

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

**ATTORNEY GENERAL’S POST-HEARING BRIEF**

Comes now the intervenor, the Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention, and states as follows for his post-hearing brief in the above-styled matter.

**STATEMENT OF THE CASE AND INTRODUCTION**

Louisville Gas and Electric Company and Kentucky Utilities Company (the “Companies,” or LG&E/KU) filed their notice of intent on January 3, 2018 to the Public Service Commission (the “Commission”), and shortly thereafter filed their Joint Application (“Application”) for Certificates of Public Convenience and Necessity (“CPCN”) for Full Deployment of Advanced Metering Systems (“AMS”), on January 10, 2018. The Commission deemed the Application accepted for filing on January 19, 2018. On January 30, 2018, the Companies filed an Informational Update to their business case to reflect changes due to the recently enacted Tax Cuts and Jobs Act of 2017 (“TCJA”).

The Attorney General was granted full intervention on January 12, 2018. Multiple other parties were subsequently granted intervention.<sup>1</sup> Upon the motion of the Attorney

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<sup>1</sup> Kentucky Industrial Utility Customers (“KIUC”), on January 30, 2018; Association of Community Ministries, Inc. (“ACM”), on February 14, 2018; Metropolitan Housing Coalition (“MHC”), on February 14, 2018;

General, the Commission suspended the original procedural schedule, and later entered a revised procedural schedule. Two rounds of data requests were conducted upon the Companies' Application and Direct Testimony. After intervenors submitted testimony, the Companies and Commission Staff conducted one round of data requests. On June 8, 2018, the Attorney General submitted corrected witness testimony. The Companies filed rebuttal testimony on June 15, 2018. The Companies filed another Informational Update on July 3, 2018, with the final net benefit of the proposal calculated as a net present value revenue requirement ("NPVRR") amount of \$24.6 million. Finally, an evidentiary hearing was held on July 24, 2018.

The Companies' Application is novel and extraordinary in that it is based on a cost-benefit analysis that can only be beneficial to customers if the Commission assumes that: 1) AMS meters will last longer than any other utility has depended on before, and longer than any of the support cited by the Companies; 2) other utilities have grossly underestimated benefit levels in their own cost-benefit analyses for significant benefit types; 3) the Companies can increase their theft and failed meter billing and recovery from less than \$1M a year to an average in excess of than \$17.5M a year, while incurring no additional costs or changing any of their billing or collection processes; 4) dedicated conservationists and ordinary customers are similarly motivated to conserve energy; 5) fixed costs will fall as a result of any conservation customers do achieve; 6) the Companies will be incentivized to help customers conserve energy, even though they acknowledge doing so will eat into their own margins; 7) perfect rate treatment of costs and savings will result, while simultaneously assuming no rate cases and perpetual savings; and, 8) it is fair, just and reasonable for customers to pay for two

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Community Action Council for Lexington-Fayette, Bourbon, Harrison, and Nicholas Counties, Inc. ("CAC"), February 14, 2018.

meters when they are only receiving benefits from one (the Companies ignore all economic customer consequences associated with retiring existing meters prematurely).

Even if the Commission is able to squint and turn its head to the side just enough to find that the business case is cost-beneficial, the Companies failed to provide *any alternatives* for the Commission to consider, although required to do so to obtain a CPCN. In addition, faced with overwhelming evidence that a favorable customer benefit-cost ratio is *not* achievable, the Companies still “recommend approval even if the Commission believes costs modestly exceed quantified benefits.”<sup>2</sup> Despite the fact that the Companies failed to review alternatives, or the fact that the cost-benefit analysis is net-negative for customers, the most alarming issue is that 100% of the financial risk of the AMS deployment falls squarely on customers. The Companies anticipate recovering *their* costs of the meters over the first fifteen years, but those meters are going to have to last another 5 years or more *and* attain the questionable levels of savings the Companies anticipate, just for customers to *break-even on the investment*. Such a CPCN is simply not fair, just and reasonable for customers. The Commission has reviewed the record in this matter, including public comments, and knows there is little-to-no public support for the proposal. Customers do not want this project; the Companies do. Yet, the Application is proposed in a manner that ensures the Companies’ full recovery of its investment and expenses (together with a return thereon), in both the AMS meters and meters retired prematurely, with no assurance that expense reductions and quantifiable savings will exceed costs. Customers deserve better, and in this case, Commission approval of the Application is not in customers’ best interest.

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<sup>2</sup> Case No. 2018-00005, *In the Matter of: Electronic Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for Full Deployment of Advanced Metering Systems*, Rebuttal Testimony of John. P. Malloy (“Malloy Rebuttal”) (Ky. PSC June 15, 2018) at 50.

## ARGUMENT

### 1. The Companies Failed to Meet the Burden of Proof to Justify Approval of the Required CPCN

In Case No. 2012-00428,<sup>3</sup> the Commission initiated an administrative docket in order to consider implementation of Smart Meter and Smart Grid technologies. All of Kentucky's jurisdictional electric utilities, including LG&E/KU, were parties to that proceeding. In its Final Order in that docket, the Commission found that while a certificate of public convenience and necessity ("CPCN") may not be necessary for *all* Smart Meter / Smart Grid technology deployments, nonetheless:

"[w]ith regard to CPCNs, the Commission finds it appropriate for jurisdictional electric utilities to obtain CPCNs for *major* AMR or AMI meter investments. In the past, when addressing requests for CPCNs for AMR and AMI meters, the Commission has noted its concern regarding a number of meter related issues such as cost, compatibility with current system equipment and software, and unplanned obsolescence."<sup>4</sup>

The Commission's finding that major Smart Meter programs should include a CPCN filing is also fully consistent with its findings in prior cases.<sup>5</sup> Moreover, in that same docket, LG&E/KU asserted that a cost-benefit analysis should support any Smart Meter CPCN application.<sup>6</sup>

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<sup>3</sup> *In Re: Consideration of the Implementation of Smart Grid and Smart Meter Technologies*, Final Order dated April 13, 2016, at 1-2.

<sup>4</sup> *Id.*, at 11 [emphasis added].

<sup>5</sup> *See, e.g.*, Case No. 2009-00143, *In Re: Application of Inter-County Energy Cooperative for a CPCN*, Final Order dated Dec. 23, 2009, at 4.

<sup>6</sup> Case No. 2012-00428, Direct Testimony of Lonnie E. Bellar, at 12; Direct Testimony of David Huff, at 6. *See also* Case No. 2009-00143, *supra* at 4: ("the Commission would prefer to have seen a cost-benefit analysis specific to Inter-County's program rather than rely on the 'overall benefits recognized by many utilities across the state and nation.' The Commission recommends that, in future work plan applications, if Inter-County proposes any large expenditures for new technologies such as AMR devices, Inter-County should perform a cost-benefit analysis as part of its application, showing how the proposed expenditure will benefit Inter-County's system and customers specifically.").

As the Commission noted in Case No. 2017-00419: <sup>7</sup>

“The Commission's standard of review of a request for a CPCN is well settled. No utility may construct or acquire any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission except as provided in **KRS 278.020(1) and (2)** and 807 KAR 5:001, Section 15(3), which are provisions not applicable to this matter. To obtain a CPCN, a utility must demonstrate a need for such facilities and an absence of wasteful duplication.<sup>8</sup>

“Need” requires:

[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 or operated.

[T]he 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.<sup>9</sup>

“Wasteful duplication” is defined as “an excess of capacity over need” and “an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties.”<sup>10</sup> To demonstrate that a proposed facility does not result in wasteful duplication, we have held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.<sup>11</sup> Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.<sup>12</sup> All relevant factors must be balanced.<sup>13</sup>

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<sup>7</sup> *In Re: Application of Grayson RECC for a CPCN to Install an AMI System*, Final Order dated July 16, 2018.

<sup>8</sup> *Id.* at p. 4 (quoting *Kentucky Utilities Co. v. Public Service Comm'n*, 252 S.W.2d 885 (Ky. 1952)).

<sup>9</sup> *Id.* (quoting *Kentucky Utilities Co.*, *supra*, at 890).

<sup>10</sup> *Id.*

<sup>11</sup> *Id.* (citing Case No. 2005-00142, *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a CPCN for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky* (Ky. PSC Sept. 8, 2005).

<sup>12</sup> *Id.* (citing *Kentucky Utilities Co. v. Public Service Comm'n*, 390 S.W.2d 168, 175 (Ky. 1965); and Case No. 2005-00089, *Application of East Kentucky Power Cooperative, Inc. for a CPCN for the Construction of a 138 kV Electric Transmission Line in Rowan County, Kentucky* (Ky. PSC Aug. 19, 2005), Final Order dated Nov. 9, 2005).

<sup>13</sup> *Id.* (citing Case No. 2005-00089, *supra*, Final Order at 6).

The Commission is also required under KRS 278.040 (1) “to regulate utilities and enforce the provisions of this chapter,” which includes insuring that utility rates are fair, just and reasonable.<sup>14</sup> This charge, more than any other, guides the Commission in ratemaking decisions. The statute’s language implicates rates as they pertain to utilities being able to demand rates that are fair, just and reasonable in exchange for service. However, courts have interpreted the language more broadly as to include the context of the relationship between utility and consumer, and have more readily applied the principle of equity in rates on behalf of the consumer, resulting in an analysis of affordability.<sup>15</sup> Inherent in the scheme set forth in KRS Chapter 278, the Commission must ensure that the “conflicting interests of all parties concerned with utility rates are fairly balanced,” including the “reasonableness of the costs” of projects “in comparison with other alternatives.”<sup>16</sup> For the reasons set forth below, the only way the Commission can accomplish its mission in the instant case is to deny the proposed CPCN.

a. The Companies Failed To Show A Substantial Inadequacy Of Service

The Companies propose to replace nearly one million electric meters and indices of over 300,000 gas meters.<sup>17</sup> The Companies have agreed in this docket that those meters are presently operable and capable of serving customers safely and reliably.<sup>18</sup> No evidence has been provided demonstrating that a significant portion of the existing meters are

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<sup>14</sup> KRS 278.030 (1).

<sup>15</sup> See, e.g., *Nat’l—Southwire Aluminum Co. v. Big Rivers Elec. Corp.*, 785 S.W.2d 503, 506–509 (Ky. App. 1990); *Kentucky Industrial Utility Customers, Inc. v. Kentucky Pub. Serv. Comm’n*, 504 S.W.3d 695, 705-709 (Ky. App. 2016).

<sup>16</sup> *Kentucky Indus. Utility Customers, Inc. v. Kentucky Pub. Serv. Comm’n*, 504 S.W.3d 695, 709 (Ky. App. 2016)(other citations omitted).

<sup>17</sup> Case No. 2018-00005, *In the Matter of: Electronic Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for Full Deployment of Advanced Metering Systems*, Testimony of John. P. Malloy (“Malloy Direct”) (Ky. PSC Jan. 10, 2018) at 9-10.

<sup>18</sup> July 24, 2018 Video Transcript of Evidence (“VTE”) at 9:13:14; VTE at 1:32:12.

malfunctioning or are otherwise inadequate. The record does reflect, however, that the current meters are not fully depreciated and that the Companies have yet to fully recover the cost, including a return, of those assets.<sup>19</sup> As of early 2018, the amount that LG&E/KU customers owe for their current, operable meters is more than \$90 million, and both utilities' weighted average remaining service life is "approximately" 15 years.<sup>20</sup> The Companies have simply not provided the Commission with sufficient evidence to support any showing of inadequacy.

The Companies also point to the fact that other utilities have been approved to deploy smart meter technology system-wide in support of their own CPCN for the same technology.<sup>21</sup> However, and of course undisclosed by the Companies, many if not most of the metering systems these utilities already had were either obsolete, or had already been significantly depreciated.<sup>22</sup> In the instant case, the Companies provided no evidence indicating that a significant portion of the companies' metering infrastructure is obsolete, malfunctioning, or that manufacturers will no longer provide technical support.

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<sup>19</sup> Companies' Response to PSC DR 1-45; VTE at 9:13:14 & at 1:32:12.

<sup>20</sup> Companies' Response to PSC DR 1-4; VTE at 9:13:36.

<sup>21</sup> See Malloy Direct at 4-6.

<sup>22</sup> See, e.g., *In Re Application of Clark Energy Cooperative, Inc. for a CPCN to Install an AMI System*, Case No. 2016-00220, Final Order dated Dec. 22, 2016, at 6; *In Re Application of Licking Valley RECC for a CPCN*, Case No. 2016-00077, Final Order dated Aug. 29, 2016 (vast majority of existing meter infrastructure had already been fully depreciated, and manufacturer no longer providing technical support); *In Re Application of Nolin RECC for a CPCN to Install an AMI System*, Case No. 2014-00436, Final Order dated Feb. 13, 2015, at 3 (AMR components installed in 2002 had reached the end of their service lives and were no longer supported by manufacturer); *In Re Application of Cumberland Valley RECC for Approval to Install an AMI System*, Case No. 2018-00056, Final Order dated July 9, 2018, at 1-6 (meters had become obsolete due to lack of manufacturer technical support); *In Re Application of Grayson RECC for a CPCN to Install an Advanced Metering Infrastructure System*, Case No. 2017-00419, Final Order dated July 16, 2018, at 1-8 (approximately one-half of the meters were obsolete, being 18 years old, and the remaining meters would soon become obsolete because the manufacturer will no longer provide technical support for them).

In Case No. 2014-00003,<sup>23</sup> the Companies obtained Commission approval for their second AMI meter pilot program (“AMS Customer Service Offering”), in which up to 5,000 AMI meters would be installed in each service territory for customers willing to participate.<sup>24</sup> However, the program is still not fully subscribed, with approximately 8,000 customers participating.<sup>25</sup> This constitutes approximately *only 1%* of the combined Companies’ customer base. Moreover, according to one study, most of the customers participating in the AMS Customer Service Offering (52%) never accessed the AMS feature that the Companies allege is a significant benefit: the MyMeter e-portal.<sup>26</sup> Since customers who signed-up for the AMS Customer Offering were likely the Companies’ most motivated, it is difficult to imagine that the proposed system-wide program will be any more of a success than the pilot. These telling numbers should indicate to the Commission that it would not be economically feasible if the Companies had continued on a voluntary basis, and offered AMS on an unlimited opt-in basis. Instead, in the current filing, it is obvious the Companies believe that AMS must be foisted on ratepayers if it is to have any chance of succeeding. The unsuccessful results of the AMS Customer Service Offering thus should call into question the economic feasibility of the program, and supports a denial of the CPCN.

- b. The Companies Failed To Provide Sufficient Evidence The Proposal Will Not Result In Wasteful Duplication
  - i. The Companies Failed To Consider or Review Reasonable Alternatives

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<sup>23</sup> *In Re: Joint Application of Louisville Gas & Electric Co. and Kentucky Utilities Co. for Review, Modification, and Continuation of Existing, and Addition of New, Demand-Side Management and Energy Efficiency Programs.*

<sup>24</sup> Malloy Direct at 11-12.

<sup>25</sup> Companies’ response to AG 1-9.

<sup>26</sup> Malloy Direct at 18.



The Companies bear the burden in demonstrating “that a thorough review of all reasonable alternatives has been performed.”<sup>27</sup> Respectfully, the Companies have wholly failed to meet their burden in this regard. When asked what alternatives were considered or even identified, let alone reviewed and provided to the Commission for its consideration, Mr. Malloy stated, “There were no alternatives identified that 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.”<sup>28</sup> Along with not thoroughly reviewing reasonable alternatives, it is apparent from Mr. Malloy’s response that the Companies defined their criteria in such a way as to secure a specific outcome (the AMS CPCN). During the hearing counsel for the Attorney General asked Mr. Malloy, “if you didn’t look at alternatives, how do you know that this is the most cost-beneficial alternative?” to which Mr. Malloy responded, “It’s the most cost beneficial technology given the criteria that we set in the assessment to meet all the needs.”<sup>29</sup>

It is abundantly clear that the Companies set the parameters in an outcome-determinative manner so as to justify choosing the option they have been reviewing for years.<sup>30</sup> Although we do not know if the Companies’ decision to “set the parameters” resulted in the most cost-beneficial option for customers, we most certainly know it produced the only option the Companies wanted the Commission to consider.<sup>31</sup> An application for a CPCN

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<sup>27</sup> *In Re: Application of Grayson RECC for a CPCN to Install an AMI System*, Final Order dated July 16, 2018 (citing Case No. 2005-00142, *supra*).

<sup>28</sup> VTE at 9:56:27.

<sup>29</sup> VTE at 10:00:44.

<sup>30</sup> VTE at 2:27:56; VTE at 9:57:57.

<sup>31</sup> VTE at 9:57:57.

juxtaposed against the status quo does not satisfy the Companies' burden on this issue. Mr. Malloy described the Commission's position succinctly: "They only have one choice."<sup>32</sup>

The record reflects that the Companies should have considered, but did not:

- 1) A geographic roll-out, or one that replaced meters in areas where the current stock is nearly depreciated. This concept was discussed in the SmartGridCity evaluation conducted by Mr. Alvarez's team, and referenced in his testimony provided in the 2016 rate cases. In regard to this concept, the evaluation concluded, "[a] utility need not upgrade its grid all at once, but over time based on logically prioritized geographies. The lesson is that incremental modernization [selective deployment as well as upgrading equipment as retired] is a realistic alternative to 'all or nothing' deployments;"<sup>33</sup>
- 2) Automatic Meter Reading ("AMR");
- 3) Delaying the project until the weighted-average remaining depreciable lives of the current meters is significantly less than today.<sup>34</sup>

ii. The Companies' Cost-Benefit Analysis Supports Denying The CPCN

The basis of the Companies' CPCN application is a cost-benefit analysis in the form of a business case in which the Companies have attempted to show that replacing the current, working, meters with new AMS meters is net beneficial to customers.<sup>35</sup> The following Commission Staff's question, and Mr. Malloy's response is indicative of the Companies' position:

Question: Why would installing the proposed system now, versus 15 years . . . or 10-15 years from now when the currently deployed meters reach the end of their life? Why is this necessary now?<sup>36</sup>

Answer: Well, we've said and we've studied, advanced meters for quite some time and even during ARRA heydays when government money was available we would invest at the pace of customer value and we had not seen customer

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<sup>32</sup> VTE at 10:01:53.

<sup>33</sup> Attorney General's Response to Companies' DR 1-1, Attachment - SmartGridCity Evaluation Report, dated October 21, 2011 (Ky. PSC June 8, 2018) at 12.

<sup>34</sup> VTE at 2:17:04.

<sup>35</sup> VTE at 9:13:50.

<sup>36</sup> VTE at 2:27:22.

value over several assessments along the way and now that we believe there is a net benefit to customer, depriving our customers of those benefits and moving us into an automated framework. . . we think the benefits outweigh the costs, even the costs of waiting.<sup>37</sup>

Mr. Malloy's statement at the hearing ("we *think* the benefits outweigh the costs"),<sup>38</sup> is a much more candid indication of the Companies' position as compared to what they filed into the record. For instance, Mr. Malloy's position in the Application was that the deployment "will provide net benefits," but in rebuttal testimony, he began hedging this position.<sup>39</sup> In discussing previously available federal subsidies Mr. Malloy stated, "the Companies have shown in this proceeding that the proposed AMS deployment is likely to be net beneficial even absent outside subsidies."<sup>40</sup> Rather, the Companies' real position(s) are that benefits: (a) will; (b) likely will; or (c) they think will, outweigh costs. Respectfully, the Attorney General can unequivocally say that any unbiased review of the evidence in this matter will find that the level of benefits assumed in the business case will *not* materialize to the levels the Companies estimate, and therefore will not exceed costs. As the basis for the CPCN, since the cost-benefit analysis is overwhelmingly negative for customers, the Commission must deny the Application.

### Unreasonable Time Periods

The Companies' business case calculated benefits from 2018 through 2040, or 23 years, and originally estimated the net present value revenue requirement benefit from deployment of \$28.5 million.<sup>41</sup> This 23-year period, best described as the "benefit period," is the longest

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<sup>37</sup> VTE at 2:27:56.

<sup>38</sup> *Id.* (emphasis added).

<sup>39</sup> Malloy Direct at 2 (emphasis added).

<sup>40</sup> Malloy Rebuttal at 8 (emphasis added).

<sup>41</sup> Malloy Direct at 7.

such benefit period of which either Mr. Alvarez or Mr. Malloy seem to be aware.<sup>42</sup> If the meters in the proposal do not last as long as advertised, presuming every other number the Companies assumed is correct, customers lose. The table below, which was provided in the Companies' July 3, 2018 Informational Update, proves that:

\$M	Service Life		
	15-year	18-year	20-year
Project NPVRR*	\$ 67.2	\$ 18.1	\$ (11.6)
Nominal Benefit	\$ 648.0	\$ 803.6	\$ 913.8
Benefit NPV	\$ 368.4	\$ 417.6	\$ 447.3

\*Negative amount means benefits exceed costs

Since the outset, the Companies have framed this case as a CPCN application supported by a cost-benefit analysis over 23-years that assumes a 20-year service life, on average, for AMI meters. For instance, in his January 10, 2018 Direct Testimony in this matter Mr. Malloy stated, “[t]he Companies project that over the estimated 20-year life of the fully deployed AMS metering system, the Companies and their customers will receive net benefits.”<sup>43</sup> Mr. Malloy is further asked the question, “[t]he Companies appear to have assumed an average service life of 20 years for AMS meters (2021-2040) in addition to the deployment period of 2018-2020. Is this reasonable?”<sup>44</sup> Mr. Malloy responded, “Yes, it is reasonable.”<sup>45</sup> Mr. Malloy casually goes on to provide testimony in support of the Companies’ purported use of a 20-year useful life.<sup>46</sup> In a prolonged attempt to discredit Mr. Alvarez’s

<sup>42</sup> Case No. 2018-00005, *In the Matter of: Electronic Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for Full Deployment of Advanced Metering Systems*, Corrected Direct Testimony of Paul J. Alvarez (“Corrected Alvarez Direct”) (Ky. PSC June 8, 2018) at 22; VTE at 9:55:42.

<sup>43</sup> Malloy Direct at 10.

<sup>44</sup> Malloy Direct at 21.

<sup>45</sup> Malloy Direct at 21.

<sup>46</sup> See Malloy Direct at 21-24; See also Companies’ Response to Staff DR 1-9; Companies’ Response to AG DR 1-5, 1-32, 1-33, 2-1, 2-22, wherein the Companies respond to data requests referencing the 20-year assumption as if that is exactly the period they used, including claiming that they still “believe a 20-year service life is

expert testimony about a more realistic service life for the AMI meters, Mr. Malloy dedicates an entire section of his rebuttal testimony to, “**The Companies’ Use of a 20-year AMS Service Life is Reasonable and within Industry Norms.**”<sup>47</sup> Amazingly, it was not until the hearing that Mr. Malloy changed his tune about exactly what service life the cost-benefit analysis was based upon.

Mr. Malloy’s statement at the hearing, that, “we expect, as filed in testimony, for the useful life or service of the meters to be 20, 20 plus years” was a clear indication that the cost-benefit amount the Companies based its proposal on assumed a service life longer than 20 years.<sup>48</sup> Significantly, however, the Companies have provided no evidence to support an AMS service life beyond 20 years.<sup>49</sup> The newly discovered reality of the Companies’ business case is that it assumes every newly installed AMS meter will last through the “23-year assessment period regardless of when it was put in.”<sup>50</sup> When asked to confirm that the Companies “used a service life beyond . . . 20-years,” Mr. Malloy answered, “correct.”<sup>51</sup> Mr. Malloy distinguished the two tables in the July 3, 2018 Information Update by explaining that “the bottom chart (provided above) is a 23-year benefit period but with a 20-year service life of the new meters,” or exactly what the Companies have maintained the top table has represented during the entirety of this case.<sup>52</sup> To be more specific, the bottom table represents the NPVRR cost-benefit amount (\$11.6M) assuming a 23-year benefit period, and that meters roll-off and

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reasonable to assume for full AMS deployment,” because they expected a 20-year service life for those AMS meters installed in the Downtown Louisville Network.

<sup>47</sup> Malloy Rebuttal at 12.

<sup>48</sup> VTE at 9:19:59.

<sup>49</sup> VTE at 9:55:45.

<sup>50</sup> VTE at 9:17:50; *See also* VTE at 9:18:17.

<sup>51</sup> VTE at 9:52:38.

<sup>52</sup> VTE at 9:17:15.

stop providing benefits 20-years to-the-date it rolled-on and began providing benefits.<sup>53</sup> It is this bottom table, provided in the July 3, 2018 informational update, which the Commission should consider the actual NPVRR cost-benefit scenario the Companies have been attempting to support throughout this case. Instead of the Companies' case in chief being that this proposal is net beneficial to customers in excess of \$24.6M, it seems that under the facts and positions they present, it merely results in a NPVRR benefit of \$11.6M. If there was any question as to how slim the projected net benefit was before, there is no question now that the Companies' own application, *as filed*, rests on the thinnest of ice.

The Companies' basis for utilizing a purported "average service life of 20 years for AMS meters,"<sup>54</sup> is a review of other utilities' analyses.<sup>55</sup> The Companies cited several other utilities' cost-benefit studies to try to prove 20-years "is consistent with a number of other utilities' assumptions."<sup>56</sup> First, the Companies cited the Ameren Illinois study's research of other utilities' *depreciable* lives<sup>57</sup> and to ConEd's apparent assumption of a service life of "at least 19 years . . . and likely 20."<sup>58</sup> The Attorney General respectfully disagrees with the Companies' assumption as to ConEd's average meter service life. The benefit period used by ConEd is only 20 years, and the program included a 5-year deployment schedule.<sup>59</sup> If the Companies' assertion that the "likely" average service life for meters in the ConEd study was

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<sup>53</sup> VTE at 9:16:48; The table also provides the math assuming 15 and 18-year service lives, assuming the benefit period is 3-years longer than the service lives. All three amounts are based on 15-year depreciation schedules.

<sup>54</sup> Malloy Direct at 21.

<sup>55</sup> VTE at 2:36:21.

<sup>56</sup> Malloy Direct at 21.

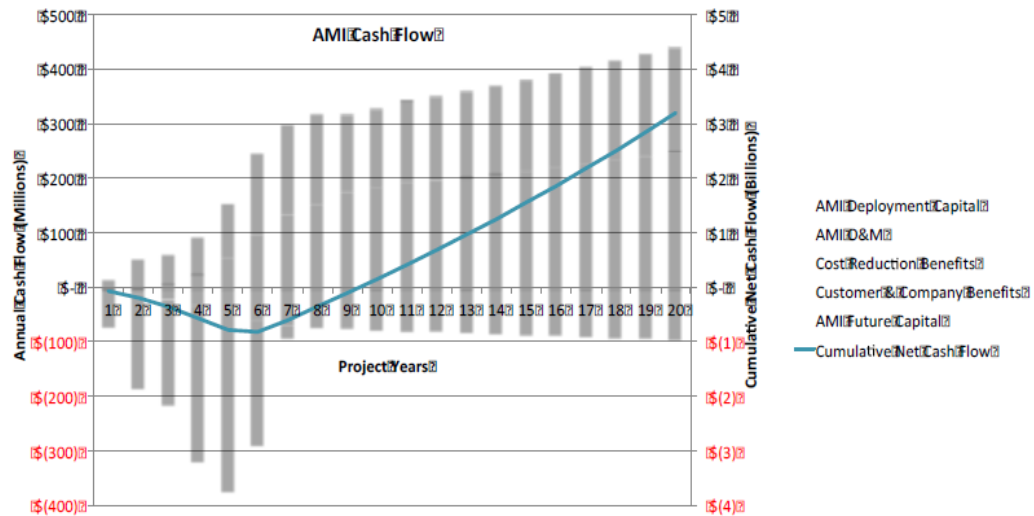
<sup>57</sup> Attorney General Hearing Exhibit 8, Ameren Illinois Advanced Metering Infrastructure (AMI) Cost/Benefit ("Ameren Illinois Study") Analysis, Ameren Exhibit 2.4RO, Page 7 of 52; As explained later, this is a massive distinction because although Ameren seemed to stay consistent between "service lives" and "depreciable lives," the Companies certainly did not.

<sup>58</sup> Malloy Direct at 23, citing at footnote 28, ConEdison Advanced Metering Infrastructure Business Plan, October 15, 2016 ("ConEd Study") at 57, Figure 5-3, available at <[https://psc.ky.gov/pscccf/2016-00371/rateintervention%40ky.gov/03312017030028/ConEd\\_AMI\\_Plan.pdf](https://psc.ky.gov/pscccf/2016-00371/rateintervention%40ky.gov/03312017030028/ConEd_AMI_Plan.pdf)> (last visited August 10, 2018).

<sup>59</sup> Id. at 40.

20 years is true, then nearly all of the meters would have had to be installed in year one, with a *de minimis* amount deployed in years 2-5. In studying the figure in the ConEd analysis upon which the Companies base their “likely 20” year assumption (provided below), the largest annual cash flows *out* of the utility occurs between years 4 through 6 of the program.

**Figure 5-3 Capital Investment and Ongoing Cost-Benefit Comparison**



This data indicates it is impossible that enough meters were planned for deployment in year 1, or even year 2, to prove the Companies’ “service life” assertion is correct. Therefore, it appears that the ConEd study imputed a service life likely ranging between 15-18 years. The ConEd analysis therefore most definitely does not support a 20-year service life.

The Companies also used the Duke Ohio Smart Grid Assessment as support for a 20-year service life.<sup>60</sup> Although that assessment used a 20-year benefit period, the utility’s actual experience can provide the Commission additional insight into the realities of smart grid and smart meter deployments as “the company [Duke] in Ohio has proposed to replace all the

<sup>60</sup> Malloy Direct at 23.

meters after only maybe 6-7 years.”<sup>61</sup> Additionally, concerning “service lives,” the Companies point to the “benefit periods” used by several other utilities without providing any evidence as to the service lives they assumed.<sup>62</sup> BC Hydro, a Canadian non-IOU, did assume a 20-year “amortization period[,]” based upon the estimated economic life, although that business case stated the amortization periods used “have no impact on the NPV of the business case.”<sup>63</sup> Mr. Malloy’s comment and belief that a “20-year useful life was fairly consistent across the industry,” is not supported by the specific examples he provided.<sup>64</sup> Of the six utilities he specifically referenced as support, only three appeared to use a 20-year useful life in their supporting business cases, while one of those, Duke Energy Ohio, is requesting to replace their system in far less than half that time.<sup>65</sup>

In an attempt to provide additional support for a 20-year service life, the Companies “backed into” discussions with the manufacturer to ask what it believed the useful life *of its own meters* are.<sup>66</sup> It is clear from the record, and indeed Mr. Malloy’s testimony, that the Companies were determined to move ahead with the cost-benefit analysis, purportedly assuming a 20-year service life, before it even confirmed with the manufacturer the meters would last that long.<sup>67</sup> Additionally, the email the Companies provided is only a terse response with no support to the most important question asked of the Companies’ analysis:

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<sup>61</sup> VTE at 3:19:50.

<sup>62</sup> Malloy Direct at 22-24; VTE at 9:51:36-9:52:12.

<sup>63</sup> See Malloy Direct at 24, Footnote 34, BC Hydro Smart Metering & Infrastructure Program Business Case (“BC Hydro Study”) at 32, available at < <https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/projects/smart-metering/smi-program-business-case.pdf> > (Last visited August 10, 2018).

<sup>64</sup> VTE at 2:36:22.

<sup>65</sup> VTE at 3:19:50.

<sup>66</sup> VTE at 2:36:29.

<sup>67</sup> Companies’ Response to Staff DR 1-9; VTE at 2:36:29; Importantly, the supporting email that was provided has little probative value. For instance, the email does not indicate anywhere that the sender represents the manufacturer, or identifies Landis + Gyr at all. Furthermore, the email does not cite any technical information or basis on which the sender supports his statement.



what is the expected life of the meters?<sup>68</sup> The response was merely, “20 years.”<sup>69</sup> Regardless of the Companies’ attempt to support a 20-year meter service life, it is clear the Companies simply used a life longer than 20 years. The Companies have provided no support for assuming AMS meter service lives in excess of 20 years, and the support for 20 years is razor thin.

As support for its 23-year benefit period, the Companies point to a handful of other smart meter cost-benefit analyses completed by other utilities in varying jurisdictions:

- Ameren Illinois: “The time horizon used for the business case was 20 years. A terminal value was also calculated to take into account the costs and benefits associated with the undepreciated AMI infrastructure remaining beyond the 20 year period.”<sup>70</sup> Notably, the Ameren Illinois business case was unique in that it anticipated an 8-year meter deployment, whereas here the Companies’ plan is to deploy the meters over less than a 2-year period.<sup>71</sup> The distinction between the two deployments periods relative to the “service lives” anticipated by each utility is significant: 40% vs. less than 10%.<sup>72</sup>
- Consolidated Edison (“ConEd”): ConEd used a “20-year evaluation period, assuming a six-year project life with a five-year meter deployment scenario.”<sup>73</sup> Even with a five-year meter deployment, ConEd did not elongate the benefit period beyond 20-years.
- Duke Energy Ohio Smart Grid Audit and Assessment: The assessment of Duke Energy Ohio’s smart grid deployment, conducted for the Public Utilities Commission of Ohio, was completed by a team in which Mr. Alvarez was a key member.<sup>74</sup> As Mr. Alvarez’s direct testimony notes, although the Commission approved Duke’s smart grid investment based off a cost-benefit analysis, the assessment of Duke Ohio’s smart grid deployment found that “customer costs exceeded customer benefits.”<sup>75</sup>

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<sup>68</sup> Companies’ Response to Staff DR 1-9.

<sup>69</sup> *Id.*

<sup>70</sup> Ameren Illinois Study at p. 7 of 52.

<sup>71</sup> *Id.* at page 3 of 52; Malloy Rebuttal at 12.

<sup>72</sup> In recognition of the significant portion of the benefit period missed by those meters deployed towards the end of the deployment, Ameren Illinois did calculate a “terminal value . . . to take into account the costs and benefits associated with the undepreciated AMI infrastructure remaining beyond the 20 year period.”

<sup>73</sup> ConEd Study at 40.

<sup>74</sup> Corrected Alvarez Direct at 4; The assessment used a 20-year benefit period, but as Mr. Alvarez noted at the hearing in this matter, that period was used because the utility’s underlying business case used a 20-year period, and the Ohio Commission “wanted to use the same benefit period to compare apples-to-apples.”

<sup>75</sup> Corrected. Alvarez Direct at 18.

- Duke Indiana: Calculated benefits and costs for years 2009-2028, a 20-year period<sup>76</sup> although the deployment of meters was expected to occur in excess of three years.<sup>77</sup>
- Central Maine Power Company: Calculated operational benefits and supply-side savings over a 20-year period.<sup>78</sup>
- BC Hydro: Canadian non-IOU. “The Smart Metering Program business case includes approximately \$1.6 billion in quantified benefits (present value), to be realized over 20 years.”<sup>79</sup>

As the Companies’ examples illustrate, the 23-year period chosen to calculate savings is *significantly* longer than any other utility. It seems logical and reasonable for Ameren Illinois to extend just beyond the benefit period to calculate the benefits that such a significant amount of their late-deployed meters might attain. Other utilities with longer meter deployment periods than the Companies’, such as ConEd with a 5-year deployment and Duke Indiana with a 3-year deployment, did not calculate any benefits beyond a 20-year benefit period. Based on the Companies’ own examples, their 23-year benefit period appears unreasonable.

In addition to the 23-year benefit period, 20+-year actual average service life, and purported 20-year service life, the Companies assigned a *different* length of time to depreciate the meters: 15 years. Although there seems to be no mention of the use of a 15-year depreciation of meters in the Companies’ Application or accompanying testimony, Mr. Malloy did admit in rebuttal that this was certainly the Companies’ intention, yet argues that the mismatch of years is not unreasonable at all.<sup>80</sup> Only in Mr. Malloy’s rebuttal did it become

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<sup>76</sup> November 4, 2009 Order in Cause No. 43501, at 6, provided in Malloy Direct at 23, footnote 32 of available at < [https://www.in.gov/iurc/files/43501order\\_110409.pdf](https://www.in.gov/iurc/files/43501order_110409.pdf) > (Last visited August 10, 2018).

<sup>77</sup> *Id.*

<sup>78</sup> See Maine Public Utilities Commission, Docket No. 2007-215(II), Order at 6 (Feb. 25, 2010) (“CMP has provided a cost-benefit analysis that shows with the DOE grant, its proposed AMI investment will result in approximately \$25 million in operational savings over 20 years”), provided in Malloy Direct at 23, footnote 33, available at < <https://mpuc.cms.maine.gov/COM.Public.WebUI/Common/CaseMaster.aspx?CaseNumber=2007-00215> > (Last visited August 10, 2018).

<sup>79</sup> See, e.g., BC Hydro Study at 8.

<sup>80</sup> Malloy Rebuttal at 45.

clear to the Attorney General that the Companies calculated their costs, including depreciation, over 15-years but their benefits over 23 years. This is hardly reasonable. The consequence of this would be that if the meters last only 15-years, then the last 5-8 years of the benefits will *never* be attained, and according to the Companies' own assumptions, the project will be net negative for customers.

This Companies use of a 15-year deprecation stems from the Companies' most recent rate-cases<sup>81</sup> where the Companies' witness, Mr. John J. Spanos, supported it by stating that 15 years is the industry average.<sup>82</sup> Mr. Spanos noted that the annual deprecation rate he used "is based on a method of depreciation accounting that seeks to distribute the unrecovered cost of fixed capital assets over the estimated remaining useful life of each unit, or group of assets, in a systemic and reasonable manner."<sup>83</sup> It seems reasonable that if the assets are expected to last 15 years, and the Companies are recovering the costs of that asset over 15 years, then they should only calculate the benefits of that asset over 15 years.<sup>84</sup>

Early on in this matter the Companies argued that the Commission should move expeditiously in this case, based partly on their experience and familiarity with other smart meter applications.<sup>85</sup> Though the Attorney General disagreed with that conclusion, he does agree that the Commission must call upon its experience and precedent in deciding this case. In fact, the Vice Chairman called upon this experience at the hearing in this matter. In questioning Mr. Malloy about the Companies' inconsistent use of time periods, Vice

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<sup>81</sup> Case Nos. 2016-00371 & 2016-00370.

<sup>82</sup> Case No. 2016-00370, *In the Matter of: Application of Kentucky Utilities Company for an Adjustment of its Electric Rates and Certificates of Public Convenience and Necessity*, Direct Testimony of John J. Spanos (Ky. PSC Nov. 23, 2016) at 15, provided as Attorney General Hearing Exhibit 2.

<sup>83</sup> *Id* at 5.

<sup>84</sup> See also Mr. Malloy's primary quote from the Ameren Illinois Study where that utility specifically stated that they determined their service life based on studies of depreciable lives, Malloy Direct at 21.

<sup>85</sup> Companies' Response to Attorney General's Motion to Amend Procedural Schedule (Ky. PSC Feb. 1, 2018) at 2-3.

Chairman Cicero wondered aloud, “we’ve had several meter hearings here recently and useful life is basically 13 to 15 years and without having some support, I don’t know how you can utilize a 20-year life besides a piece of paper.”<sup>86</sup> The Commission’s experience in determining depreciable lives of smart meters, and thus the period over which to recover those costs, are actually in the 13-15 year range.<sup>87</sup> The Commission should follow its precedent and experience, which have been based upon Kentucky-specific utility experience and on manufacturer technical information, as well as follow the Companies’ own depreciation expert, and consider a reasonable depreciable and service life of 15-years. 15-years, coupled with a 3-year period to reflect a roll-out of the project and consider avoided investments, is a reasonable way to proceed. Under that scenario, and assuming, *arguendo*, all of the Companies’ other assumptions are correct, the net present value revenue requirement is a net negative \$67.2M to customers.<sup>88</sup>

### ePortal Benefits

The Companies claim that one of the benefits of the proposal is the “conservation effect” derived from consumers’ use of the Companies’ online website (“ePortal”) to view usage and then subsequently use less energy.<sup>89</sup> Mr. Malloy states that, “[t]he Companies and

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<sup>86</sup> VTE at 2:36:50

<sup>87</sup> Recently, the Commission found that a depreciable life of 15-years was reasonable for Cumberland Valley RECC AMI CPCN, even though the utility initially requested approval for a 12-year depreciation period based on its own experience and failure with smart meters, Case No. 2018-00056, Order (Ky. PSC Jul. 8, 2018) at 5 & 12; In Case No. 2014-00436 the Commission approved Nolin RECC’s request for a CPCN to deploy an AMI system, and according to Nolin’s anticipation that “the useful life of this AMI system to be 10-13 years” the Commission found that “a 12-year depreciation period is reasonable and should be approved.” Case No. 2014-00436 (Ky. PSC Feb 13, 2015) at 7; The Commission has also approved the Duke Energy Kentucky request for a CPCN.<sup>87</sup> In that case, the Commission approved a depreciation period for “new metering equipment” for 15-years for electric AMI meters and set the depreciation for gas modules at 15-years, a modification from the settlement agreement. Case No. 2016-00162, Stipulation at 1, Order at 12& 17; Case No. 2014-00376 Kenergy Corp. requested 15-years, and received 15-years (Order dated Feb 24, 2015) at 5-6.

<sup>88</sup> See July 3, 2018 Informational Update, provided as Attorney General Hearing Exhibit 1 (Ky. PSC July 3, 2018) at 2.

<sup>89</sup> Malloy Direct at 16-17.

other utilities have observed that customers who actively access such information tend to decrease their usage.”<sup>90</sup> Mr. Malloy notes that LG&E/KU refer to those who sign in and view their usage at least 6 times as “active users.”<sup>91</sup> The Companies’ data shows that of the customers who partook in the AMS Customer Service Offering, 17% were active users, and thus, the Companies base their ePortal benefits on the assumption that 17% of their entire combined customer base would become active users.<sup>92</sup> Said differently, the Companies’ base assumption is that all customers will be just as interested and engaged in energy conservation as those “dedicated conservationists” who have gone out of their way to participate in the Companies’ voluntary AMS Customer Service Offering.<sup>93</sup>

As Mr. Alvarez stated, a more reasonable assumption as to the participation rate of “active users” when looking at the entirety of the Companies’ customer base is the participation rate of the AMS Customer Service Offering itself: 1%.<sup>94</sup> The actions required to join the current AMS Customer Service Offering are significantly similar to those that will be required to be an “active user” in the proposed ePortal offering.<sup>95</sup> It is unreasonable to assume that the same percentage of customers who went out of their way to sign up for a smart meter, and then went out of their way to view the usage 6 or more times, can be extrapolated to the entirety of LG&E/KU’s combined customer base. This unreasonable assumption is even starker when compared with a similar outcome of the same study where more than one-half of the customers who went through the effort to get the meter, even with “limited promotion,”

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<sup>90</sup> *Id.* at 16.

<sup>91</sup> Malloy Direct at 19.

<sup>92</sup> Malloy Direct at 18-19; Note that the Companies calculation assumes the .8% opt-out rate as provided on page 18 of Malloy Direct.

<sup>93</sup> VTE at 10:29:52.

<sup>94</sup> Corrected Alvarez Direct at 30.

<sup>95</sup> *Id.*

never even logged in to view their usage.<sup>96</sup> The participation rate assumption is extremely aggressive, not conservative.

After determining the participation rate of “active users,” the Companies then reviewed data from the Oct. 8, 2013 Smart Grid Consumer Collaborative<sup>97</sup> study (“SGCC Study”) examining other “ePortal-like systems” in order to project bill savings to be achieved.<sup>98</sup> After a review of the SGCC Study data, the Companies “conservatively” chose 3% bill savings.<sup>99</sup> The SGCC Study provided aggregated data based on significant analyses of customer conservation after viewing usage. In particular, the “range of 5 to 15 percent in conservation effect” was found from several decades of research from customers using “direct, real-time usage feedback.”<sup>100</sup> Importantly, however by the Companies’ own admission, (a) the ePortal does not, and cannot provide “direct, real-time usage feedback,”<sup>101</sup> b) “the feasibility of [real-time feedback] is not currently economically possible;” and (c) the investments necessary to make usage feedback real-time are “expensive . . . have limited usefulness to the customer, and have thus proven not to be cost-effective.”<sup>102</sup>

Clearly, it is unreasonable to extrapolate a conservation amount from a study of a type of technology and interaction, *which the Companies are not proposing to implement*. The Companies’ conservation assumption is even more unreasonable when one looks at what the SGCC Study says about customers who use technologies that do not provide direct, real-time data, such as the Companies’ ePortal. The SGCC Study states, “[a]s with many other

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<sup>96</sup> Malloy Direct 18; Malloy Rebuttal at 27.

<sup>97</sup> Attached as Exhibit JPM-1, Appendix A-7 to Mr. Malloy’s Direct Testimony, with portions provided as AG Hearing Exhibit 9.

<sup>98</sup> Malloy Direct at 18-19.

<sup>99</sup> *Id.*

<sup>100</sup> See *Id.*; Malloy Direct Exhibit JPM-1, Appendix A-7, Page 33 of 61.

<sup>101</sup> Malloy Direct, Exhibit JPM-1, Page 34 of 64.

<sup>102</sup> *Id.*; Attorney General Hearing Exhibit 10.

participation-dependent Smart Grid capabilities, these economic benefits are typically much higher for customers using real-time data, and minimal or nonexistent for customers not using them.”<sup>103</sup> Furthermore, the SGCC Study goes to significant lengths to differentiate real-time offerings from those that provide historical usage, “generally on a one-day lag.”<sup>104</sup> Whereas the Companies’ ePortal falls squarely in the category of offerings *other* than real-time, yet they assume a conservation estimate much higher than “minimal or non-existent.”<sup>105</sup> It is beyond dispute that the Companies’ ePortal offering is not the same or similar to the offerings that support a 5-15 percent conservation reduction. Instead of an in-home display or other direct, real-time, immediate, and convenient feedback or notification, the Companies’ ePortal offering is after-the-fact, and requires internet access in order view historical, albeit granular, data. As the Companies failed to provide any studies or analyses that show that providing usage data 1-2 days later has the same or similar conservation effect as the real-time offering it cited, the Commission should afford significant weight to the SGCC Study’s presumption of “minimal or non-existent” conservation benefits from the proposed ePortal.

Likely knowing that the only support provided for its original \$158 ePortal benefit estimate from the SGCC Study was on shaky ground, the Companies provided an additional study to “confirm” that their previous estimate was reasonable.<sup>106</sup> The new study (“Tetra Tech Study”) was prepared on January 3, 2018, the same day the Companies filed the Notice of Intent in this case and seven days before the Application was filed.<sup>107</sup> This of course means that the Tetra Tech Study was provided well-after the completion of the collaborative.<sup>108</sup> Mr.

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<sup>103</sup> Malloy Direct, Exhibit JPM-1, Appendix A-7, Page 33 of 61.

<sup>104</sup> *Id.* at Page 32 of 61.

<sup>105</sup> *Id.*; *See also* Corrected Alvarez Direct at 33-35.

<sup>106</sup> Malloy Direct at 19.

<sup>107</sup> Malloy Direct, Exhibit JPM-1, Appendix A-10, Page 1 of 10.

<sup>108</sup> *See* Direct Testimony of David E. Huff.

Malloy states that the Tetra Tech Study found a bill savings for current “active users”<sup>109</sup> of the current AMS Customer Service Offering.<sup>110</sup> As with the Companies other unconvincing support, the Commission should disregard the Tetra Tech Study as it examines only those customers who have gone out of their way to request, receive and use the smart meters offered through the AMS Customer Service Offering, for which the Companies have engaged in “limited promotion.”<sup>111</sup> Furthermore, Mr. Alvarez raised substantial concerns regarding the Tetra Tech Study’s methodology, including the fact that one of the two approaches used found that the relationship between active users and the control group of non-active users “was not statistically significant.”<sup>112</sup> Further, Mr. Alvarez was concerned regarding the percentage of customers removed due to “extreme change in estimated annual pre-post consumption” where the original removal was of 4.5% and 13% of the active and non-active user groups, respectively, but in discovery corrected to the removal of 47.3% and 16.6%, again, respectively.<sup>113</sup> These concerns obviously call into question the veracity of the data, particularly as the Companies failed to “provide updates to the report or statistical analysis outcomes” after properly identifying their correction.<sup>114</sup>

An additional concern regarding the Companies’ purported ePortal benefits is that they are assumed to last forever. That is, even though a significant amount (approximately 71%) of the residential kWh charge includes recovery of fixed, non-fuel costs, the Companies have assumed that a customer reducing their bill by 3%, will save 3% in perpetuity.<sup>115</sup> This

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<sup>109</sup> Defined as those customers who log-in 6 or more times.

<sup>110</sup> Malloy Direct at 19.

<sup>111</sup> Malloy Rebuttal at 26-28.

<sup>112</sup> Corrected Alvarez Direct at 36.

<sup>113</sup> Id., quoting Malloy Direct, Exhibit JPM-1, Appendix A-10, Page 5 of 10.

<sup>114</sup> Corrected Alvarez Direct at 36.

<sup>115</sup> VTE at 11:16:36; Corrected Alvarez Direct at 28-29.



ignores the reality of ratemaking. If the Companies' conservation projections are correct, meaning 17% of customers use AMS to each save 3%, this action is single-handedly likely to necessitate a rate case in which the Commission will set new rates to recover the Companies' anticipated level of fixed, non-fuel costs. Ratemaking ensures fixed costs are recovered. Thus for any customers who may have saved due to conservation since the last rate case, approximately 71% of those savings will no longer exist, and instead those "savings" will now be charged back to them again through higher customer and/or kWh charges.<sup>116</sup> This is imperative to note, because most of the "corrective actions" Mr. Malloy mentions that active users may take to reduce their consumption are one time measures such as changing to LED light bulbs, buying and using programmable thermostats, and investing in new HVAC units or hot water heaters.<sup>117</sup> Thus, more than two-thirds of the immediate, and one-time, savings from those primary activities are likely wiped-away the first time the Companies have rate cases. The Companies' treatment of these savings as permanent, and the presumption in the cost-benefit analysis of "perfect rate treatment" provide only more evidence as to how unreasonable the ePortal benefit assumption is.<sup>118</sup>

Finally, as unlikely as the Companies' assumptions regarding ePortal conservation benefits are likely to manifest, they are even more so when one considers the disincentive the Companies have to promote conservation. As Mr. Alvarez noted, "[m]aximizing the energy conservation benefits of the ePortal specifically, or of smart meters generally, penalizes the Companies economically because conservation decreases sales and reduces the likelihood that the Companies will earn the rate of return on equity the Commission has authorized."<sup>119</sup>

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<sup>116</sup> VTE at 11:17:35.

<sup>117</sup> VTE at 11:06:25-11:06:50.

<sup>118</sup> VTE at 10:26:00.

<sup>119</sup> Corrected Alvarez Direct at 33.

This disincentive to promote conservation, or looked at differently, the incentive to promote energy sales in order to increase margins, is commonly referred to as “the throughput incentive.”<sup>120</sup> In a different matter, the Companies’ long-time cost-of-service expert, Mr. Steve Seelye, provided an apt description of the throughput incentive, and its relationship to regulated utilities: “[u]nder traditional regulation, there is an incentive for utilities to avoid programs aimed at reducing sales.”<sup>121</sup> As Mr. Malloy agrees, for the project to be beneficial, especially the ePortal portion, the Companies will have to expend significant time and effort educating and availing customers of information.<sup>122</sup> This misses the point entirely. Harkening back to a question by Commissioner Mathews regarding 3<sup>rd</sup> party access to data, one can wonder, what incentive will the Companies have to ensure customers can freely, and without significant effort, share their usage information with 3<sup>rd</sup> parties?<sup>123</sup> The Companies’ business case explains that while AMS Customer Service Offering participants can use “Green Button Download My Data,” in order to share data with a 3<sup>rd</sup> party, they have to download the information each time before sharing.<sup>124</sup> When asked whether the Companies have considered providing the more convenient, and thus effective, “Green Button Connect My Data,” whereby information is shared with 3<sup>rd</sup> parties on an ongoing basis after a one-time authorization, the Companies argued that there is not enough data to support the cost of the upgrade, but will continue to study it “after AMS is deployed.”<sup>125</sup> Returning to the earlier question, if the Commission approved this application, what incentive do the Companies

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<sup>120</sup> Attorney General Hearing Exhibit 7, Case No. 2018-00044, Prepared Direct Testimony of William Steven Seelye on Behalf of Columbia Gas of Kentucky, Inc. at 8.

<sup>121</sup> *Id.*

<sup>122</sup> VTE at 11:56:44-11:57:35.

<sup>123</sup> VTE at 2:47:30.

<sup>124</sup> Malloy Direct, Exhibit JPM-1, Page 22 of 64.

<sup>125</sup> Companies’ Response to Staff DR 1-23.

have to invest the money necessary to implement the “Connect My Data function”? If the “Connect My Data” function is cost-beneficial to customers, and thus will reduce the utilities’ sales, the Companies are incentivized *not* to implement to program. This is merely the reality of utility regulation and ratemaking. If the Commission has yet to see utilities come in to implement DSM programs without a lost-revenue factor, why would those same utilities now be incentivized to promote conservation without any protection from reduced margins?

#### Non-Technical Losses (“NTL”)

The single largest individual benefit type to which the Companies’ cite is non-technical losses. NTL, sometimes referred to as “unaccounted-for energy, is energy that is not billed.”<sup>126</sup> “Most non-technical losses result from theft of service.”<sup>127</sup> Mr. Alvarez testified in this matter that “[i]n the AMS business cases I have reviewed, the benefit projections for non-technical loss . . . recovery are among the most variable of any AMS capability.”<sup>128</sup> Given that initially, NTL recovery represented \$402M of the \$985M in total nominal projected benefits, and that the Companies’ cost-benefit analysis assuming a 20-year service life is so thin (approximately \$11.6M), the variability of the this benefit type alone should give the Commission significant cause for concern.<sup>129</sup> The Companies calculated the NTL recovery benefit level by assuming NTLs represented 2% of total revenues, an estimate in the upper half of the range of 1.65% to 2.15%, as described in the underlying study.<sup>130</sup> Even though the relative size of this benefit type is so large, and considering that the level of estimated revenue which NTLs represents comes from a defined range, the Companies nevertheless decided not to conduct a sensitivity

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<sup>126</sup> Corrected Alvarez Direct at 37.

<sup>127</sup> Malloy Direct at 16.

<sup>128</sup> Corrected Alvarez Direct at 37.

<sup>129</sup> July 3, 2018 Informational Update, at 2.

<sup>130</sup> Malloy Direct at 17 & Exhibit JPM-1, Appendix A-8, at page 34 of 112.

analysis within this range for the Commission's consideration.<sup>131</sup> Failing to conduct a sensitivity analysis within the range is unreasonable, particularly when some of the business cases the Companies cited did conduct those type of analyses around this benefit type.<sup>132</sup>

Assuming that NTLs represent 2% of revenues, the Companies estimated that based on historical experience they would identify, bill and collect 36% of NTLs.<sup>133</sup> Similar to ePortal benefits, the Companies assume perfect rate treatment of NTLs, and that these savings are perpetual.<sup>134</sup> In addition to ePortal benefits, the SGCC Study also looked at reasonable quantifications of cost and benefits related to the recovery of NTLs.<sup>135</sup> The SGCC study also makes clear that the benefit of theft detection is net of detection and prosecution costs.<sup>136</sup> Today, the "Companies spend over \$.50 in operating expenses for every \$1 in non-technical losses they recover on average," and yet, other than the Companies' investment in the Meter Operations Center, there were no net costs included in the gross calculation of recovery of NTLs.<sup>137</sup> In fact, the Companies "don't anticipate any incremental costs" to bill and collect the \$17.5M average nominal value over the 23-year benefit period.<sup>138</sup> All the while, Mr. Malloy has stated that the meters will present a "complete fundamental change in how [the Companies] operate [their] system versus the manual way [they] operate it today."<sup>139</sup> Even with this "fundamental change," the Companies have identified \$0 in incremental cost for revenue assurance<sup>140</sup> and zero changes to the process used to bill and collect non-technical

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<sup>131</sup> VTE at 11:49:35.

<sup>132</sup> Ameren Illinois Study— at page 10 of 52; ConEd Study at page 58; BC Hydro Study at 9, further at 2 ("the NPV also remains positive if all benefits are achieved at the low end of the estimated benefit range").

<sup>133</sup> Malloy Direct at 17; Also assumes a .8% opt-out rate.

<sup>134</sup> VTE at 11:33:25; 10:26:00.

<sup>135</sup> Malloy Direct, Exhibit JPM-1, Appendix A-7, Pages 30-31 of 61.

<sup>136</sup> *Id.* at Page 31 of 61.

<sup>137</sup> Corrected Alvarez Direct at 39; VTE at 11:22:27.

<sup>138</sup> VTE at 11:22:32.

<sup>139</sup> VTE at 11:42:17.

<sup>140</sup> VTE at 11:37:14.

losses,<sup>141</sup> even with a 10+-fold increase in NTL and theft recovery. Assuming, as the Companies do, no incremental costs to bill and collect millions of dollars more in recovered NTLs is wholly unreasonable. With so few actual process changes, and in order for the Commission to consider a reasonable alternative, it should consider what the level of NTL recovery would be assuming the recent experience of \$.50 in operating expense for every \$1 in recovery, thus halving the level of NTLs the Companies assumed.<sup>142</sup>

The Companies' estimate of NTL recovery is anything but conservative. Mr. Alvarez noted that "of all the AMS business cases I have ever reviewed, the Companies' non-technical loss recovery benefit projections are among the most aggressive."<sup>143</sup> Ameren Illinois, cited as support by the Companies, has considerably more customers, and thus more meters than the Companies (1.25M vs. .98M), but assumed a much lower estimate for unaccounted for energy.<sup>144</sup> While the Companies' 23-year estimate tops \$400M, Ameren Illinois estimated only \$35M over 20 years.<sup>145</sup> Less than a decade ago, the Companies' own review of NTLs and other "system losses," estimated a total 25-year present value of only \$28M, merely 15% of its present-value estimate in this Application.<sup>146</sup> The SGCC Study found "total revenue assurance economic benefit amounts to \$3.00 per customers per year, consisting of \$1.56 in meter accuracy and \$1.44 in theft detection benefits."<sup>147</sup> Based on this information, even if the Companies had 1,000,000 meters, this would be a benefit of only \$3M per year, or \$69M over

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<sup>141</sup> Companies' Response to AG DR 1-22.

<sup>142</sup> Corrected Alvarez Direct at 39.

<sup>143</sup> Id. at 37.

<sup>144</sup> Malloy Direct, Exhibit JPM-1, Page 48 of 64; Attorney General Hearing Exhibit 8, Ameren Illinois Advanced Metering Infrastructure (AMI) Cost/Benefit Analysis, Ameren Exhibit 2.2RO, Page 1 of 1.

<sup>145</sup> Ameren Illinois Page 22 of 52; Malloy Direct at 10.

<sup>146</sup> Corrected Alvarez Direct at 38-39, (citing Case No. 2016-00371, Companies Response to ACM DR 1-33, page 14.)

<sup>147</sup> Malloy Direct, Exhibit JPM-1, Appendix A-7, Page 31 of 61 (citations omitted).

a 23-year period, not in excess of \$400M as the Companies estimate. In further support, Mr. Malloy pointed to Mr. Alvarez's reasonable estimate for NTL recovery (provided in the 2016 rate cases) and stated "the two assumptions were not far apart."<sup>148</sup> When asked about the math underlying this assertion, Mr. Malloy admitted that Mr. Alvarez's previous assumption was actually more than 20% less than the Companies' in this matter, or \$80M.<sup>149</sup> If the Companies believe Mr. Alvarez's assumption is so reasonable, then certainly that gross calculation, coupled with a \$.50 on the dollar net recovery costs, or approximately \$160M net, is a reasonable alternative amount for the Commission to consider.

#### Inclusion of Undepreciated, Operable, Meters in the Cost-Benefit Analysis

The cost-benefit analysis accompanying the Companies' AMS CPCN included as part of their 2016 rate cases<sup>150</sup> included the costs of premature retirement of their existing metering infrastructure.<sup>151</sup> However, in a *marked* departure from that prior filing, the cost-benefit analysis accompanying the instant filing does *not* include those costs.<sup>152</sup> The Companies invested in, and customers have been paying for the current meters with the legitimate expectation that those meters will provide benefits over their lives in excess of their costs. Since the Companies' otherwise prudent investment in the current meters was premised on the fact that they were expected to provide benefits in excess of costs, the premature meter retirement deprives customers of those benefits, and therefore the costs associated with them should be accounted for *and included* in a cost-benefit analysis. The failure to include this cost

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<sup>148</sup> Malloy Rebuttal at 35.

<sup>149</sup> VTE at 11:51:07.

<sup>150</sup> Case Nos. 2016-00370 and 2016-00371.

<sup>151</sup> Case No. 2018-00005, Corrected Alvarez Direct at 45 (*citing* Direct Testimony of John P. Malloy in Case Nos. 2016-00370 and 2016-00371, Ex. JPM-1, at 38).

<sup>152</sup> Corrected Alvarez Direct at 45 (*citing* Direct Testimony of John J. Malloy, Case No. 2018-00005, Ex. JPM-1, at 45).

in the cost-benefit analysis means that customers will be paying for *two* sets of metering infrastructure when only *one* is “used and useful”<sup>153</sup> and providing benefits. This would result in gross unfairness and inequity to customers.

As first described by Mr. Alvarez in the hearing, this gross inequity is further illustrated in the following potential scenario. In the event the Companies receive permission to deploy AMS as proposed, and return to the Commission with a new CPCN filing 10 years later for the construction of yet another AMS system, would it be appropriate for the Commission to ignore the costs and expected benefits of the current proposal?<sup>154</sup> If the AMS infrastructure already in place at that time is not fully depreciated, the Companies’ position appears to be that the cost of those meters should not be included in the cost-benefit analysis accompanying that future CPCN filing. In such a scenario, how inequitable would it be for Mr. Malloy to continue arguing that including those costs, “introduced error” because it is not a marginal cost?<sup>155</sup> What about the fact that the meters were deployed solely because they were shown to be cost-beneficial over a 23-year period, but now customers are being denied all 23 years of benefits? Despite the Companies’ position that the infrastructure to be retired provided net benefits over costs, the Companies would now have customers continuing to pay for the retired infrastructure, but without the benefits upon which their investment was premised. Clearly, the Commission must require the Companies include the cost of current meters in the cost-benefit analysis, as not doing so would set an untenable precedent going forward.

In filings prior to the instant one, the Companies have stated that the costs of prematurely retiring existing metering infrastructure *should* in fact be included in a cost-benefit

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<sup>153</sup> See Corrected Alvarez Direct at 44-47, and KRS 278.290.

<sup>154</sup> See response of Paul J. Alvarez to Staff cross-examination, VTE 3:17:10 – 3:17:42.

<sup>155</sup> Malloy Rebuttal at 48.

analysis. For example, in the Joint Utility Brief filed in Case No. 2012-00428 (submitted as AG Hearing Exhibit 6 in the current case), the Companies state at p. 9:

“[U]tilities proposing smart-technology deployments that will necessitate retiring existing utility assets with unrecovered book life should take the cost of those retirements into account in their cost-benefit analyses and be able to recover that cost if the deployment is prudent.”<sup>156</sup>

In the instant case, the Companies should be held to the promises they made to the Commission and their customers.

### Rate Case Timing

The two most significant categories of benefits in the Companies’ benefit-cost analysis are reductions in both operating costs and lost revenues. Neither of these benefits will reduce customer rates until and unless these two benefits are reflected in the Companies’ books (or some other adjustment made) in the test year of a base rate case.<sup>157</sup> However, there are neither any assurances these benefits will actually be reflected in the Companies’ next base rate case test year, nor as to precisely when a base rate case with these benefits reflected in the test year will be filed. Nonetheless, two things are certain: ratepayers will experience none of the benefits until a rate case reflecting these benefits in the test year is filed, and conversely, shareholders will receive the economic benefits of theft and operating expense reductions until a rate case is filed and these benefits can be reflected in the test year.

The Companies believe ratepayers should be satisfied with mere deferrals of future rate cases,<sup>158</sup> rather than to receive the savings reflected in the benefit-cost analysis (to whatever extent actually realized). This is also inconsistent with the Companies’ claim that the AMS

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<sup>156</sup> See also AG Hearing Exhibit 5, p. 70, wherein the Joint Utilities, including the Companies, further stated, “assets with unrecovered book life should take the cost of those retirement into account in their cost-benefit analyses and be able to recover that cost if the deployment is prudent.”

<sup>157</sup> See Corrected Alvarez Direct at 10-11.

<sup>158</sup> Malloy Rebuttal at 5; See also Corrected Alvarez Direct at 11, lines 15-18, discussing a recent PPL conference call with investors.



project's bill impact will reach a maximum of \$2 per month. This estimate was calculated net of benefits, despite the fact that any attendant rate reductions may not actually appear in rate reductions, or on customer bills, for years or possibly even a decade. Ratepayers, who will ultimately pay the bill for these investments, deserve the full measure of benefits this technology can bring, not just mere crumbs.

For that reason, should the Commission feel inclined to grant the CPCN over the vast weight of the evidence against doing so, it must include a mechanism similar to those instituted by regulators in Ohio and Oklahoma to reflect the savings identified in the Application.<sup>159</sup> Without such a mechanism, all of the project's benefits become ethereal and can be eroded or eliminated simply through the Companies' mere timing of rate case filings.

## 2. The Risks of the Projects Are Completely Asymmetrical

As is typical with CPCN filings, the Companies' sole risk is limited to obtaining project financing. Once that financing is secured, however, *all* the financial risk – including the cost of retiring existing meters prematurely -- is effectively transferred to ratepayers. Of course, along with paying the Companies' authorized rate of return, the ratepayers' final bill includes taxes and interest expense, all for a wastefully duplicative meter. Financial risk associated with this filing is manifested in several ways, and it is ratepayers who bear nearly all of it.

First, and most importantly, even if the meters' effective lives prove to be as long as the Companies have represented, there is the risk that benefits will never materialize at the level projected. Even if the Companies theoretically try as hard as they can in an attempt to achieve the ratepayer benefits promoted in the instant filing, they bear *no financial risk* if those benefits do not occur. On the other hand, ratepayers are at great risk because if those benefits

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<sup>159</sup> Corrected Alvarez Direct at 12-16.

do not turn out as projected, they stand to lose tens or perhaps hundreds of millions of dollars. As Mr. Alvarez points out, if the Commission should approve the project, those benefits will simply *not* be realized or at best will not be at the levels projected unless the Commission takes *affirmative steps* to ensure that ratepayers receive the benefit of their bargain.<sup>160</sup>

Second, assuming *arguendo* the benefit levels the company projects are attainable, and that meters do not last 23 years, there is significant ratepayer risk that costs will still exceed benefits. As Vice-Chairman Cicero pointed out in the evidentiary hearing, the margin of net benefits is so small that if the meters do not last 20 years, the project is a net-negative for customers.<sup>161</sup> This points out that the Companies are essentially asking the Commission to speculate as to the effective useful life of the meters - either it is 15 years, as expert witness John Spanos testified in the Companies' last rate cases, or 20 years as stated in the current case, or an implied 20-plus years as ascribed to the projected benefit period. But, importantly, if the meters only last 15-20 years then the Companies' investment will be wholly recovered but customers will never receive the benefits upon which the project was based.

An additional risk to ratepayers is that benefits will not be reflected in rates in a timely manner. As Mr. Malloy confirmed during the hearing, the cost-benefit analysis assumes a perfectly timely transfer of economic benefits into rate reductions, although this is not the reality of ratemaking.<sup>162</sup> Unsurprisingly, from the Companies' perspective, allowing the utility to keep benefits and use them is still a benefit to customers as long it prolongs a rate-case for even a short amount of time.<sup>163</sup> The Companies, exclusively, are in control of when they file rate cases, and between rate cases are in control of their expenses. For example, imagine the

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<sup>160</sup> Corrected Alvarez at 10-16.

<sup>161</sup> VTE at 2:41:46, and 2:45:39.

<sup>162</sup> VTE 10:26:00 – 10:26:40.

<sup>163</sup> Malloy Rebuttal at 5; *See also* VTE at 10:21:30.

scenario where the Companies' instant CPCN is approved and at a later date they decide to give their employees a pay raise but used the benefits from the AMS program to offset that expense. The result of that scenario is that customers will not see the benefit they were promised. Only in the next rate case will there be any review of the operational expense levels; both the reduction due to the smart meters, and the increase due to salary raises. If for instance, the imaginary raises in this scenario are deemed unreasonable by the Commission, in unilaterally prolonging the time between rate cases the Companies have kept customers from receiving the benefits of a smart meter deployment. Therefore, the only protection customers have to ensure the preservation of these promised benefits is the Commission's affirmative review of expenses and determining how those benefits should be reflected in rates. Mr. Malloy casually asserts that customers can always file complaints with the Commission to change rates, but of course, this is a red herring. Since the Companies are the sole entities seeking approval of the AMS proposal, the onus should be on them to ensure customers obtain the promised benefits.

Finally, ratepayers bear the risk that costs may exceed projections. Although the Commission at any time may deny rate recovery for cost overruns, the reality of ratemaking is that if the Commission approves a CPCN, the Commission has historically been reluctant to deny recovery of overrun costs. There are only two ways to ensure customers are protected on this front: (a) deny the CPCN, since the evidence clearly proves that costs outweigh benefits; or alternatively, (b) if the Commission is persuaded to grant the CPCN, it must ensure the Companies are solely responsible for cost overruns.<sup>164</sup>

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<sup>164</sup> The Attorney General notes that the Companies have already included a \$27.2 capital contingency for this project; *see* p. 47 of 64 in Malloy exhibit JPM-1.

### 3. The Fact That Other Utilities Have AMI Meters Is Not Support For The Companies Getting Them

As support for the Commission's approval the Companies point to the number of smart meters already deployed across the United States.<sup>165</sup> What the Companies' initial argument failed to mention was that nearly 30% of the deployed AMI meters were subsidized using federal money, by as much as 50% of their cost.<sup>166</sup> Furthermore, of the number of meters the Companies cite as support, they failed to indicate or explain how many of those millions of previously deployed AMI meters replaced obsolete or near fully depreciated meters. Of course, the Companies' existing meters still have approximately 15 years of life left on average and \$90 million of value.<sup>167</sup> In Kentucky, the Commission's experience has ordinarily been smart meter proposals where, either 1) the current metering system was obsolete or nearly fully depreciated,<sup>168</sup> or 2) the utility included the cost of current, undepreciated meters in the supporting cost-benefit analysis.<sup>169</sup> Neither of these are present in this case. Additionally, of the vast number of AMI meters the Companies cite, no indication or evidence has been provided as to how many of those meters were supported by a cost-benefit analysis, or how many of them were required to be approved by a regulator in a proceeding such as this. As

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<sup>165</sup> Malloy Direct at 4-6.

<sup>166</sup> Corrected Alvarez Direct at 18; Malloy Rebuttal at 8.

<sup>167</sup> Companies' Response to PSC DR 1-45.

<sup>168</sup> See, e.g., *In Re Application of Clark Energy Cooperative, Inc. for a CPCN to Install an AMI System*, Case No. 2016-00220, Final Order dated Dec. 22, 2016, p. 6; *In Re Application of Licking Valley RECC for a CPCN*, Case No. 2016-00077, Final Order dated Aug. 29, 2016 (vast majority of existing meter infrastructure had already been fully depreciated, and manufacturer no longer providing technical support); *In Re Application of Nolin RECC for a CPCN to Install an AMI System*, Case No. 2014-00436, Final Order dated Feb. 13, 2015, p. 3 (AMR components installed in 2002 had reached the end of their service lives and were no longer supported by manufacturer); *In Re Application of Cumberland Valley RECC for Approval to Install an AMI System*, Case No. 2018-00056, Final Order dated July 9, 2018, pp. 1-6 (meters had become obsolete due to lack of manufacturer technical support); *In Re Application of Grayson RECC for a CPCN to Install an Advanced Metering Infrastructure System*, Case No. 2017-00419, Final Order dated July 16, 2018, pp. 1-8 (approximately one-half of the meters were obsolete, being 18 years old, and the remaining meters would soon become obsolete because the manufacturer will no longer provide technical support for them).

<sup>169</sup> See Case No. 2016-00152.

such, providing the Commission the number of currently deployed AMI meters underlies no valid legal argument in support of their Application.

In reviewing the cost-benefit analyses of other utilities which the Companies provided, it becomes apparent how immense the difference between those analyses are and the Companies' own business case. For instance, Ameren Illinois was allowed to consider carbon reduction as a monetary benefit, an otherwise non-energy benefit consideration the Companies have seemingly argued is outside the Commission's jurisdiction.<sup>170</sup> Further, Ameren Illinois had \$221M of benefits designated as Electric Vehicle Enhancement, a benefit the Commission likely would not, or could not, consider in the context of this Application.<sup>171</sup> Finally, the Ameren Illinois business case included \$35M in increased energy efficiency benefits and \$590M (a massive amount for a utility with only approximately 25% more customers than the Companies) in Demand Response.<sup>172</sup> As the Commission is well aware, the Companies are requesting approval to scale back their energy efficiency programs in Case No. 2017-00441, and as Mr. Alvarez has pointed out, in that matter assigned a \$0 value to capacity.<sup>173</sup> As Mr. Alvarez discussed in detail, the Companies' unique capacity value and excess capacity significantly impedes "one of the largest potential economic benefit from a smart meter deployment."<sup>174</sup> Further differences in situations between the Companies and other utilities exacerbate the Companies' poor cost-benefit position. Take for example the BC Hydro business case the Companies referenced, in which the Canadian utility anticipated

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<sup>170</sup> Ameren Ill. Study Page 22 of 52; See Case No. 2017-00441, Reply Brief of Louisville Gas and Electric Company and Kentucky Utilities Company, (Ky. PSC Jul. 9, 2018) at 4-7.

<sup>171</sup> Ameren Ill. Study, Page 22 of 52.

<sup>172</sup> *Id.*

<sup>173</sup> Corrected Alvarez Direct at 17.

<sup>174</sup> *Id.*; See also, the ConEd Study, wherein over 20 years the utility estimated \$90M NPV in Demand Side Management expansion.

providing funding for in-home devices, and the analysis was still cost-beneficial even if only the operational efficiencies were realized, and conservation savings never materialized.<sup>175</sup> Further, BC Hydro conducted sensitivity analyses around benefit levels and found that “the NPV remains positive if all benefits are achieved at the low end of the estimated benefit range.”<sup>176</sup> This is clearly distinguishable from the Companies’ analysis.

As the Companies directed the Commission’s attention to approved smart meter proposals, the Attorney General feels compelled to urge the Commission to consider fellow state utility regulators’ careful review of other AMS business cases and summarily denying the Companies’ AMS Application. As Mr. Alvarez noted, the Massachusetts Department of Public Utilities (“DPU”) rejected a \$1.2B smart meter proposal, due in part to “challenges to time-varying rate participation and, on a related note, lack of a uniform approach to customers/third party data access[,] . . . insufficient capacity cost avoidance benefits” and “high costs associated with the premature retirement of existing metering systems.”<sup>177</sup> The DPU’s Order in this regard is highly significant given that regulator’s heretofore embrace of smart grid and smart meter systems. Furthermore, the New Mexico Public Regulation Commission recently denied a significant smart meter proposal due to, “1) the proposal’s failure to seize energy conservation opportunities; 2) insufficient operational benefits; 3) high opt-out fees; and 4) the excess of lifetime customers’ costs over customers’ savings, particularly in light of shareholder rewards.”<sup>178</sup> Should the Commission properly find that the

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<sup>175</sup> BC Hydro Study, at 2-3 & 11.

<sup>176</sup> *Id.* at 11.

<sup>177</sup> Corrected Alvarez Direct at 19.

<sup>178</sup> *Id.* at 18-19.

Companies' Application be denied, its decision will certainly be within the mainstream of its fellow state regulatory bodies.

**CONCLUSION**

Simply, customers cannot afford the risky investment this proposal represents. The Companies' benefits are aggressive and unachievable, and the costs underestimated. Further, the proposal places the entire weight of financial risk on the backs of customers, who are neither interested in this proposal nor able to deal with such an inequitable level of risk.

Wherefore, the Attorney General respectfully requests the Commission consider the entirety of the evidence in this record and summarily deny the Companies the proposed CPCN.

Respectfully submitted,

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