	Phase III MWh	Phase III MW	Phase III MW/MWh	Phase IV Proposed MWh	Phase IV Proposed MW	Phase IV Proposed MW/MWh
PECO	1,029,234	136.6	0.0001327	1,380,837	276.0	0.0001999
PPL	1,129,648	160.1	0.0001418	1,250,157	244.0	0.0001952
Duquesne Light	268,218	31.8	0.0001185	347,084	67.0	0.0001930
Metropolitan Edison	500,620	65.5	0.0001309	463,215	85.0	0.0001835
Penelec	477,681	57.1	0.0001196	437,676	91.0	0.0002079
Penn Power	152,201	20.1	0.0001323	128,909	22.0	0.0001707
West Penn Power	472,366	58.8	0.0001244	504,951	95.0	0.0001881

The ratio of peak demand reduction (MW) to energy savings (MWh) across EDCs are fairly consistent. Applying the average MW/MWh ratio from Phase III to the Phase IV proposed target for energy savings of 347,084 MWh would result in a demand reduction of approximately 41 MW. The 67 MW goal proposed in the *Tentative Implementation Order* would lead to a MW/MWh ratio 63% higher than what has been seen to date in Phase III. Duquesne Light anticipates lower peak period demand reductions per unit of energy saved due to the removal of residential lighting measures; the Company does not anticipate an increase in demand reduction per unit of energy saved in Phase IV. The Phase IV Energy Efficiency Potential Study[17] does not provide data to support its projection for energy efficiency demand reduction.

Moreover, such an inflated demand reduction target would require Duquesne Light to shift program dollars to the most cost-effective demand reduction measures, such as peak-period office building lighting, and potentially away from more costly demand reduction choices such as low-income programs. Duquesne Light recommends the demand reduction target be reduced to 41.1 MW.

[16] This table was compiled by Duquesne Light using the data contained in the *SWE Annual Report Act 129 Program Year 10* Feb 19, 2020.
[17] See 13.

D. Nomination of energy efficiency demand reductions into PJM capacity market should be voluntary.

Duquesne Light believes the proposed requirement to nominate a portion of energy efficiency demand reductions into the PJM capacity market to be inappropriate and recommends this requirement instead be a voluntary option. As background, peak period demand reductions from Act 129 programs have been treated differently in each of the three previous phases of Act 129. In Phase I, because demand response impacts in the top 100 hours could only be known after the fact, EDCs and their evaluation contractors struggled to call events, report impacts, and verify the claimed reductions. In Phase II the Commission discontinued demand response and removed all demand reduction targets. In Phase III the Commission adopted very prescriptive demand response rules, under which an event would be triggered when the day-ahead forecast indicated a load of 96% annual peak load forecast, and requiring an event duration of four hours, with a maximum of six events per year. In Phase IV, the Commission proposes yet another approach for the treatment of electric demand reductions.

The *Tentative Implementation Order* proposes to discontinue mandatory dispatchable demand response programs with discrete compliance reductions in Phase IV and instead require EDCs to nominate a portion of demand reductions achieved through energy efficiency measures, as a capacity resource in PJM's forward capacity auction. This change will require EDCs to follow the measurement and verification requirements of PJM Manual 18B for any demand reductions nominated to PJM.[18] However, there are key differences between the measurement and verification requirements of Act 129 and PJM.

The Act 129 TRM requires application of coincidence factors to energy efficiency

[18] PJM Manual 18B: Energy Efficiency Measurement & Verification, Revision: 04. Effective Date: August 22, 2019.

reductions. Duquesne Light's system coincident peak period is summer. These are the values EDCs ostensibly would "nominate" into the PJM capacity market. However, for an energy efficiency project to qualify as a PJM capacity resource, nominators must forecast load reduction during both summer and winter seasons. It is unclear how EDCs will nominate energy efficiency demand reductions calculated using the required TRM summer coincidence factors into the annual PJM capacity market.

The proposed requirement could influence the types of projects EDCs prioritize. For instance, efficiency improvements to cooling systems, which serve to save energy at the time the grid is most stressed in the summer, would not provide year-round savings, and thus could not be bid into the PJM capacity market on their own. To ensure having energy savings to nominate into the PJM capacity market, EDCs will prioritize those projects that have year-round savings, like office lighting, over projects that can make meaningful reductions during the coincident system peak. The Company urges the Commission to reconsider this proposed requirement by making it voluntary.

Further, across all Act 129 phases, there have been conflicting measurement requirements between PJM rules, the Commission's Orders, and the Statewide Evaluator's SWE promulgated measurement requirements. In prior phases, Pennsylvania EDCs and their evaluation, measurement, and verification contractors have focused on verifying demand reductions based on PUC rules, not PJM measurement requirements. Duquesne Light has concern that time and resources spent trying to understand and comply with conflicting rules will take away from energy efficiency projects that provide meaningful benefit to utility customers and the grid.

IV. CONCLUSION

Duquesne Light Company appreciates the opportunity to provide comment in this

proceeding. The Company has provided cost-effective energy efficiency benefits to its customers, successfully meeting its targets in the first two phases of Act 129, and expects to complete Phase III successfully. The Company looks forward to continuing to assist its customers in improving their properties, saving money, and reducing their environmental impact in Phase IV. These comments seek to highlight the provisions of the *Tentative Implementation Order* the Company perceives to pose the greatest risk to program success. It urges the Commission to give consideration to the comments of Duquesne Light and other EDCs who are on the frontline of bringing energy efficiency benefits to utility customers. The Company looks forward to continued collaboration on this issue.

Respectfully submitted,

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DATE: April 27, 2020