

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

**ELECTRONIC JOINT APPLICATION OF LOUISVILLE)
GAS AND ELECTRIC COMPANY AND KENTUCKY)
UTILITIES COMPANY FOR A CERTIFICATE OF PUBLIC) CASE NO. 2018-00005
CONVENIENCE AND NECESSITY FOR FULL)
DEPLOYMENT OF ADVANCED METERING SYSTEMS)**

**POST-HEARING BRIEF OF
METROPOLITAN HOUSING COALITION**

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INTRODUCTION

This matter comes before the Kentucky Public Service Commission ("Commission") on application by Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company ("KU") (collectively "LGE/KU") for Certificates of Public Convenience and Necessity ("CPCN") for the full deployment of Advanced Metering Systems ("AMS") across their Kentucky service territories, including gas operations for LG&E, and to approve their proposed AMS Opt-Out Special Charges.

According to the *Electronic Joint Application Of Louisville Gas And Electric Company And Kentucky Utilities Company For Certificates Of Public Convenience And Necessity For Full Deployment Of Advanced Metering Systems* ("Joint Application"), if approved, the proposed AMS deployment would begin in 2018 and be completed in early 2021. Joint Application at 5-6. The Joint Application assumes a 0.8% opt-out rate, and projects that 413,000 electric meters will be replaced and about 334,000 AMS gas indices will be added in LG&E's service territory, while in KU's 531,000 electric meters will be replaced.

The AMS meters that the Companies propose to deploy will have two-way communication capabilities that will allow communication of usage in real time, and almost 900,000 of the AMS electric meters will also have remote service switching capabilities.

According to the Joint Application, what support there is for the requests for CPCNs are found in the testimony of Mr. Malloy and the exhibits associated with his testimony. Joint Application, Num. Para. 12, p. 6.

In accordance with the Order entered by the Commission on July 25, this Post-Hearing Brief is submitted for Commission consideration by the Metropolitan Housing Coalition ("MHC"). For the reasons stated below, and those provided by the Office of the Attorney General, MHC respectfully requests that the Commission deny the request for a CPCN at this time due to the questionable benefits of the deployment for ratepayers, and the punitive impact of the proposed "opt-out" provisions.

ARGUMENT

I. THE REQUEST FOR CPCN'S SHOULD BE DENIED AT THIS TIME FOR FAILURE TO SATISFY THE STANDARDS FOR GRANTING A CPCN

LGE/KU have requested the Commission to grant a Certificate of Public Convenience and Necessity ("CPCN") to allow for full deployment of AMS electric meters throughout the LGE and KU service areas, and to add indices to the gas meters in the LGE service area. This Commission reviews requests for a CPCN against the standards of the governing statute and case law. KRS 278.020(1)(a) provides, (with certain exceptions inapplicable here) that "[n]o person, partnership, public or private corporation, or combination thereof shall commence providing utility service to or for the public or begin the construction of any plant,

equipment, property, or facility for furnishing to the public any of the services enumerated in KRS 278.010 . . . until that person has obtained from the Public Service Commission a certificate that public convenience and necessity require the service or construction.” KRS 278.020.

In deciding whether public convenience and necessity *require* the service or construction, the Commission “may issue or refuse to issue the certificate, or issue it in part and refuse it in part[.]” KRS 278.020(1)(b). The question of whether “public convenience and necessity require” the service or construction for which the CPCN is sought, has been interpreted by Kentucky courts in this manner:

We think it is obvious that the establishment of convenience and necessity for a new service system or a new service facility requires first a showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed and operated.

Second, the inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.

The above two factors have relation to the need of particular consumers for service. However, our concept of the meaning of 'public convenience and necessity,' as expressed in our decisions in previous cases, embodies the element of absence of wasteful duplication, as well as a need for service.

Kentucky Utilities Co. v. Public Service Com., 252 S.W.2d 885, 890 (1952).

Thus the determination to issue, deny, or partially issue or deny, the CPCN is based *not* on what other utilities in other states, or for that matter in other service areas in *this* Commonwealth, are doing with respect to AMS deployment. The Joint Application must demonstrate that deployment of the AMS *within the LGE/KU service area* is necessary at this time due to the “substantial inadequacy of existing service” due to “substantial inadequacy of service facilities” **and** that in addition to the need for service, there is an absence of wasteful duplication.

The testimony of John Malloy and associated exhibits on which the Joint Application case for issuance of a CPCN rests, fail to demonstrate a **need** by customers for the AMS deployment, and likewise fail to demonstrate that the premature retirement and scrapping of functional, reliable, meters is anything *but* a matter of wasteful duplication.

A. The Joint Application Fails To Demonstrate That AMS Deployment Is Needed Due To The Inadequacy Of Existing Meter Technology

It is undisputed in the record of this proceeding that the current generation of electric meters within the LGE/KU service areas are capable of performing their intended function, which are to measure the usage of electricity and, in the LGE service area, of natural gas, by the customer. There is no demonstration in the Joint Application or in the record that the existing meters provide service that is substantially inadequate, so that the first prong of the test for a grant of a CPCN is lacking.

When asked whether the utilities were able to provide reliable service to customers using existing meters, witness Malloy indicated “yes, we are.” Hearing, July 24, 2018, Malloy, at 1:32:13 pm. To his knowledge, witness Malloy indicated that neither LGE nor KU had been cited by the Commission for failure to provide reliable service due to shortcomings in the functionality or capability of the current meters. *Id.* at 1:32:25.

During cross-examination of witness Malloy, Commission Staff reviewed the standard for the grant of a CPCN and asked Mr. Malloy why LGE/KU chose this time to request a CPCN:

Q. I'm sure you know that the standard for a CPCN, the utility must show that the facility and the capital investment is needed. Generally that's been interpreted to be necessary for the provision of adequate, reliable, and safe service while considering a range of reasonable options. And here's my question – why would installing the proposed system now versus fifteen years or backing up say ten to fifteen years from now when the currently deployed meters reach the end of their life. Why is this necessary now?

The response by witness Malloy fell far short of justifying the *necessity* for deployment. His response was that the companies now believe that there is a net benefit to customers and that not moving forward would “deprive customers of those benefits[.]” Hearing, Malloy, 2:28:14 pm.

Malloy identified reliability as an issue, indicating that deployment of the AMS would better allow identification of “nested” outages. Yet there is no indication that LGE or KU have been cited by the Commission for failure to provide reliable services, nor that the companies have failed to timely restore service during outages. The requirement for “substantial

inadequacy" of the existing meters required to support issuance of a CPCN is lacking.

The other benefit witness that Malloy cited to support the necessity of deployment now, was that the AMS would "avail customers of control over their energy consumption, not that they don't have control today but they'd have more granular information for better control than what they would today." Hearing, Malloy, 2:29:04 pm. As noted before, day-after data (as contrasted with real-time data) is of little to no benefit to ratepayers in controlling energy costs.

B. Replacement Of Over 900,000 Existing Meters With An Average Remaining Useful Life Results In Wasteful Duplication

As far as wasteful duplication, the customer will be required to continue to pay for the existing meters for 15 (LGE) and 17 (for KU) years after those meters have been pulled, replaced, and scrapped. Hearing, Malloy, 1:37:59-1:38:13 pm. The disposition of the meters once removed will be to discard them. Hearing, Malloy, 1:42:28 pm. In prefiled testimony. Witness Malloy argued that the full cost of paying for the discarded meters should continue to fall on customers, even though they will no longer benefit, because the meters were at some prior time approved as prudent investments by Commission. Yet Mr. Malloy acknowledged that it was likely not the case that the Commission was informed that those meters would be removed and scrapped 15 years before the end of their useful life. Hearing, Malloy, 1:57:32.

Deployment of AMS in the LGE/KU system at a time when the current generation of meters remain serviceable and reliable, fails to satisfy the threshold for a CPCN. The proposal strands significant investments without need, and saddles the ratepayers with the costs of paying the remaining costs of those investments that approval of the CPCN would strand.

Deployment under the business plan proposed by LGE/KU will result in the customer being required to pay off the scrapped meters, at the same time that it is paying for the first generation of AMS, and potentially for a second set of advanced meters if the unsupported assumption of a 20-year useful life for AMS meters that are warranted to perform for only five years, provides to be overly optimistic.

II. THE COSTS OF THE PROPOSED DEPLOYMENT OF THE AMS EXCEED REALISTICALLY ANTICIPATED BENEFITS, SO THE CPCN SHOULD BE DENIED

As noted earlier, the Joint Application for CPCNs rests entirely on the testimony of Mr. Malloy and the exhibits associated with his testimony.

Joint Application, Num. Para. 12. The benefits associated with the deployment of the AMS, according to Mr. Malloy, fall into three categories.¹

¹ According to the testimony of Mr. Malloy in response to a question by Commissioner Matthews, the cost-benefit analysis was conducted in a blended manner for both LGE and KU rather than on each company. Lacking in the record is an adequate assessment of the reasonably anticipated net benefits of installation of the new gas meter indices in the

According to the Joint Application, fully deploying AMS will provide will provide “net benefits to customers by creating net cost savings, increased distribution grid efficiencies and performance, and empowering the Companies with data potentially to offer new rates and services in the future.” Malloy Direct Testimony at p. 2.

More specifically, the testimony explained the anticipated benefits in this manner:

These net savings result from operational savings (e.g., reduced meter reading expense), improved identification and attribution of non-technical losses (i.e., losses resulting from theft of service and malfunctioning meters), and reduced energy consumption by customers as they become more aware of their consumption patterns by reviewing the granular consumption information AMS provides and seeking to increase their energy-efficiency measures and behaviors.

Regarding increased distribution grid efficiencies and performance, AMS data could be used for transformer load management, which may allow some distribution transformer failures to be predicted earlier, with preemptive repair or replacement of such transformers reducing outage durations and avoiding the additional cost of “emergency” replacements. AMS can also proactively report when power outages have been detected for individual meters, help the Companies identify the location and extent of outages, supporting more rapid and effective coordination of restoration efforts. Finally, AMS can reduce the number of instances in which a crew is dispatched to a reported outage, but arrives on-site to find utility-responsible services operating properly.

In addition, data from AMS meters will allow the Companies to consider and propose additional rate and service offerings, including various kinds of time-of-day rate structures and a variety of service-related notifications and updates that could aid

LGE service area. Since those indices will not provide for remote disconnection and reconnection of service, the workforce savings associated with AMS electric meters will likely be lower on the gas side.

customers in understanding and modifying their energy consumption patterns. Although the Companies are not proposing any new rates in this proceeding, and are not committing to do so, they anticipate that data provided by AMS will help the Companies better formulate rates and rate structures in the future.

Malloy Testimony at p. 3.

When “unpacked,” the anticipated benefits are nebulous, and the anticipated useful life of the AMS assets results on a hope rather than any empirical basis, while the costs are very real (and as noted by the Alvarez testimony, likely understated).

A. The 20-Year Projected Life Of The AMS Meters Rests On Scant Evidence And Should Be Discounted

As was noted both during the Attorney General's cross-examination of witness Malloy, and in the questioning by Commissioner Cicero, the cost-benefit analyses provided by LGE/KU demonstrates a net benefit *only* if one assumes the useful life of the AMS will be 20 years, rather than 15 or 18 years. Yet the AMS selected for installation by the companies is warranted only for a five (5) year period, and, due to the fact that the AMS have relatively recently begun to be deployed by utilities, there is **no** empirical evidence in the record to support the estimated useful life of 20 years.

The sole bases identified by witness Malloy to support the selection of the 20-year life were twofold: anecdotal discussions from other utilities concerning their projections on the useful life of the AMS, and an email

between two parties “with no supporting documentation.”² Question from Commissioner Cicero, Hearing, 2:37:43. The companies have failed to justify the choice of a useful life that is considerably longer than that assumed by other utilities seeking to deploy AMS in their service areas in Kentucky.

When questioned by Commissioner Cicero how the company could assume a 20-year life without supporting documentation from Landis and Gyr to justify that assumption, witness Malloy responded that:

I understand your point, and we can reach out to Landis and Gyr to get a more definitive answer but we were comfortable with the 20-year useful life.

Hearing, Malloy, 2:37:55 pm.

Respectfully, the time to have done so was before the hearing in this matter. Lacking any empirical basis for the 20-year projected useful life, the company has failed to demonstrate that the costs of deploying a generation of meters warranted for only five (5) years, is justified because those meters will last 20 years. As noted by witness Malloy, actual data on the performance of these AMS is currently lacking. Given that AMS is new technology without a demonstrated track record over the mid- and long-

² According to witness Malloy, the email thread presented as support for the assumed 20-year useful meter life, was between a Landis and Gyr employee and Jonathan Whitehouse of LG&E, and provided no support documentation for the assumed 20-year useful life.

term, a 20-year useful life assumption is unsupported and should not be accepted by the Commission.

B. The Failure To Extend The Planning Horizon Beyond The Projected Useful Life Of The AMS Meters Ignores Significant Future Costs

In her prefiled Direct Testimony, MHC Director Hinko expressed concern that the cost-benefit assessment of the AMS deployment failed to consider the significant costs of replacing the first generation of AMS shortly after the 20-year assumed useful life of the meters:

[T]he life of the new AMS meters will be 20 years, (Testimony of John P. Malloy filed January 10, 2018 as part of the application, on page 21). This is a much shorter life cycle than the current non-AMS meters, necessitating replacement much sooner. Ratepayers will have to endure another significant fee spike since the new meters will all be installed in only a few years. And that significant cost to ratepayers at and after 20 years is studiously avoided as a topic since the cost would be incurred shortly after the period of 20 years chosen by LG&E to assess cost/benefit to 20 years. If the cost/benefit horizon were extended to 25 years instead of 20, it would completely change the ratio of costs to savings to ratepayers.

Hinko Direct Testimony, p. 11.

In his rebuttal testimony, witness Malloy responded that in order to look out beyond the 20-year horizon, one would need to look at both the costs *and* the benefits of the second-generation meters. Yet in his testimony at the hearing, Malloy acknowledged that a significant portion of the projected benefits of deployment of the AMS would be present with respect to the second generation of meters:

Q. You criticized Ms. Hinko's testimony regarding the costs and benefits of the AMS. She had proposed to use a 25-year horizon

rather than the 20-year because her assumption as that within 25 years you're gonna have to replace this first generation of meters. And you said well its inappropriate to look at that without looking at all of the benefits over that next planning cycle. Is that roughly correct?

A. That's roughly correct.

Q. In that second planning cycle, the operational savings will no longer be extant, will they?

A. They will not.

Q. So 41% of the benefits that you currently see in replacing these jobs with meters will not be there for the second round.

A. Not be there for the second assessment.

Hearing, Malloy, 2:09:11 - 2:09:30.

The marginal net benefit presented in the deployment of the first generation of AMS rests in a significant part on the idling of a workforce and replacement of their functions with a metering infrastructure that is less durable than the meters being replaced, and whose useful life is warranted at for only five years. Consideration of the distinct possibility of replacing the first generation of meters with a second, even as the customer is paying for the current meters and first generation of AMS, must be part of any reasonable cost-benefit analysis.

C. The Mantra Of "Granularity" And The Questionable Inherent Benefits of Access To Day-Old Usage Data

Throughout the hearing, the availability of more "granular" data was highlighted as a distinct and inherent benefit to customers. The assumption undergirding the projected conservation benefits to

customers is that armed with more “granular” data regarding electricity usage, the customer will undertake conservation and energy efficiency measures that it would not otherwise undertake given the usage data on a monthly basis.

The justification given by witness Malloy for selecting the proposed AMS for deployment, and for not considering any other alternatives to the business case (such as AMR, replacement of meters when they are fully depreciated or failed, deploying smart meters in rural areas and keeping electromagnetic meters in urban areas), was that

There were no alternatives identified that would meet the needs that we were trying to establish to serve our customers with the granular meter information they would need to manage their conservation and manage their energy consumption, so if you went with standard meter reading as we have today, digital meters, AMR, none of that capability solved the problem we were trying to solve is moving customers into control their own energy consumption.

Hearing, Malloy, 9:56:35 am.

Yet the later testimony of witness Malloy in response to questioning from Commissioner Matthews calls into serious question the value of “granular data,” by underscoring that access to day-old usage data does not drive adoption of energy efficiency measures by customers, and that customers are not motivated to undertake efficiency measures due to data usage on a previous day:

Q. If its hot today, am I going to make my decision on where to set my thermostat based on my usage yesterday that I looked up in the e-portal?

A. Well I think its fair. What you're trying to do over time on a conservation exercise in your home is – you're not really making, generally making discrete decisions every minute of every day. You're deciding I want to deploy LEDs in the rooms I use more often; I want to set my thermostat to here, and I'm going to look back on the last month and say was it helpful, not helpful, and if so how much, and draw conclusions about your consumption over time and not such discrete decisions as you're referencing today.

Hearing, Malloy, 2:47:58 pm.

The assumption that access to day-old “granular” data on usage the prior day, will drive energy efficiency measures in a manner that is different from the incentive to install such measures based on monthly usage data that is provided by the current meters, is thus without basis, and the business case for selecting AMS and rejecting any alternatives that might achieve comparable energy conservation and efficiency fails.

Any other benefits that the company projects from its access to more granular data, such as allowing it to explore and propose alternative pricing, can be done using the data that the company has collected from the pilot opt-in program. There is no need to deploy AMS to gain data to develop rate offerings, nor is there any assurance that the company *will* offer alternative rates if the AMS deployment is approved, since the Direct Testimony of Mr. Malloy specifically disclaims any commitment in that regard:

In addition, data from AMS meters will allow the Companies to consider and propose additional rate and service offerings, including various kinds of time-of-day rate structures and a variety of service-related notifications and updates that could aid

customers in understanding and modifying their energy consumption patterns. Although the Companies are not proposing any new rates in this proceeding, and are not committing to do so, they anticipate that data provided by AMS will help the Companies better formulate rates and rate structures in the future.

Malloy Direct testimony at p. 3.

The assumption that “more granular” data will cause customers to change behavior is questionable for another reason. Information concerning usage patterns during peak and off-peak times may be interesting, but with blended rates that are not depending on the time-of-usage, information on prior-day usage has no value to customer over current monthly bills, since changes in daily usage patterns will not affect the overall bill in blended rates.

If encouraging greater conservation and energy efficiency is a primary benefit justifying AMS deployment, a more direct way to achieve those savings may be to increase company investment in DSM and EE programs. Yet LGE is proposing to eliminate and trim those programs that directly address conservation and usage reduction. Without a comparative assessment of the prudence of the proposed AMS deployment in securing greater energy efficiency and energy conservation, this justification for issuance of the requested CPCNs cannot be tested for adequacy.

D. Much Of The Anticipated Benefits Of AMS Deployment on Customer Energy Usage Will Be Transitory

The asserted financial benefit to customers of savings from lower energy usage failed to take into account the transitory nature of a significant percentage of those savings. With a significant percentage of fixed costs for LGE and KU embedded in the volumetric rates, it is reasonable to assume that the companies will seek to recover lost revenue due to lower energy usage in a subsequent rate case. As the volume of usage declines, the fixed costs will be recovered in the form of higher rates or higher customer charges, or a combination of both, thus reducing the projected benefits of lower energy usage due to access to "granular" day-old usage data.

III. THE PROPOSED OPT-OUT PROVISIONS ARE PUNITIVE AND UNREASONABLE, PARTICULARLY IN LIGHT OF QUESTIONABLE BENEFITS OF THE AMS DEPLOYMENT TO CUSTOMERS

The proposal to impose an initial, and a recurring, meter charge for existing customers who wish not to have their perfectly-useful meters replaced with an advanced meter, is discriminatory and punitive. The imposition of the charges individually on those customers, rather than across the customer class, results in a precipitous increase in charges for those individual customers wishing simply to be "left alone," and will likely fall disproportionately on protected classes of customers (low- and fixed-

income) for whom the benefits of the AMS deployment are the most speculative and unlikely.³

The costs of the pilot program, which is available only to 5,000 customers in each of the service areas, were not imposed individually on the customers who elected to participate in the smart-meter deployment, and whose participation incurred the costs of the new meters, but rather was spread to and paid by the entire residential customer class. Hearing, Malloy, at 2:01:08 pm. In other words, the entire residential customer class paid for a program available to only a relative few customers.

Similarly, the residential DSM and EE programs are paid for by all residential customers through a DSM surcharge and not solely by those individuals who choose to participate in them, irrespective of whether the DSM or EE offerings. Id., 2:02:19 pm.

Assuming that the selective imposition of the costs of maintaining the *status quo* with respect to existing meters is appropriately imposed on those choosing not to participate, the proposed meter charge is without sound basis in the record. The sole basis for the determination that .8% of customers would opt-out, was a review of eight other utilities' experience with opt outs. Yet it is unclear whether the opt-out provisions of those

³ With respect to the impact on low-income customers, Witness Malloy indicated that the companies hadn't considered whether the opt-out charges would be eligible under the low-income energy assistance programs. Hearing, Malloy, 1:07:43 pm.

programs were similar to that proposed by LGE/KU; making such comparison questionable. Witness Malloy admitted that he did not know the reason(s) for the variability in opt-out numbers in the Northeast, Hearing, Malloy, 2:04:29, nor was he aware of whether any of those eight states had either set-up or monthly opt out charges, Hearing, Malloy, 2:03:52 pm, making a comparison of those states' experiences and of LGE'KUs opt-out proposal impossible.

The structure of the proposed opt-out charge is such that a residential customer choosing to opt-out would, under the LGE/KU business case, be obligated to continue to pay monthly for the costs related to the generation of scrapped meters, would additionally be paying monthly the costs of underwriting the deployment of the AMS, that they elect not to utilize, **and** 100% of the cost of serving those who choose to opt-out.

The proposal appears more punitive in nature than compensatory, particularly since it begins to impose opt-out fees at a time when there should still be staff on the payroll reading meters for customers that are not opting out but for which the AMS switch-over has not yet occurred.

The proposal to recover 100% of the opt-out expenses from those choosing to opt-out, could have a dramatic negative impact on customers with low- and fixed-incomes that are already struggling to pay their utility bills. Yet the company has not reviewed the distribution of opt-

outs from the AMS deployment by income, and does not know the profile of people more likely to opt out. Hearing, Malloy, 2:08:19 pm.

The incorporation of the costs of servicing customers electing to opt out should not be imposed solely on that population, when they will be required to pay additionally the costs of AMS deployment despite their election not to participate. Instead, the company should work to develop lower-cost mechanisms for securing meter readings from opt-outs, and the costs should be distributed across the customer base, just as the costs of deployment and of DSM/EE programs are so distributed.

CONCLUSION

Company unwilling to commit to no cost overruns being imposed on ratepayers. 2:11:39. Company also not willing to commit to adjustments being made if the benefits don't materialize. 2:13:17 pm. Witness Malloy indicated that he believes that the companies had done a robust assessment, and that they "are comfortable with our costs and benefits in this case." 2:13:25. If the CPCNs are granted and cost recovery is allowed for the AMS deployment, given the unwillingness of the company to accept a share of the risks associated with the MAS deployment, those additional costs and underachieved benefits will fall entirely on the ratepayers.

Respectfully submitted,



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CERTIFICATE OF SERVICE

This is to certify that this electronic version of the Post-Hearing Brief of the Metropolitan Housing Coalition is a true and accurate copy of the same document being filed in paper medium; that the electronic filing has been transmitted to the Commission on August 10, 2018; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that an original and six (6) copies in paper medium of the Post-Hearing Brief of the Metropolitan Housing Coalition will be delivered by priority mail within two (2) business day of August 10, 2018 to the Commission.



Tom FitzGerald