

COMMONWEALTH OF PENNSYLVANIA



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April 7, 2016

Rosemary Chiavetta, Secretary  
PA Public Utility Commission  
Commonwealth Keystone Bldg.  
400 North Street  
Harrisburg, PA 17101

Re: Petition of Duquesne Light Company for  
Approval to Modify its Smart Meter  
Procurement and Installation Plan  
Docket No. P-2015-2497267

Dear Secretary Chiavetta:

Enclosed for filing is the Office of Consumer Advocate's Reply Brief in the above-referenced proceeding.

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

Respectfully Submitted,

/s/ David T. Evrard  
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Assistant Consumer Advocate  
PA Attorney I.D. # 33870

Enclosure

cc: Honorable Katrina L. Dunderdale, ALJ  
Certificate of Service  
\*219324

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company for :  
Approval to Modify its Smart Meter : Docket No. P-2015-2497267  
Procurement and Installation Plan :

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REPLY BRIEF  
OF THE OFFICE OF CONSUMER ADVOCATE

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DATED: April 7, 2016

**PUBLIC VERSION**

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## I. INTRODUCTION

In this Reply Brief, the OCA responds to the arguments advanced by Duquesne Light Company (Duquesne or Company) in its Main Brief regarding the issues in dispute in this proceeding. Those arguments have not altered the position of OCA on these contested issues. As will be set forth herein, the OCA continues to submit that Duquesne's proposed Advanced Distribution Management System (ADMS) is not cost-effective and should not be implemented. Moreover, should the Commission disagree and allow the project to go forward, Duquesne should recover the costs of the project through its base rates and not through its Smart Meter Charge. Finally, the costs of implementing the Bill Ready functionality should be recovered from Electric Generation Suppliers (EGSs) rather than from customers through the Smart Meter Charge.

## II. PROCEDURAL HISTORY

[PLEASE REFER TO SECTION II. OF THE OCA'S MAIN BRIEF]

Additionally, on March 17, 2016, Main Briefs were filed in this proceeding by Duquesne and the OCA.

## III. STATEMENT OF THE QUESTIONS INVOLVED

The questions at issue in this case are the following:

- Whether Duquesne's proposed ADMS is cost-effective and whether the Company should be permitted to implement it?
- If ADMS is implemented, whether the costs of ADMS should be recovered through Duquesne's Smart Meter Charge (SMC) or recovered through base rates?
- Whether the costs of implementing Bill-Ready billing should be recovered through the SMC?

#### IV. BURDEN OF PROOF

In this proceeding, Duquesne is seeking an order from the Commission approving the amendments it has proposed to its previously approved Final Smart Meter Plan. As such, the assignment of the burden of proof in this case falls squarely within the provisions of Section 332(a) of the Public Utility Code, 66 Pa.C.S. § 322(a), which states that the “proponent of a rule *or order* [bears] the burden of proof.” (emphasis added) As the proponent of a specific Commission order, it is Duquesne that carries the burden of proof in this proceeding.

#### V. SUMMARY OF ARGUMENT

Corresponding with the issues identified in Section III above, the OCA argues as follows in this brief:

- The ADMS project proposed by Duquesne in this proceeding is not cost-effective and the Commission should not approve Duquesne going forward with the project.
- If the Commission disagrees and authorizes implementation of ADMS, recovery of ADMS costs should be sought through a base rate proceeding and not through the Company’s SMC.
- The costs of implementing the Bill-Ready functionality should not be recovered through the SMC; rather, these costs should be borne by Electric Generation Suppliers (EGSs).

#### VI. ARGUMENT

##### A. SUMMARY OF DUQUESNE LIGHT’S MODIFIED SMART METER PLAN AND DISPUTED ISSUES IN THIS PROCEEDING

[PLEASE REFER TO SECTION VI. OF THE OCA’S MAIN BRIEF]

The disputed issues in this proceeding are as stated in Section III above.

B. ADMS ISSUES

1. ADMS Project Approval Issues

As explained in the OCA’s Main Brief, the smart meter capabilities at issue in this proceeding – voltage monitoring and the communication of outages and restorations – are two of the nine “additional” capabilities that were identified by the Commission in its Smart Meter Implementation Order.<sup>1</sup> With respect to these additional capabilities, the Implementation Order made it clear that their effectuation would be subject to a cost-benefit review. At various places in the Implementation Order, the Commission stated as follows:

While the Commission believes that all of the above-listed capabilities will further facilitate the consumer’s ability to intelligently control their electric use and costs, *we are cognizant that the costs of some of these added capabilities may exceed any benefit they may provide.* Therefore, the Commission reserves the authority to waive the requirement for any of the Commission imposed requirements as described in Section E.1 below.

Implementation Order at 17 (emphasis added).

The Commission recognizes that some of the requirements for smart meters outlined in Section C of this Order go beyond the minimum requirements set forth in Act 129. *In order to ensure that these additional smart meter functions are cost-effective,* we direct that each smart meter plan filing include cost data that quantifies the costs to meet the minimum requirements set forth in Act 129, the costs to meet all of the requirements set forth in Section C above, and the individual incremental costs of each added function, less any operating and capital cost savings.

*Id.* at 29 (emphasis added).

*To the extent that an EDC or another party demonstrates that a particular Commission imposed requirement is not cost-effective, the Commission will have the option of waiving a particular requirement for that EDC or all EDCs.*

*Id.* at 31 (emphasis added).

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<sup>1</sup> Smart Meter Procurement and Installation, Docket No. M-2009-2092655 (Order entered June 24, 2009) (Implementation Order).

Duquesne proposes to implement the outage/restoration communication capability through installation of an Outage Management System (OMS), and plans to implement the voltage monitoring capability through installation of a Distribution Management System. Together, these two systems comprise the Advanced Distribution Management System (ADMS). Duquesne St. No. 2 at 12. In its Main Brief, Duquesne recites a host of benefits that it asserts will result from implementation of the ADMS. Duquesne M.B. at 12-17. The OCA does not dispute that some, if not many, of these benefits may occur. The OCA's sole contention is that implementation of the ADMS does not meet the threshold condition imposed by the Commission in the Implementation Order, namely, it is not cost-effective.

In their Main Briefs, Duquesne and OCA describe in detail the dollar value of the costs and benefits of ADMS as projected by the Company. In summary, the overall cost of the ADMS will range from \$46 million to \$56 million, plus ongoing Operating and Maintenance (O&M) costs of \$5 million to \$6 million during the implementation phase of the project, through 2020. Duquesne St. No. 2 at 15-16. Leaving aside the \$6 million of societal benefits and other non-quantifiable benefits (Duquesne St. No. 2 at 16; Duquesne St. No. 2-R at 9) claimed by the Company, what OCA will term the "hard" benefits identified by Duquesne total \$46.3 million over 20 years. Duquesne St. No. 2 at 16. If one compares these hard benefits with the cost of the project (the \$46 million to \$56 million, plus the \$5 million to \$6 million in operating costs), it is apparent that costs will exceed benefits. Further, as described in OCA's Main Brief, OCA witness Sherwood testified that Duquesne did not include in its cost-benefit analysis the ongoing incremental Operating and Maintenance (O&M) costs that it would incur through the life of the ADMS project. OCA M.B. at 10-12. These costs range from **BEGIN CONFIDENTIAL** [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] **END CONFIDENTIAL** The OCA's Main Brief included testimony by Ms. Sherwood as to why she thought it necessary to include these costs in a cost-benefit analysis. OCA M.B. at 10-11. When one adds the \$46 million to \$56 million identified by Duquesne to the

**BEGIN CONFIDENTIAL** [REDACTED]

[REDACTED] **END CONFIDENTIAL** dwarf the projected hard benefits of \$46.3 million.

The linchpin of this case, therefore, is the claimed societal benefits of \$6 million per year. Without including those benefits in the analysis, the ADMS project cannot possibly pass a cost-benefit test. In its Main Brief, the OCA argued against inclusion of these benefits, while Duquesne, for its part, argued the opposite. OCA witness Sherwood expressed concern over whether these societal benefits could be reliably quantified. OCA M.B. at 12; OCA St. No. 1 at 14.

In its Main Brief, Duquesne asserts that these benefits *have* been reliably quantified. Duquesne M.B. at 19-20. It maintains that based on detailed distribution system data it provided to its consultant DNV GL, the consultant, using a proprietary model, generated the estimate of \$6 million of annual societal benefits, which reflects savings resulting from an anticipated 5-minute reduction in average outage duration. Duquesne St. No. 2 at 7. Duquesne further maintains that the DNV GL estimate is supported by the results of a second model which Duquesne employed, the Interruption Cost Estimate (ICE) Calculator, which purports to

calculate interruption savings from reliability improvements. Duquesne M.B. at 19-20; Duquesne St. No. 2-R at 6. Using this model, Duquesne estimated societal benefits of \$4.2 million three years after implementation of OMS, rising to \$5.7 million at the end of 19 years, assuming a 2% annual inflation rate. *Id.* at 7.

For the reasons stated in its Main Brief, the OCA submits that these benefits cannot be reliably quantified. OCA M.B. at 12-14. Those arguments will not be repeated here. Rather, the OCA would only reiterate that the **BEGIN CONFIDENTIAL** [REDACTED]

[REDACTED] **END CONFIDENTIAL** Duquesne St. No. 2A, JTK Exh. 4 at 1-2. In addition, OCA witness Sherwood cited some very specific limitations associated with the ICE model that should call into question the model's ability to accurately estimate interruption savings for the Duquesne service territory over the life of the ADMS project. OCA M.B. at 13-14; OCA St. No. 1-S at 2-3.

The OCA submits that the estimated societal benefits of the DNV GL and ICE models are ultimately too speculative to warrant inclusion in a rigorous cost-benefit analysis of the ADMS project. As mentioned earlier, without inclusion of these benefits in the evaluation, ADMS cannot possibly be found to be cost-effective.<sup>2</sup> Therefore, the Commission should reject ADMS for failure to meet the cost-effectiveness test imposed by the Implementation Order.

Finally, in its Main Brief, Duquesne states that the OCA has offered no estimate of customer savings and has failed in its burden of presenting contrary evidence. Duquesne M.B.

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<sup>2</sup> **BEGIN CONFIDENTIAL** [REDACTED] **END CONFIDENTIAL** OCA St. No. 1, Exh. SLS-3. Any cost overruns would postpone the crossover point even further.

at 20. The OCA submits that it is under no such burden in this proceeding. The burden is entirely the Company's to show that ADMS is cost-effective and the OCA maintains that Duquesne has not met that burden.

2. ADMS Cost Recovery Issues

In its Main Brief, the OCA argued that in the event the Commission authorized ADMS to go forward, the costs of the project should be recovered through base rates and not through Duquesne's Smart Meter Charge (SMC), as sought by the Company. OCA M.B. at 15-16. Among the arguments raised by Duquesne in response to the OCA's position is that what the OCA proposes is contrary to Act 129. Specifically, Duquesne asserts that EDCs are permitted under Act 129 to recover smart meter costs through automatic adjustment clauses. The Company states that EDCs have discretion to choose between base rate recovery and recovery through an automatic adjustment clause, as authorized under Act 129. Duquesne M.B. at 21-22.

Section 2807(f)(7)<sup>3</sup> provides that EDCs may recover smart meter "technology" costs either through base rates or through an automatic adjustment clause under Section 1307.<sup>4</sup> Duquesne fails to recognize, however, that ADMS costs are not "smart meter technology costs" as defined by Act 129 and subject to cost recovery under Section 2807(f)(7). Act 129 defines "smart meter technology," in part, as follows:

As used in this section, the term "smart meter technology" means technology, including metering technology and network communications technology capable of bidirectional communication, that records electricity usage on at least an hourly basis, including related electric distribution system upgrades to enable the technology.

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<sup>3</sup> 66 Pa. C.S. §2807(f)(7).

<sup>4</sup> 66 Pa.C.S. § 1307.

66 Pa. C.S. §2807(g). The ADMS costs are not “smart meter technology” costs as defined by the Act. As previously explained, ADMS is comprised of an Outage Management System and a Distribution Management System. These systems utilize the bidirectional communication and data production capabilities *of the* smart meter technology to better manage the distribution system, but are not the smart meter technology in and of themselves.

The OCA further submits, however, that even if ADMS costs are deemed to be “smart meter technology,” the Commission can direct recovery through base rates. The discretion that Duquesne states it has exercised to recover costs through an automatic adjustment clause, is carried out against the backdrop of the general regulatory authority of the Commission and is subject to the Commission’s enforcement of other statutory provisions of general applicability, such as the command of Section 1301<sup>5</sup> that rates must be just and reasonable. To the extent that Section 2807(f)(7) allows two methods of cost recovery, the OCA submits, an EDC has discretion to choose one of those methods, but only to the extent allowed by the Commission operating under its plenary authority to enforce the Public Utility Code. If in the exercise of its plenary regulatory authority, the Commission determined that one permitted method of recovery would not foster just and reasonable rates as mandated by Section 1301, the OCA submits the Commission would have the power to direct recovery through the other authorized method.

In this case, the OCA submits that good reason exists for the Commission to direct that ADMS costs be recovered through base rates. The cost-effectiveness of ADMS can only be established by relying on the difficult to quantify and speculative societal benefits. Because there is uncertainty over the extent to which these benefits will materialize (and because these benefits represent such a significant portion of the claimed overall benefits of the project

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<sup>5</sup> 66 Pa.C.S. §1301.

and cannot be reflected as a savings offset in the surcharge), the OCA submits that seeking base rate recovery would be appropriate because it would allow for the potential recovery of costs found to be reasonable and prudent to coincide with the period over which the societal benefits materialize, to the extent that they do. Front-loading the costs (via the SMC) in the face of such uncertain benefits, should give rise to concerns for just and reasonable ratemaking.

Moreover, the OCA reiterates the points it made in its Main Brief, *viz.*, the type of costs being incurred for ADMS are the type of normal, ongoing capital and operating expenses that are traditionally recovered through base rates; Duquesne currently recovers the costs of outage and distribution management functions through base rates; and base rates are better suited to addressing issues of cost responsibility. OCA M.B. at 15-16.

For all of these reasons, should ADMS be approved, the Commission should direct that recovery of the project's costs should be through base rates, one of the recovery options specifically authorized by Act 129.

### C. RECOVERY OF BILL READY COSTS

In its Main Brief, the OCA explained that as part of this proceeding, Duquesne is seeking to recover \$7 million for the purpose of implementing Bill Ready billing. Duquesne proposes to recover that cost through its SMC. As such, the cost will be imposed on all customers. The OCA argued that this cost should be recovered instead from EGSs who will be the predominant beneficiaries of the Bill Ready functionality. OCA M.B. at 16-17.

In response to the OCA, Duquesne states that the Commission has directed EDCs to include Bill Ready billing as part of their smart meter plans as a means of facilitating Time of Use and Real Time Pricing. Duquesne further states that because of this directive, the costs of Bill Ready billing are smart meter costs that must be recovered through the SMC. Duquesne

maintains that it has no mechanism for recovering such costs from EGSs and that doing so would prevent complexities. Duquesne M.B. at 25-26.

The OCA recognizes that the Commission has directed that Bill Ready billing be included in EDC smart meter plans. This, however, does not mean that surcharge recovery from ratepayers is the appropriate cost recovery mechanism for these costs.

As explained in the OCA's Main Brief, Bill Ready billing enables EGSs to take interval data from customers' smart meters and calculate the generation and transmission charges for special pricing programs that they offer (such as Time Of Use pricing) and then forward those charges to the EDC for inclusion on the EDC bill rendered to the customer. This contrasts with Rate Ready billing under which EGSs provide their rates to the EDC and the EDC calculates customer bills using the EGS' rate multiplied by the monthly consumption. Rate Ready billing offers EGSs limited opportunity to make special pricing options available to their customers. At present, Duquesne offers only Rate Ready billing. OCA M.B. at 16. It is clear that being able to provide Bill Ready billing will facilitate the ability of EGSs operating in the Duquesne territory to offer a greater range of products to their customers. As such, EGSs are clearly the principal beneficiaries of this functionality,

If engaging in a balancing of equities, one must consider that not all customers shop for their generation supply. Further, not all customers who do shop will avail themselves of the special rates offered by EGSs as a result of Bill Ready billing. Many will prefer to remain on fixed rates that don't vary by time of use. It is most likely that a substantial portion of Duquesne's customer base will derive no benefit from the Bill Ready functionality.

The OCA submits that when viewed in this fashion, fundamental fairness in ratemaking would dictate that these cost be borne by the entities that are the predominant

beneficiaries of this capability. The OCA therefore urges the Commission to allocate cost responsibility to EGSs.

D. INCREMENTAL AMI PROJECT COSTS

The parties are in agreement on this issue.

E. MISCELLANEOUS ISSUES

In its Main Brief, the OCA explained that because the ICE model for calculating interruption savings (societal benefits) identifies customer benefits by rate class, OCA witness Sherwood was able to make some observations about the wide disparity between the costs and benefits of ADMS with respect to the residential class. In particular, Ms. Sherwood observed that based on ICE calculations, residential customers would receive 1.5% of societal benefits associated with ADMS but pay approximately 90% of the costs. OCA M.B. at 17-18; OCA St. No. 1-S at 4. Further, in her Surrebuttal Testimony, Ms. Sherwood stated that “[t]he ADMS’ allocated cost by rate class should more closely mirror the benefits by rate class.” *Id.*

Duquesne, in its Main Brief, argued that any contention by the OCA that ADMS costs should be allocated to customer classes on the basis of the estimated benefits to each class would be contrary to the existing cost allocation method for smart meter costs that was established when Duquesne’s original Smart Meter Plan was approved in 2010. The existing method calls for common costs, such as for ADMS, to be allocated to customer classes based on the number of meters in the class. Duquesne M.B. at 24.

In the OCA’s Main Brief, however, the OCA noted that while the cost-benefit disparity for the residential class was indeed striking, it did not make that observation for the purpose of reopening the question of overall cost allocation of smart meter costs as part of this

proceeding. Rather, it cited the issue to further exemplify the cost-ineffectiveness of the ADMS project and as further reason that the Commission should reject the project. OCA M.B. at 18.

The OCA also observed that the existence of the disparity in costs and benefits for residential customers lends support to the OCA's position that recovery of these costs should be sought in a base rate proceeding, where the costs and benefits can be thoroughly examined and issues of cost allocation fully addressed. *Id.* Should, however, the Commission authorize ADMS to go forward and permit recovery through the SMC, the OCA submits that cost allocation under the SMC may need to be addressed in a future proceeding. .

## VII. CONCLUSION

The OCA submits that Duquesne Light Company has failed to meet its burden of proving that the ADMS project it proposes to implement is cost-effective. In its Implementation Order, the Commission reserved the right to waive the requirement for any of the nine additional smart meter capabilities it imposed if that capability was shown not to be cost-effective. In this proceeding, the ADMS project (proposed as a means of meeting two of the nine additional capabilities) has been shown to be demonstrably cost-ineffective and the Commission should reject the project. Unless the Company can return with a cost-effective alternative proposal for implementing the outage communication and voltage monitoring capabilities, the Commission should waive these requirements for Duquesne.

Should the Commission not reject the ADMS project, the OCA submits that the recovery of project's costs should be sought through a base rate case and not the Company's Smart Meter Charge.

Finally, the OCA submits that the Commission should assign the costs related to Bill Ready billing. These costs are most fairly assigned to Electric Generation Suppliers who are the overwhelming beneficiaries of this functionality.

Respectfully Submitted,

/s/ David T. Evrard

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April 7, 2016  
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CERTIFICATE OF SERVICE

Petition of Duquesne Light Company for :  
Approval to Modify its Smart Meter : Docket No. P-2015-2497267  
Procurement and Installation Plan :

I hereby certify that I have this day served a true copy of the Office of Consumer Advocate's Reply Brief upon parties of record in this proceeding in accordance with the requirements of 52 Pa. Code §1.54 (relating to service by a participant), in the manner and upon the persons listed below:

Dated this 7<sup>th</sup> day of April 2016.

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