

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

**In the Matter of:**

<b>INVESTIGATION OF KENTUCKY UTILITIES</b>	)	
<b>COMPANY'S AND LOUISVILLE GAS AND</b>	)	
<b>ELECTRIC COMPANY'S RESPECTIVE NEED</b>	)	<b>CASE NO. 2015-00194</b>
<b>FOR AND COST OF MULTIPHASE</b>	)	
<b>LANDFILLS AT THE TRIMBLE COUNTY</b>	)	
<b>AND GHENT GENERATING STATIONS</b>	)	

**POST-HEARING BRIEF OF**  
**KENTUCKY UTILITIES COMPANY AND**  
**LOUISVILLE GAS AND ELECTRIC COMPANY**

**Filed: October 16, 2015**

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## I. INTRODUCTION

This proceeding involves the certificates of public convenience and necessity (“CPCN”) granted by the Commission to Louisville Gas and Electric Company (“LG&E”) and Kentucky Utilities Company (“KU”) (collectively, the “Companies”) in the Companies’ 2009 Environmental Cost Recovery (“ECR”) plan proceedings (“2009 ECR Cases”) for the Ghent and Trimble County Landfills at which the Companies will dispose of coal combustion residuals (“CCR”) generated at the Ghent and Trimble County generating stations.<sup>1</sup>

Despite the voluminous record that has developed, this case requires the Commission to resolve only two questions. First, with respect to the Trimble County Landfill, should the Commission affirm the existing CPCN and ECR authority it granted to the Companies in the 2009 ECR Cases in light of the uncontested continuing need for the Trimble County coal-fired units and the Companies’ clear evidence demonstrating that the onsite Landfill remains the least-cost feasible method by which to dispose of the CCR generated at Trimble County? Second, with respect to the Ghent Landfill, should the Commission find that the costs incurred for Phase I of the Landfill were properly passed through the ECR mechanism given the uncontested need for the Ghent Landfill and the unrebutted present value revenue requirement (“PVRR”) analyses filed in this investigation that demonstrate that the Landfill and its associated facilities that are in commercial operation are the least-cost feasible means by which to dispose of the CCR generated at Ghent?

In answering these two questions, the Commission should focus on the clear evidence showing that both the Trimble County and Ghent Landfills have been—and remain—the least-

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<sup>1</sup> *In the Matter of: Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00197) (Ky. PSC Dec. 23, 2009); *In the Matter of: Application of Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00198) (Ky. PSC Dec. 23, 2009).

cost feasible solutions for the Companies' CCR disposal requirements. Sterling Ventures, LLC ("Sterling"), an entity that made uneconomical offers to the Companies to store gypsum produced at Ghent, has neither provided an acceptable disposal alternative to the Trimble County Landfill, nor provided persuasive support for any cost-recovery disallowance. The record in this case has repeatedly shown that, even when making cost and operational assumptions favorable to Sterling, it is more economical to build the on-site Trimble County Landfill and associated facilities, which include the CCR treatment and transport facility ("CCRT"), than to retire and replace the units or dispose of the CCR at an off-site alternative. With respect to Sterling, its concept to dispose of Trimble County's CCR at an underground limestone mine never matured into a true offer or even a proposal; and certainly it is not an alternative the Companies can pursue with confidence today. That aside, the mere concept is neither feasible nor least cost, and would not qualify as beneficial use under the CCR Final Rule recently promulgated by the U.S. Environmental Protection Agency.<sup>2</sup> Further, as set forth in more detail later in this brief, Sterling's alternative is so contingent and rife with operational and financial risks that it simply cannot be taken seriously as a plausible alternative to the Companies' proposed Landfill for a reliable long-term CCR disposal site. Moreover, because the gypsum stack at Ghent is expected to close, the CCRT constructed at Ghent in connection with the Landfill was necessary and prudent, negating any possible PVRB benefit of Sterling's offer to dispose of gypsum produced at Ghent. In addition, Sterling's offers regarding gypsum were confirmed through analyses by the Companies to be neither feasible nor least cost.

The record in this case shows that the Companies repeatedly and thoroughly evaluated the Ghent and Trimble County Landfill projects as compared to retiring and replacing the capacity, as well as against numerous other on-site and off-site alternatives, including Sterling's

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<sup>2</sup> 80 Fed. Reg. 21,302 (Apr. 17, 2015).

site. The Landfills consistently proved to be the least-cost manner of disposing of CCR without significant feasibility and operational risks that would jeopardize the economic dispatch of the Companies' coal-fired generation. Therefore, the Commission should affirm the CPCN and ECR authority granted to the Companies in the 2009 ECR Cases and dismiss Sterling's Complaint.

## II. PROCEDURAL HISTORY

On December 23, 2009, in the 2009 ECR Cases, the Commission issued orders granting CPCNs to the Companies to construct all phases of the Ghent and Trimble County Landfills and associated facilities, which included a CCRT at both sites.<sup>3</sup> In the same orders, the Commission also granted ECR cost recovery for Phase I of the Landfills.<sup>4</sup> The Commission's orders were unequivocal: "[T]he evidence indicates that these landfill projects are reasonable and cost-effective and will not result in a wasteful duplication of facilities and, therefore, we find that the requested CPCNs should be granted."<sup>5</sup>

After receiving this authority from the Commission, the Companies began performing the necessary engineering and permitting for both Landfills. These efforts culminated in the successful completion of Phase I of the Ghent Landfill and CCRT facilities in December 2014.<sup>6</sup> With respect to the Trimble County Landfill, after receiving the CPCN the Companies were required to perform additional engineering,<sup>7</sup> have worked to obtain all necessary permits, and have expended over \$24.4 million to advance development under the authority the Commission

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<sup>3</sup> *In the Matter of: Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00197) (Ky. PSC Dec. 23, 2009); *In the Matter of: Application of Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00198) (Ky. PSC Dec. 23, 2009).

<sup>4</sup> *Id.*

<sup>5</sup> (Case No. 2009-00197) (Ky. PSC Dec. 23, 2009) at 8.

<sup>6</sup> Direct Testimony of John N. Voyles, Jr. of August 6, 2015 in Case No. 2015-00194 ("Voyles Direct") at 6.

<sup>7</sup> See *infra* pages 9-10.

granted.<sup>8</sup> LG&E and KU regularly apprised the Commission of the status of both the Ghent and Trimble County Landfills, including presenting the changing costs of the projects as the conceptual cost estimates became refined through the engineering and permitting process. The Companies also apprised the Commission when the Trimble County Landfill project timeline shifted through permitting efforts.<sup>9</sup>

In April 2015, during a hearing at the Commission regarding the Companies' then-pending base rate cases, the Commission asked the Companies to consider filing an action to allow the Commission to review the status of the Trimble County Landfill.<sup>10</sup> On May 22, 2015, the Companies filed the requested application with the Commission, which was assigned Case No. 2015-00156.<sup>11</sup> The application requested that the Commission issue a declaratory order affirming the ongoing validity and sufficiency of the Trimble County Landfill CPCN (for the entire Landfill) and ECR cost recovery authority (for Phase I of the Trimble County Landfill).<sup>12</sup> The application showed that continuing to construct the Trimble County Landfill is at least \$781 million PVRR (in 2015 dollars) more favorable than retiring the Trimble County coal units (when the current CCR storage reaches capacity) and replacing the retired units' 932 MW baseload generating capacity with natural gas combined cycle generating capacity.<sup>13</sup>

Nearly simultaneously to the Companies' filing of the application, on May 20, 2015, Sterling tendered a complaint to the Commission against KU wherein it alleged that the increased costs of the Ghent and Trimble County Landfills had resulted in wasteful duplication

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<sup>8</sup> *In the Matter of: Verified Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Declaratory Order Concerning Construction of the Trimble County Landfill and Related Cost Recovery* (Case No. 2015-00156), Verified Joint Application at page 2.

<sup>9</sup> *Id.* at Exhibit 4; Voyles Direct at 7-10.

<sup>10</sup> 4/21/15 Hearing Transcript at 11:37:30-11:38:21 in Case Nos. 2014-00371 and 2014-00372.

<sup>11</sup> *In the Matter of: Verified Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Declaratory Order Concerning Construction of the Trimble County Landfill and Related Cost Recovery* (Case No. 2015-00156), Verified Joint Application.

<sup>12</sup> *Id.* at page 16.

<sup>13</sup> *Id.* at ¶22, Exhibit 5.

and improper charging of environmental compliance costs.<sup>14</sup> Sterling, which owns and operates an underground limestone mine in Verona, Kentucky, asserted that it had previously offered to remove gypsum from Ghent and place it in its mine at a cost that would have resulted in PVRR savings.<sup>15</sup> With respect to Trimble County, Sterling claimed that it offered to haul and place all types of CCR (gypsum, fly ash, and bottom ash) at its underground mine at a cost that would have resulted in PVRR savings.<sup>16</sup> Sterling requested the Commission to disallow \$41 million in ECR cost recovery for the Ghent Landfill and to remove the Companies' existing CPCN and ECR authority for the Trimble County Landfill.<sup>17</sup>

Sterling, although alleging in its complaint that it is a KU customer,<sup>18</sup> is not a customer of the Companies. The account holder for the address Sterling claims is served by KU is Samuel A Boone, not Sterling.<sup>19</sup> Sterling is a limited liability company with a single member, The Boone Trust.<sup>20</sup>

The Commission found that an investigation should be initiated pursuant to 807 KAR 5:001, Section 4(14) for the purpose of examining all of the issues raised regarding the need for, and the cost of, the Trimble County and Ghent Landfills and consolidated the two matters.<sup>21</sup> Notably, Sterling's lengthy complaint and exhibits provided so little substance that the Commission stated it could not determine if Sterling had established a *prima facie* case;

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<sup>14</sup> *In the Matter of: Sterling Ventures, LLC, Complainant v. Kentucky Utilities Company*, Application, generally.

<sup>15</sup> *Id.* at 7-12.

<sup>16</sup> *Id.* at 19-23.

<sup>17</sup> *Id.* at 27 and exhibits thereto.

<sup>18</sup> *Id.* at I. ¶3.

<sup>19</sup> *Id.*

<sup>20</sup> 9/15/15 Hearing Transcript at 15:57:45-15:58:05.

<sup>21</sup> *In the Matter of: Investigation of Kentucky Utilities Company's and Louisville Gas and Electric Company's Respective Need for and Cost of Multiphase Landfills at the Trimble County and Ghent Generating Stations* (Case No. 2015-00194) (Ky. PSC June 16, 2015).



nonetheless, the Commission consolidated the complaint with the Companies' application because it raised issues in common with the Companies' application.<sup>22</sup>

The Commission issued a procedural schedule that allowed for the simultaneous filing of direct and rebuttal testimony and two rounds of discovery.<sup>23</sup> The Kentucky Industrial Utility Customers, Inc. ("KIUC")<sup>24</sup> and the Office of the Attorney General<sup>25</sup> were permitted to intervene. This matter was heard by the Commission on September 14 and 15, 2015, during which the Companies' and Sterling's witnesses testified and were subject to cross examination. Responses to hearing data requests were filed September 24, 2015. This brief is filed in accordance with the deadline established by the Commission at the conclusion of the hearing.

### **III. THE COMPANIES HAVE SATISFIED THE WELL ESTABLISHED PUBLIC CONVENIENCE AND NECESSITY STANDARD FOR THE LANDFILLS.**

The statutory requirement for certificates of public convenience and necessity is contained in KRS 278.020(1), which states:

No person, partnership, public or private corporation, or any combination thereof shall . . . 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 . . . .

Kentucky's highest court has construed "public convenience and necessity" to mean: (1) there is a need for the proposed facility or service; and (2) the new facility or service will not

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<sup>22</sup> *Id.*

<sup>23</sup> *In the Matter of: Investigation of Kentucky Utilities Company's and Louisville Gas and Electric Company's Respective Need for and Cost of Multiphase Landfills at the Trimble County and Ghent Generating Stations* (Case No. 2015-00194) (Ky. PSC July 2, 2015), as amended by (Ky. PSC July 21, 2015).

<sup>24</sup> *In the Matter of: Investigation of Kentucky Utilities Company's and Louisville Gas and Electric Company's Respective Need for and Cost of Multiphase Landfills at the Trimble County and Ghent Generating Stations* (Case No. 2015-00194) (Ky. PSC June 3, 2015).

<sup>25</sup> *In the Matter of: Investigation of Kentucky Utilities Company's and Louisville Gas and Electric Company's Respective Need for and Cost of Multiphase Landfills at the Trimble County and Ghent Generating Stations* (Case No. 2015-00194) (Ky. PSC July 10, 2015).

create wasteful duplication.<sup>26</sup> Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.<sup>27</sup> In the 2009 ECR Cases, the Commission expressly found that the Companies had satisfied this legal standard with respect to the Ghent and Trimble County Landfills: “the evidence indicates that these landfill projects are reasonable and cost-effective and will not result in a wasteful duplication of facilities and, therefore, we find that the requested CPCNs should be granted.”<sup>28</sup> As set forth more fully below, the evidence in this proceeding shows that the Companies have continued to satisfy this standard for these projects.

In CPCN cases the Commission considers whether the utility has reviewed alternatives to the proposed construction.<sup>29</sup> In the 2009 ECR Cases, the Companies satisfied this burden by explaining the numerous alternatives it investigated.<sup>30</sup> In this proceeding, the Commission was also presented evidence of an alternative offered by Sterling. In prior Commission proceedings such as this, the Commission has granted the utility’s CPCN when it found that the other party’s alternative, although less expensive under favorable assumptions, was rife with uncertainty and risk.<sup>31</sup> In this matter – *even setting aside the critical engineering feasibility issues* – the Companies performed PVRR analyses of Sterling’s offers that contained favorable assumptions for Sterling that nevertheless proved that the Ghent and Trimble County Landfills continue to be the least-cost option for disposing of CCR.

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<sup>26</sup> *Kentucky Utilities Co. v. Public Service Commission*, 252 S.W.2d 885, 890 (Ky. 1952).

<sup>27</sup> *See Kentucky Utilities Co. v. Pub. Serv. Comm’n*, 390 S.W.2d 168, 175 (Ky. 1965). *See also In the Matter of: The Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity to Construct 138 kV Transmission Line in Rowan County, Kentucky* (Case No. 2005-00089) (Ky. PSC Aug. 19, 2005).

<sup>28</sup> (Case No. 2009-00197)(Ky. PSC Dec. 23, 2009) at 8.

<sup>29</sup> *In the Matter of: The Application of Kentucky-American Water Company for a Certificate of Public Convenience and Necessity Authorizing the Construction of Kentucky River Station II, Associated Facilities and Transmission Main* (Case No. 2007-00134) (Ky. PSC April 25, 2008) at 29-30.

<sup>30</sup> Voyles Direct at 5-6.

<sup>31</sup> *In the Matter of: The Application of Kentucky-American Water Company for a Certificate of Public Convenience and Necessity Authorizing the Construction of Kentucky River Station II, Associated Facilities and Transmission Main* (Case No. 2007-00134) (Ky. PSC April 25, 2008) at 51, 79.

With regard to Sterling's requested disallowance of a portion of the costs attributable to the Ghent Landfill, Sterling's burden of proof is quite high because the costs are presumed reasonable as they were incurred under the authority of a CPCN:

In those instances where the Commission has issued a Certificate of Public Convenience and Necessity for the construction of a facility, the Commission has determined that the facility's construction is reasonable. The utility can construct the facility with reasonable certainty that the costs associated with the facility will be recovered through its rates.<sup>32</sup>

In fact, the Commission has held that "[i]f the Commission has issued a Certificate for the construction of a utility facility, that facility and its associated expenses are presumed to be reasonable."<sup>33</sup> Given this sound Commission policy and the evidence produced in this proceeding, the Commission should reaffirm the CPCN for the Trimble County Landfill and reject Sterling's request to disallow a portion of the costs associated with the Ghent Landfill.

#### **IV. THE COMMISSION SHOULD AFFIRM THE COMPANIES' EXISTING AUTHORITY FOR THE TRIMBLE COUNTY LANDFILL BECAUSE IT REMAINS NECESSARY TO SERVE CUSTOMERS AND IS THE LEAST-COST FEASIBLE METHOD OF DISPOSING OF CCR.**

##### **A. The Companies satisfied their burden of proof in the 2009 ECR cases.**

The Commission granted a CPCN to the Companies to construct the multi-phase Trimble County Landfill, and associated facilities that include a CCRT, in Case Nos. 2009-00197 and 2009-00198.<sup>34</sup> The CPCN for all phases of the Landfill, and ECR cost recovery authority for

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<sup>32</sup> Case No. 2000-481, *In the Matter of: Application of Northern Kentucky Water District (A) For Authority to Issue Parity Revenue Bonds in the Approximate Amount of \$16,545,000; and (B) A Certificate of Convenience and Necessity for the Construction of Water Main Facilities* (Ky. PSC Aug. 30, 2001).

<sup>33</sup> Case No. 2000-481, *In the Matter of: Application of Northern Kentucky Water District (A) For Authority to Issue Parity Revenue Bonds in the Approximate Amount of \$16,545,000; and (B) A Certificate of Convenience and Necessity for the Construction of Water Main Facilities* (Ky. PSC Oct. 8, 2001). In a subsequent case, the Commission allowed rate recovery of the costs incurred pursuant to a CPCN after an intervenor challenged whether the costs should be borne by all of the utility's customers. See *In the Matter of: Application of Kentucky-American Water Company for an Adjustment of Rates Supported by a Fully Forecasted Test Year* (Case No. 2012-00520) (Ky. PSC Oct. 25, 2013) at 68-71.

<sup>34</sup> *In the Matter of: Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00197) (Ky.

Phase I, were granted after a thorough investigation by the Commission and numerous intervening parties that included the Office of the Attorney General and the KIUC.<sup>35</sup>

The Companies presented detailed evidence regarding the need for the Trimble County Landfill and CCRT facilities, as well as the numerous alternatives that it evaluated. Specifically, the Companies identified twenty-six potential CCR storage alternatives on existing Trimble County station property and the surrounding areas.<sup>36</sup> These alternatives included off-site, commercially owned options.<sup>37</sup> The cost of trucking CCR to an existing off-site commercial landfill for the life of project was almost two times the cost of the proposed landfill.<sup>38</sup> This is not surprising; transportation and handling costs necessarily increase when the distance the CCR is transported increases. Of the twenty-six potential alternatives, nine landfill scenarios were evaluated during this feasibility study.<sup>39</sup> From these, three storage alternatives for scope of work estimates and net present value evaluations were developed.<sup>40</sup>

In addition to providing detailed evidence regarding the alternatives the Companies considered, the Companies likewise thoroughly explained the associated facilities that were necessary to the landfill; principal among them being the CCRT. The CCRT facility is required to treat, dewater and prepare the CCR for disposal regardless of the site for disposition; meaning that the facility is required if the CCR is stored in an on-site landfill, or trucked or barged off-site.<sup>41</sup> The Companies designed the CCRT, including conveyer systems, in order to reduce

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PSC Dec. 23, 2009); *In the Matter of: Application of Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00198) (Ky. PSC Dec. 23, 2009).

<sup>35</sup> See generally Case Nos. 2009-00197 and 2009-00198.

<sup>36</sup> Voyles Direct at 5-6.

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

<sup>41</sup> *Id.* at 22.

particulate emissions and fugitive dusting concerns.<sup>42</sup> Dust emissions from handling CCR must be managed within the constraints of the Companies' Title V air permits. Had the Companies attempted to truck, rather than convey, significant quantities of CCR on haul roads located near property boundaries to the Landfill, it likely would have been impossible to avoid visible particulate emissions reaching neighboring properties.<sup>43</sup>

The Companies' analysis of these twenty-six potential CCR storage alternatives demonstrated that an on-site landfill was the best option from a cost, operations, and environmental risk standpoint. After review, the Commission accepted the Companies' evidence and granted the requested CPCN for all phases of the Trimble County Landfill and ECR cost recovery authority for Phase I.<sup>44</sup>

**B. Subsequent analyses demonstrated that the Trimble County Landfill remains the least-cost feasible alternative.**

After obtaining the CPCN to construct the Trimble County Landfill, the Companies continued to evaluate the project from a cost perspective, and met with the Commission and the Office of the Attorney General on several occasions to provide updated cost, permitting, and engineering information.<sup>45</sup> The first meeting occurred on November 4, 2010, at which time the Companies explained that the cost of Phase I had increased by \$56 million due to progress with engineering designs that refined cost estimates for the CCRT.<sup>46</sup> A second update was provided on June 14, 2013, at which time the Companies informed the Commission that permitting

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<sup>42</sup> Rebuttal Testimony of John N. Voyles, Jr. of September 10, 2015 in Case No. 2015-00194 ("Voyles Rebuttal") at 7.

<sup>43</sup> *Id.*

<sup>44</sup> *In the Matter of: Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00197) (Ky. PSC Dec. 23, 2009); *In the Matter of: Application of Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00198) (Ky. PSC Dec. 23, 2009).

<sup>45</sup> Companies' Declaratory Order Application Exh. 4.

<sup>46</sup> Voyles Direct at 6-7.

difficulties had arisen after the Kentucky Division of Waste Management (“KDWM”) denied a requested permit after determining that a karst feature, which was located in the footprint of the original landfill design, was subject to protection under the Kentucky Cave Protection Act.<sup>47</sup> The Companies were in the process of evaluating an alternative location to avoid the cave.<sup>48</sup> Although engineering for the alternate site was not sufficiently complete for providing refined cost estimates due to the ongoing evaluation, the Companies explained that the on-site Landfill remained the least-cost means by which to address Trimble County’s long-term CCR disposal needs.<sup>49</sup>

A third meeting was held on February 5, 2015.<sup>50</sup> In the intervening period between the second and third meeting, the Companies became aware that the EPA, in connection with reviewing the Companies’ revised Clean Water Act Section 404 Permit application, sent the U.S. Army Corps of Engineers a letter stating that the Alternatives Analysis submitted with the application should consider whether Sterling’s underground limestone mine or the Lee’s Bottom site in Indiana could serve as the “least environmentally damaging practicable alternative,” which is the legal standard under the applicable federal regulations.<sup>51</sup> The Companies then evaluated whether Sterling’s underground limestone mine could be the “least environmentally damaging practicable alternative,” and also analyzed how the costs of that alternative compared to the Trimble County Landfill.<sup>52</sup> After analyzing the Sterling alternative, the Companies determined that it was not feasible and uneconomic as compared to the Trimble County Landfill.<sup>53</sup> At the February 5, 2015 meeting with the Commission, the Companies provided a

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<sup>47</sup> *Id.* at 7.

<sup>48</sup> *Id.*

<sup>49</sup> Companies’ Declaratory Order Application Exh. 4 at 34.

<sup>50</sup> Voyles Direct at 8.

<sup>51</sup> *Id.* at 13; 40 C.F.R. Section 230.10.

<sup>52</sup> *Id.* at 13-14.

<sup>53</sup> *Id.* at 8.

cost-benefit analysis showing that an on-site landfill ranged from \$156 to \$217 million lower from a PVRR perspective than off-site disposal at Sterling's mine using certain capital-cost assumptions associated with off-loading CCR at a barge facility to be built in Steele Bottom, Kentucky, close to Sterling's mine.<sup>54</sup>

The information provided to the Commission in this series of meetings is consistent with the Companies' practice to conduct least-cost analyses of ECR (and other) projects on an ongoing basis. Sometimes these analyses cause the Companies to allow CPCNs to lapse and request approval from the Commission to have certain projects removed from their environmental compliance plans.<sup>55</sup> In this instant matter, however, the Companies' analyses continued to show that the Trimble County Landfill was cost effective from a retire-and-replace versus retrofit perspective, and as compared to the off-site disposal alternative offered by Sterling.<sup>56</sup>

With respect to considering whether to retrofit the Trimble County station by obtaining a CCR storage solution (on-site or otherwise) versus retiring the units and replacing the capacity, it was evident in the 2009 ECR cases that obtaining a CCR storage solution was economically favorable by a wide margin, which is not surprising given the efficiency of the Trimble County units that results in the units being among the first coal-fired units dispatched. Because of this wide margin, the increases in the cost of Phase I of the Trimble County Landfill, resulting from CCRT cost increases and escalations due to delays in permitting, did not alter the Companies' view prior to this proceeding that obtaining a CCR storage solution would be more economical than retiring the units and replacing the capacity. Likewise, there still remains a significant

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<sup>54</sup> *Id.* This is a total cost basis; not the Companies' 75% share.

<sup>55</sup> Direct Testimony of Robert M. Conroy of August 6, 2015 in Case No. 2015-00194 ("Conroy Direct") at 3.

<sup>56</sup> 9/15/15 Hearing Transcript at 14:14:00-14:15:45.

amount of headroom between the economic favorability of the Trimble County Landfill compared to retiring and replacing the capacity of the Trimble County coal-fired units.

**C. The Companies’ uncontested analysis shows that building the Trimble County Landfill and CCRT remains significantly more economical than retiring the Trimble County coal-fired units and replacing their capacity.**

The uncontroverted evidence in this proceeding is that the Trimble County coal-fired generating units are two of the most efficient units in the Companies’ generating fleet.<sup>57</sup> As such, they are highly valuable to the Companies’ customers; the Companies’ uncontested PVRR analysis evaluating whether to retire and replace the units with gas-fired capacity or to build the Companies’ proposed Trimble County Landfill shows there is at least \$781 million—and as much as \$1.5 billion—of PVRR benefit to keeping the coal-fired units running by building the proposed Landfill:<sup>58</sup>

**Table 1 – Analysis Results (PVRR, 2015-2044, \$2015, \$M)**

<b>Gas Price Scenario</b>	<b>Landfill Alternative</b>	<b>Retirement Alternative</b>	<b>Difference (Landfill less Retirement)</b>
Low Gas	22,845	23,625	(781)
Mid Gas	24,503	25,641	(1,137)
High Gas	25,959	27,476	(1,516)

Notably, these large PVRR benefits take into account the increased cost of the Trimble County Landfill compared to the Companies’ 2009 estimates,<sup>59</sup> an estimated \$220 million in capital costs to comply with the recently finalized federal Effluent Limitation Guidelines,<sup>60</sup> and the potential for operational constraints associated with the federal Clean Power Plan.<sup>61</sup> In short, all of the evidence in this proceeding shows that keeping the coal-fired units at Trimble County in service

<sup>57</sup> See, e.g., 9/15/15 Hearing Transcript at 13:40:13-13:42:00.

<sup>58</sup> Companies’ Declaratory Order Application at ¶22; Companies’ Declaratory Order Application Exh. 5 at 2.

<sup>59</sup> Companies’ Declaratory Order Application at ¶20; Companies’ Declaratory Order Application Exh. 5 at 6.

<sup>60</sup> 40 C.F.R. Part 423, Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, signed September 30, 2015 (<http://www2.epa.gov/eg/steam-electric-power-generating-effluent-guidelines-2015-fin>).

<sup>61</sup> Companies’ Declaratory Order Application Exh. 5 at 5.



for the foreseeable future (more than 30 years) is an indispensable part of continuing to provide customers safe, reliable, and low-cost service.

Customers' continuing need for the low-cost energy the Trimble County coal-fired units produce creates a continuing need to dispose of the CCR the units produce every moment they are running. As the Companies have shown, even a temporary inability to run the units due to a lack of CCR disposal capacity would create increased financial harm to the Companies and their customers based on the length of the disruption. Such disruption would likewise risk the Companies' ability to reliably provide electric service. Without the timely construction of the Trimble County CCRT and adequate disposal capacity for the CCR by May 1, 2019, it is highly unlikely that the Companies would be able to operate Trimble County Unit 1 and the ability to operate Trimble County Unit 2 would be in jeopardy. May 1, 2019 is the date by which the CCR Final Rule will prohibit the Companies from using the existing bottom ash pond to dispose of CCR.<sup>62</sup>

The estimated cost to customers of being unable to operate Trimble County Unit 1 and having limited operation of Trimble County Unit 2 would be \$85 million for the 12 months beginning May 1, 2019, and significant costs would continue until the Companies could build a CCRT and a long-term disposal alternative became available.<sup>63</sup> Notably, these significant costs assume the Companies could dispose of large quantities of CCR at the Valley View Municipal Solid Waste Landfill ("Valley View") for \$38.21 per ton, which is not a certainty; in other words, the costs of not having reliable long-term storage available by April 2019 could be even higher.<sup>64</sup> The financial consequences of compromising the Companies' ability to run Trimble County Units 1 and 2 highlight the importance of a Commission order in this case affirming the

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<sup>62</sup> Direct Testimony of David S. Sinclair of August 6, 2015 in Case No. 2015-00194 ("Sinclair Direct") at 16-17.

<sup>63</sup> *Id.* at 17-19.

<sup>64</sup> *Id.* at 18.

Companies' existing CPCN and ECR cost recovery authority to allow the Companies to proceed with all due speed to construct the Trimble County CCRT and Landfill.

Indeed, having the CCRT built and operational by April 2019 without having reliable onsite disposal still creates significant costs versus having the Trimble County Landfill available at that time. For example, for the 12 months beginning May 1, 2019, the cost to customers of having the CCRT and using Valley View for CCR disposal would be between \$17 million and \$27 million greater than having Phase I of the Trimble County Landfill available for the same period.<sup>65</sup> The value of having the Trimble County CCRT available on time, i.e., by April 2019, is shown in the approximately \$60 million difference between the scenario in which neither the CCRT nor a reliable long-term disposal option is available (cost to customers of \$85 million for first year) and the scenario in which the CCRT is available, but not a reliable long-term disposal option (\$17 million to \$27 million for the first year). It is therefore imperative for the Commission to affirm the Companies' authority to proceed with the Trimble County CCRT and Phase I of the Landfill.

Moreover, Sterling has *not* challenged the need for the Trimble County CCRT. Mr. Walters' testimony states that Sterling is not taking a position on the Trimble County CCRT due to an alleged lack of sufficient information,<sup>66</sup> which is an incongruous position for Sterling to take considering the firm (albeit erroneous) position it is taking concerning the gypsum-related portion of the Ghent CCRT.<sup>67</sup> That aside, Sterling later took a position supporting the Trimble County CCRT, as Mr. Walters stated in his live testimony his assumption that building the

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<sup>65</sup> *Id.* at 20.

<sup>66</sup> Direct Testimony of John W. Walters, Jr. of August 6, 2015 in Case No. 2015-00194 ("Walters Direct") at 13, lines 18-21.

<sup>67</sup> *Id.* at 5-6.

Trimble County CCRT would help mitigate the risk of the Sterling alternative.<sup>68</sup> Therefore, all of the evidence in the record of this proceeding supports the Commission’s determination in the 2009 ECR Cases that the Trimble County CCRT is necessary to serve customers in a least-cost reasonable way.

But even with timely completion of the Trimble County CCRT, the evidence above shows the importance and value of having reliable long-term disposal available for the Trimble County coal-fired units; as noted above, the incremental cost of not having it, even with the CCRT in place, is \$17 million to \$27 million in the first year alone. And that critical disposal reliability—the necessity to be sure the required CCR disposal capacity will be there without fail—can be assured only by an on-site landfill the Companies control. The proposed on-site Landfill involves moving CCR over a short distance from the CCRT to the Landfill using a dedicated pipe conveyor with a back-up haul road to allow truck hauling of CCR when the pipe conveyor is unavailable. On that property, the Companies already have several permits and are expected to soon have all the necessary environmental permits to ensure landfill operations can occur, including permits to address any fugitive dust issues (indeed, one of the reasons the Companies chose a pipe conveyor as the primary means of transporting CCR was to minimize dusting). In short, the Companies’ Landfill proposal minimizes operational risks and includes necessary and prudent redundancies (such as the haul road) to address possible contingencies.

The Sterling alternative, however and in whatever form it might eventuate, simply cannot provide the required operational certainty necessary to serve customers and to protect them from the significant costs and reliability concerns associated with disposal interruptions. Indeed, it adds multiple layers of operational risk, yet provides no well-thought-out, satisfactory means of

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<sup>68</sup> 9/15/15 Hearing Transcript at 16:25:38-16:25:46 (“They can certainly start on the CCRT. We understand the need to do that.”); 9/15/15 Hearing Transcript at 16:32:38-16:33:40, *esp.* 16:33:18-16:33:21 (“The CCRT is built”).

addressing them (and certainly an incomplete accounting of the cost of addressing them). Unlike the proven and environmentally compliant approach the Companies have proposed of moving CCR a short distance to a landfill using a covered pipe conveyor, using Sterling's mine as a disposal site would necessitate building a barge loading facility, loading barges, moving barges, unloading barges, loading trucks, hauling CCR 10 miles, unloading trucks, and then placing CCR into an underground mine. The Sterling proposal likewise necessitates return trips by trucks and barges.

Following the proposed path of the CCR from Trimble County to Sterling's mine shows all of the additional transportation, handling, environmental, and potential liability risks of using Sterling's mine as a disposal site. Yet it leaves aside the risk of stranded investments in barge loading and unloading facilities if Sterling goes out of business or otherwise fails to perform. It ignores the likelihood that Sterling might not mine sufficient quantities of limestone over almost 40 years to ensure adequate storage for Trimble County's CCR. It also overlooks the documented limited current disposal capacity of the mine. And it takes no notice of Mr. Walters' statement that if the Sierra Club (or perhaps other environmental groups) says it would prefer the CCR go in a landfill rather than Sterling's mine, Sterling is not interested in disposing of CCR; Sterling does not want to engage in environmental litigation.<sup>69</sup> As set forth in more detail below, Sterling's conceptual alternative is so contingent and rife with operational and financial risks that it simply cannot be taken seriously as a plausible alternative to the Companies' proposed Landfill for a reliable long-term CCR disposal site. The ability to reliably operate the Trimble County coal-fired units is too important and valuable to the Companies' customers to gamble on a mere concept that is so risky and ill-considered.

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<sup>69</sup> 9/15/15 Hearing Transcript at 16:40:14-16:40:44, 16:42:54-16:43:50.

**D. Sterling has not made an actual disposal offer or proposal to the Companies concerning Trimble County’s CCR, and the very concept of such disposal is neither feasible nor least-cost.**

As explained in Mr. Gardner’s testimony,<sup>70</sup> Sterling’s offer for taking the Companies’ CCR is for the CCR to be loaded onto a six-barge fleet near the Companies’ Trimble County station. Those barges would then travel 44 miles along the Ohio River to a barge unloading facility that would have to be built near Warsaw, Kentucky. The CCR would then be unloaded from the barges and loaded onto a fleet of trucks that would make up to 168 round trips per day to the Sterling mine along U.S. Highway 42. Upon arriving at the mine, Sterling “envisions”<sup>71</sup> one of three methods would be used for moving and placing CCR into the mine.<sup>72</sup> Sterling claims that storage in its mine would be “beneficial use” as that term is defined under the CCR Final Rule, and therefore would not be regulated as landfill disposal. As set forth below, it is not beneficial use under the CCR Final Rule.

**1. Sterling’s offer is not feasible because it is not “beneficial use” as defined under the CCR Final Rule.**

The record is clear that the Sterling offer would not qualify as “beneficial use” as that term is defined under the CCR Final Rule.<sup>73</sup> Although Sterling has stated that its proposal is beneficial use under the CCR Final Rule,<sup>74</sup> Sterling has repeatedly indicated that if storing CCR in its mine is not beneficial use, Sterling is unwilling to comply with the CCR Final Rule’s requirements (e.g., liners, monitoring, and closure standards) for disposal of CCR. For example,

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<sup>70</sup> Direct Testimony of J. Steven Gardner PE of August 6, 2015 in Case No. 2015-00194 (“Gardner Direct”) at 11-14.

<sup>71</sup> *Id.* at 15.

<sup>72</sup> At the hearing, Mr. Gardner seemed to revise his testimony when he said only two of the three envisioned methods are still being considered. 9/15/15 Hearing Transcript at 14:50:30.

<sup>73</sup> To date, Sterling has not provided the Companies with a complete offer that could be accepted or even a commercial proposal for genuine discussion or negotiation; until such time, there is no actual Sterling offer. There is only a Sterling concept that Sterling might convert into an actual offer at some unknown time in the future which acts more like an option subject to significant contingencies.

<sup>74</sup> Sterling’s Response to Item No. 3 of the Commission Staff’s First Requests for Information.

Sterling stated, “If there had been any indication by the [KDWM] Staff, or the EPA, that the new CCR regulation prohibited the proposed beneficial use, Sterling would not have proceeded”<sup>75</sup> with its efforts to take the Companies’ CCR. Then, at the hearing, Mr. Walters testified as follows on the possibility that disposing of CCR in the Sterling mine is not beneficial use, “we’re in the mining business, not in the landfilling business . . . if somebody says it is not going to work, we’ve said many times, we’re out.”<sup>76</sup>

In light of Sterling’s clear statements that it would be willing to dispose of the Trimble County CCR only if it is beneficial use under the CCR Final Rule, the Commission must consider whether there is a risk that such disposal might not be beneficial use, but it need not, and indeed cannot, decide definitively that legal and environmental issue. Rather, only a court evaluating the merits of a citizen suit to enforce the CCR Final Rule could make that determination.<sup>77</sup> Under Commission CPCN precedent, the Commission only needs to determine whether that issue presents an uncertainty about the Sterling offer such that it is not a feasible alternative.<sup>78</sup>

The CCR Final Rule makes a critical distinction between “disposal” and “beneficial use” of CCR. If it is disposal, the CCR Final Rule imposes rigorous and onerous requirements on that disposal because it would be a CCR landfill.<sup>79</sup> If it is “beneficial use,” many of those requirements do not apply. The CCR Final Rule states:

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<sup>75</sup> Sterling’s Response to Item No. 21 of the Commission Staff’s Supplemental Request for Information.

<sup>76</sup> 9/15/15 Hearing Transcript at 16:21:20 – 16:22:40.

<sup>77</sup> See Rebuttal Testimony of Richard J. Kinch of September 10, 2015 in Case No. 2015-00194 (“Kinch Rebuttal”) at 5, lines 13-14.

<sup>78</sup> See, e.g., *In re the Matter of: The Application of Kentucky-American Water Company for a Certificate of Public Convenience and Necessity Authorizing the Construction of Kentucky River Station II, Associated Facilities and Transmission Main* (Case No. 2007-00134) (Ky. PSC April 25, 2008) at 77-78. The Commission, in rejecting an intervenor’s alternative stated that “No permits for such route have been obtained and the likelihood of obtaining such permits has not been adequately assessed,” in finding that the utility’s proposals “have fewer...regulatory risks” because “virtually all regulatory approvals necessary to commence construction” had been obtained.

<sup>79</sup> 80 Fed. Reg. at 21473, *et seq.*

Beneficial use of CCR means the CCR meet all of the following conditions:

- (1) The CCR must provide a functional benefit;
- (2) The CCR must substitute for the use of a virgin material, conserving natural resources that would otherwise need to be obtained through practices, such as extraction;
- (3) The use of the CCR must meet relevant product specifications, regulatory standards or design standards when available, and when such standards are not available, the CCR is not used in excess quantities; and
- (4) When unencapsulated use of CCR involving placement on the land of 12,400 tons or more in non-roadway applications, the user must demonstrate and keep records, and provide such documentation upon request, that environmental releases to groundwater, surface water, soil and air are comparable to or lower than those from analogous products made without CCR, or that environmental releases to groundwater, surface water, soil and air will be at or below relevant regulatory and health-based benchmarks for human and ecological receptors during use.<sup>80</sup>

The evidence is overwhelming that storing CCR in the Sterling mine would not be beneficial use under the CCR Final Rule. Messrs. Walters and Gardner offer what amount to layperson opinions interpreting the “beneficial use” aspect of the CCR Final Rule in their Direct Testimony. However, the Companies submitted Richard Kinch’s expert opinion on the issue. Before retiring after a 41-year career at EPA, Mr. Kinch authored the beneficial use portion of the CCR Final Rule.<sup>81</sup> Mr. Kinch’s opinion is clear, and, in the words of Commissioner Logsdon, “very compelling.”<sup>82</sup> Mr. Kinch opines that the Sterling offer fails at least three of the four prongs of the beneficial use definition.<sup>83</sup>

Despite that opinion from the author of the rule, Sterling has taken the position that the EPA and the KDWM have led Sterling to believe that the Sterling offer would be beneficial

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<sup>80</sup> 80 Fed. Reg. 21469.

<sup>81</sup> Kinch Rebuttal at 1.

<sup>82</sup> 9/15/15 Hearing Transcript at 14:52:05.

<sup>83</sup> Kinch Rebuttal at 10–21.

use.<sup>84</sup> In fact, at the evidentiary hearing, Sterling's expert witness, Mr. Gardner, testified that EPA employee Eric Somerville told Mr. Gardner that the Sterling offer would be beneficial use under the CCR Final Rule.<sup>85</sup> But Mr. Somerville's own correspondence to Mr. Gardner proves otherwise. Contrary to Mr. Gardner's sworn testimony at the hearing, Mr. Somerville wrote the following to Mr. Gardner on August 3, 2015:

That said, I can speak with you about CWA 404, but I am less able to discuss "beneficial use" as that term is used in the final EPA rule on CCR. That rule was promulgated under an EPA regulation that I have no experience with. In fact, I am likely no more familiar with the nuances of beneficial reuse as you might be; my only exposure to that term as it applies here is reading the above referenced rule.<sup>86</sup>

Mr. Somerville's correspondence to Mr. Gardner, a copy of which is attached as Appendix A, could not be clearer. He took no position on "beneficial use" because he has no experience on the topic. Mr. Gardner's sworn statements to the contrary are, at best, disingenuous. Sterling also seems to claim that correspondence from EPA employees James Giattina and Heather Toney<sup>87</sup> somehow equate to an EPA opinion that the Sterling offer is beneficial use. This claim is simply false. Those letters were written months before the CCR Final Rule was finalized in December 2014 and those letters do not even mention the CCR Final Rule, much less opine as to beneficial use under the rule. Mr. Gardner's hearing testimony that an EPA opinion on beneficial use can be "inferred"<sup>88</sup> from Ms. Toney's letter is belied by the content of the letter. Finally, to the extent Sterling places any reliance on correspondence it received from EPA employee Steve Souders, such reliance would be misplaced. Mr. Souders'

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<sup>84</sup> Sterling's Response to Item No. 21 of the Commission Staff's Supplemental Request for Information.

<sup>85</sup> 9/15/15 Hearing Transcript at 15:01:50 – 15:02:40.

<sup>86</sup> Companies' Hearing Exhibit No. 1.

<sup>87</sup> See Exhibit O to Sterling's Complaint which includes a July 11, 2014 letter from Mr. Giattina and an August 7, 2014 letter from Ms. Toney.

<sup>88</sup> 9/15/15 Hearing Transcript at 15:08:00 – 15:09:25.



May 26, 2015 e-mail<sup>89</sup> to Mr. Walters merely restates the definition of “beneficial use” under the CCR Final Rule.

As for Sterling’s claim that KDWM somehow led Sterling to believe that its offer would be beneficial use under the CCR Final Rule, again, the record indicates just the opposite. In Mr. Revlett’s direct and rebuttal testimony, he explained how and why he reached out to the Kentucky Department of Environmental Protection<sup>90</sup> (“KDEP”) about this issue.<sup>91</sup> In responding to Mr. Revlett, KDEP Commissioner Bruce Scott informed Mr. Revlett as follows:

In response to your inquiry below, the agency has not taken any official position regarding the viability of whether coal combustion residuals (CCR) material generated by the LG&E Trimble station could be beneficially reused at the Sterling Ventures operation as it relates to the April 17, 2015 USEPA final federal rule for the management of coal combustion residuals (CCR) from electric utilities.<sup>92</sup>

Thus, as with the case with Mr. Somerville and the EPA, Mr. Scott’s correspondence shows Sterling’s claims related to KDWM and beneficial use to be completely false. Contrary to the discredited claims of Mr. Gardner, Mr. Kinch’s opinion provides a detailed and thoughtful analysis of whether the Sterling offer is beneficial use. Mr. Kinch opines that it clearly is not beneficial use – in fact, he testified it is not even a close call. At the hearing, he explained that he was the “father of beneficial use” at EPA and that the Sterling offer is nothing more than a “disposal practice.”<sup>93</sup> Sterling’s offer to use excessive amounts of CCR for a claimed ventilation benefit is, in fact, “disposal, under the claimed guise of beneficial use.”<sup>94</sup> And even if Kentucky

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<sup>89</sup> A copy of Mr. Souders’ e-mail was included in the attachments to Sterling’s Response to Item No. 18 of the Companies’ First Requests for Information.

<sup>90</sup> KDWM is a division of KDEP, as illustrated in the KDEP organizational chart attached to Mr. Revlett’s rebuttal testimony.

<sup>91</sup> Direct Testimony of Gary H. Revlett of August 6, 2015 in Case No. 2015-00194 (“Revlett Direct”) at 9-10; Rebuttal Testimony of Gary H. Revlett of September 19, 2015 in Case No. 2015-00194 (“Revlett Rebuttal”) at 3.

<sup>92</sup> Revlett Direct, Exhibit GHR-1, page 1 of 10.

<sup>93</sup> 9/14/15 Hearing Transcript at 20:21:30 - 20:22:40.

<sup>94</sup> Kinch Rebuttal at 18.

revises its beneficial reuse regulations, the CCR Final Rule is clear that compliance with the federal rule would still be mandatory under its dual enforcement scheme.<sup>95</sup> For that reason, Sterling's recent application to KDWM for a new state beneficial reuse permit to store both Ghent's gypsum and Trimble County's CCR has no bearing at all on the likelihood that disposing of millions of cubic yards of CCR in Sterling's mine would not meet the beneficial use criteria of the CCR Final Rule.<sup>96</sup>

The Companies' witness John Feddock also provided credible and supported opinions regarding Sterling's offer. In his rebuttal testimony, Mr. Feddock addressed the first prong of the definition of beneficial use when he opined there is no functional ventilation or other mining benefit to filling all of the Sterling mine voids with CCR as Sterling claims it would do.<sup>97</sup> At best, Sterling could possibly use small quantities of CCR to build stoppings between pillars to wall off voids, but those quantities would only be a tiny fraction of the CCR that will be produced. Mr. Feddock also testified that unencapsulated disposal of CCR in Sterling's mine would not create a ventilation benefit, but would instead create increased dusting and equipment fumes resulting in additional ventilation needs.<sup>98</sup> He also found the proposal would clearly increase overall energy needs for the mine on a net basis due to the additional equipment for CCR transport and placement underground. Finally, Mr. Feddock noted that no limestone mine

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<sup>95</sup> *Id.* at 5- 8.

<sup>96</sup> The Companies learned through a response to a Freedom of Information Act request after the hearing in this proceeding of Sterling's August 21, 2015 beneficial reuse permit application to KDWM. Sterling arguably should have provided a copy of the permit—or at least noted its existence—in response to at least two supplemental data requests filed on September 3, 2015, in this proceeding: Commission Staff's Second Request for Information No. 12 and the Companies' Supplemental Data Request No. 1.

<sup>97</sup> Rebuttal Testimony of John E. Feddock of September 10, 2015 in Case No. 2015-00194 ("Feddock Rebuttal") at 6-10.

<sup>98</sup> *Id.* at 7-10.

would undertake such a CCR disposal operation unless there was a large tipping fee profit motive.<sup>99</sup>

Although not necessarily related to beneficial use under the CCR Final Rule, Mr. Gardner initially testified that storing CCR in the mine voids could somehow provide roof support.<sup>100</sup> When challenged on that issue at the hearing, Mr. Gardner recanted his testimony.<sup>101</sup> Mr. Gardner also testified that the Sterling offer would provide an energy savings because of the decreased need for ventilation.<sup>102</sup> However, when asked for an analysis and quantification of those savings, Sterling provided nothing, stating only that “detailed analyses have not been performed.”<sup>103</sup> Furthermore, when asked about those claimed energy savings at the hearing, Mr. Gardner admitted that he had not performed any calculations of the energy that would be required under the Sterling offer for loading CCR onto the six-barge fleet, moving those six barges along the proposed 44-rive mile course, unloading CCR from the barges, reloading CCR onto trucks which would have to make up to 168 round trips per day to the Sterling mine, or finally placing and locating CCR within the Sterling mine.<sup>104</sup> Based on these facts, Sterling’s claimed energy savings are specious.

Finally, Sterling seems to make the claim that storing CCR in its mine would allow for future traditional beneficial uses.<sup>105</sup> This is yet another Sterling claim disproven by the actual facts. In this instance, the claim is that a component of CCR – gypsum – could later be extracted from the CCR stored in the mine to make wallboard. However, in discovery, Sterling had to admit there has never been any indication that the CCR Sterling would be taking would be

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<sup>99</sup> *Id.* at 7-10.

<sup>100</sup> Gardner Direct at 4.

<sup>101</sup> 9/15/15 Hearing Transcript at 15:24:10 – 15:24:40.

<sup>102</sup> Gardner Direct at 3.

<sup>103</sup> Sterling’s Response to Item Nos. 7 and 8 of the Companies’ Supplemental Requests for Information.

<sup>104</sup> 9/15/15 Hearing Transcript at 15:20:50 - 15:22:50.

<sup>105</sup> Gardner Direct at 3; Sterling’s Response to Item No. 14 of the Companies’ Supplemental Requests for Information.

segregated into component types (and it would not be).<sup>106</sup> When commingled, it would be impractical if not impossible to excavate and then segregate any one component of CCR.

**2. Sterling's offer is neither feasible nor practical because of its many shortcomings and the unacceptable risk it would pose to the Companies and their customers.**

**a. Sterling does not have adequate storage capacity in its mine.**

Sterling will not have the required storage capacity in its mine for the tremendous volumes of CCR that will be produced. Even if filling up mine voids with excessive amounts of CCR was beneficial use under the CCR Final Rule, which it is not, Sterling will not have sufficient space to store the Companies' CCR. Indeed, at the hearing, Sterling noted for the first time that it would have to change its mining plan approach to accommodate filling the mine with CCR.<sup>107</sup> Mr. Gardner's testimony claims there will be sufficient space based on Sterling's mining production history,<sup>108</sup> but Mr. Feddock rebutted that testimony with a detailed analysis showing Sterling does not have anywhere close to the 8 million cubic yards of storage capacity Sterling claims.<sup>109</sup> Mr. Gardner's direct testimony showed that his entire opinion regarding capacity was based solely on Sterling's prior production volumes, and did not take into consideration the fundamental engineering issues that Mr. Feddock analyzed, which include Sterling's mining plan, ventilation and material haulage needs, the preservation of future mining reserves, the angles of repose for the types of CCR, the effect of compaction, equipment limitations, and the realistic height at which the CCR could be stored.<sup>110</sup> Mr. Feddock's analysis concluded that Sterling only has 1.65 million cubic yards of current storage:<sup>111</sup>

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<sup>106</sup> Sterling's Response to Item No. 14 of the Companies' Supplemental Request for Information.

<sup>107</sup> 9/15/15 Hearing Transcript at 14:55:40.

<sup>108</sup> Gardner Direct at 10-11. Mr. Gardner claims a current storage capacity of 8 million cubic yards.

<sup>109</sup> Feddock Rebuttal at 13 - 19.

<sup>110</sup> *Id.* at 13 - 19.

<sup>111</sup> *Id.* at 16.

	Headers Mined Volume (cu yds.)	Floor Bench Volume (cu yds.)	Total Available Storage Capacity (cu yds.)
Level 1	909,000	436,700	1,345,700
Level 2	78,800	62,100	140,900
Level 3	102,400	63,600	166,000
<b>Total</b>	<b>1,090,200</b>	<b>562,400</b>	<b>1,652,600</b>

Relatedly, Mr. Gardner admitted at the hearing that Sterling has failed to meet its average annual mining production in four of the last five calendar years.<sup>112</sup> In addition to Mr. Feddock’s detailed storage analysis, this downward trend raises serious questions about Sterling’s future storage capacity and points out the fallacy of Sterling’s reliance on a national limestone future market study for construction aggregate.<sup>113</sup> Sterling has no long-term contracts for the sale of limestone aggregate that might provide some assurance as to future mining production.<sup>114</sup> Sterling has repeatedly refused to provide the kind of financial information that might shed light on its financial viability as a contracting partner for the next 37 years.<sup>115</sup> It refused to provide requested audited financial statements when the Companies were evaluating Sterling’s mine as an alternative to the Trimble County Landfill in the fall of 2014,<sup>116</sup> again refused in discovery,<sup>117</sup> and again refused at the hearing in response to a Commission Staff inquiry to allow the Companies to have access to this information.<sup>118</sup> Sterling either does not have or has refused to provide any supported data about the quantity or quality of its mining reserves.<sup>119</sup> Finally, based on Sterling’s historical production, there is insufficient capacity to handle the excess Ghent

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<sup>112</sup> 9/15/15 Hearing Transcript at 15:19:30 – 15:20:15; Sterling’s Response to Item No. 14 of Commission Staff’s Supplemental Requests for information.

<sup>113</sup> Sterling’s Response to Item No. 11 of the Companies’ Supplemental Requests for Information.

<sup>114</sup> Sterling Response to Item No. 22 of the Companies’ First Requests for Information.

<sup>115</sup> Sterling’s Response to Item No. 14 of the Companies’ First Requests for Information.

<sup>116</sup> Voyles Direct at 14.

<sup>117</sup> Sterling’s Response to Item No. 14 of the Companies’ First Requests for Information.

<sup>118</sup> 9/15/15 Hearing Transcript at 16:35:23-16:35:36.

<sup>119</sup> Sterling’s Response to Item No. 10 of the Companies’ First Requests for Information and Item No. 10(c) of the Companies’ Supplemental Requests for Information.

Station gypsum (as Sterling offered in 2012) and certainly insufficient capacity to dispose of CCR materials from both Trimble County and the Ghent stations going forward.

**b. There are other significant problems with Sterling’s offer that prove it to be ill-conceived.**

Sterling lacks any experience with or knowledge of handling CCR<sup>120</sup> and Sterling is unaware of any other situation in which CCR has been disposed of in an underground limestone mine.<sup>121</sup> Sterling “has no knowledge of examples where CCR has been or is being beneficially used . . . .”<sup>122</sup> When asked for its operating and management plan for the Companies’ CCR, Sterling provided scant details, and, instead, blamed the Companies for not providing Sterling with information about the CCR such as moisture content and density.<sup>123</sup> Yet Sterling’s own Complaint recited the very same density information Sterling claims it does not have, and the moisture content was publicly available at the KDWM.<sup>124</sup>

Sterling has no actual plan for where it would put CCR in its mine.<sup>125</sup> Although Sterling “envisions” “three methods”<sup>126</sup> of getting the CCR into its mine (which was later reduced to two methods during hearing testimony<sup>127</sup>), Mr. Feddock’s testimony demonstrates there are significant physical and practical impediments to the three envisioned methods as to raise serious concerns, the three methods are hypothetical at best, and the proposed tipping fee cannot be considered reliable.<sup>128</sup> Sterling admits that numerous permits would be required under its offer, but refused to provide even a proposed timeline for obtaining those permits.<sup>129</sup>

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<sup>120</sup> Sterling’s Response to Item No. 5 of Commission Staff’s First Requests for Information.

<sup>121</sup> Sterling’s Response to Item No. 6 of Commission Staff’s First Requests for Information.

<sup>122</sup> Sterling’s Response to Item No. 13 of the Companies’ First Request for Information.

<sup>123</sup> Sterling’s Response to Item No. 9 of the Companies’ First Request for Information.

<sup>124</sup> Sterling Complaint at 13, Paragraph 37.

<sup>125</sup> Sterling’s Response to Item No. 5 of the Companies’ Supplemental Request for Information.

<sup>126</sup> Gardner Direct at 14 – 16.

<sup>127</sup> 9/15/15 Hearing Transcript at 14:50:30.

<sup>128</sup> Feddock Rebuttal at 20 - 23.

<sup>129</sup> Sterling’s Response to Item No. 1 of the Companies’ Supplemental Requests for Information.

Finally, the idea of creating the heavy truck traffic generated under the Sterling offer is not realistic. Under the Sterling offer, trucks would make a round trip from the barge unloading facility to the Sterling mine 168 times per day, 6 days per week, 52 weeks per year, for 9-16 hours per day.<sup>130</sup> This enormous amount of traffic would occur on a narrow two-lane road within immediate proximity of Gallatin County schools and the community of Warsaw. It is a scenario that practically guarantees environmental enforcement or nuisance litigation (or both), as well as complaints from local officials, due to the inevitable dusting created by so much avoidable handling and transportation of CCR over much greater distances and with less dust control than is necessary.

**c. The risks and infeasibility of Sterling’s offer are wholly at odds with the Companies’ prudent utility planning.**

The prudent utility planning that is the hallmark of the Companies’ operating philosophy is not to risk the safe and reliable provision of power. That is why the Companies do not count on beneficial reuse, or any future beneficial use, to last forever or to be available to take all of the CCR from any generating station. Instead, the Companies must ensure the ability of their units to operate over the long-term. Reliance on a concept as thinly developed and risky as the Sterling offer would violate any reasonable definition of prudent utility planning.

The Commission decided a case a few years ago with many of the same issues presented in this matter. In Case No. 2007-00134,<sup>131</sup> Kentucky-American Water Company (“KAW”) sought a CPCN for the construction of a water treatment plant and a water transmission main. Much like Sterling in this matter, the Louisville Water Company (“LWC”) participated in the case by claiming that it had a cheaper and better solution than KAW’s proposal. The

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<sup>130</sup> Gardner Direct at 14.

<sup>131</sup> *In re the Matter of: The Application of Kentucky-American Water Company for a Certificate of Public Convenience and Necessity Authorizing the Construction of Kentucky River Station II, Associated Facilities and Transmission Main*, Case No. 2007-00134.

Commission conducted an in-depth net present value (“NPV”) and feasibility analysis of both proposals before rejecting the LWC proposal.<sup>132</sup> Under NPV assumptions very favorable to the LWC proposal, the Commission found the KAW proposal to be slightly more expensive.<sup>133</sup> However, because the LWC proposal was fraught with uncertainty and risk, the Commission rejected it and granted KAW’s requested CPCN. The Commission stated:

The proposed [KAW] Facilities clearly have fewer financial and regulatory risks.

\* \* \*

In contrast, the LWC Pipeline proposal remains a concept that requires considerable work and is rife with uncertainty and risk. No feasibility or siting study for the proposed transmission main has been conducted. No hydraulic analysis has been prepared. No clear route for the proposed transmission main exists. No permits for such route have been obtained and the likelihood of obtaining such permits has not been adequately addressed. The level of public opposition to the transmission mains route is unknown. The effect of such opposition on the proposed route, the timetable for constructing the proposed transmission main, and on the transmission main’s ultimate cost is also unknown.<sup>134 135</sup>

In this case, the Sterling offer is “rife with uncertainty and risk” just like the LWC proposal was. As set forth above, the Sterling offer is not beneficial use under the CCR Final Rule. Sterling’s claims of EPA and KDWM support for its beneficial use claim are false. Sterling has repeatedly confessed that it has not performed the type of detailed analyses and calculations that are critical to utility planning. It refused to provide projected application dates for the permits it will need. It refused to provide financial information that would show its

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<sup>132</sup> Case No. 2007-00134 (Ky. PSC April 25, 2008) at 51 – 80.

<sup>133</sup> *Id.* at 77.

<sup>134</sup> *Id.* at 78-79.

<sup>135</sup> The Commission’s decision in Case No. 2007-00134 was appealed to the Franklin Circuit Court where it was affirmed in Civil Action No. 08-CI-1055. It was then appealed to the Kentucky Court of Appeals where it was affirmed in 2010-CA-001597. The Kentucky Supreme Court denied discretionary review in 2011-SC-000559, and ordered the Kentucky Court of Appeals decision to be published, which it was at 358 S.W.3d 488 (Ky. 2011).



viability as a going concern.<sup>136</sup> Sterling's claimed current and future storage capacity is vastly overstated. Sterling's CCR transportation plan is, to say the least, ambitious. Sterling has no experience with handling CCR and has no detailed plan for where or how it would place CCR in its mine. These risks are unacceptable. Neither the Commission nor the Companies should jeopardize the operating ability of Trimble County station in pursuit of Sterling's offer which, when scrutinized, amounts to nothing more than an ill-considered scheme in pursuit of Sterling's own profit interests. Prudent utility planning requires the rejection of such a proposal.

**3. All of the cost-benefit analyses in the record of this proceeding conducted under reasonable assumptions show the proposed Trimble County Landfill is much lower cost than the Sterling concept.**

Even if there were an actual Sterling offer for disposing of Trimble County's CCR (which there is not) and even if that offer were feasible (which it is not), the Companies' repeated cost-benefit analyses of possible Sterling alternatives show that, when making reasonable capital-cost assumptions concerning the Sterling alternatives, the Companies' proposed on-site Landfill results in a lower PVRR across multiple regulatory, gas-price, fuel-burn, and beneficial reuse (or beneficial use) scenarios, and when analyzing the alternatives across 30 or 66 years. This is true even though the Companies made numerous favorable assumptions concerning the Sterling alternatives and did not attempt to quantify the multiple significant operational risks using Sterling's mine would present to the Companies' ability to reliably operate both Trimble County coal-fired units. In other words, even when making reasonable capital cost assumptions and assuming the Sterling alternatives qualified as beneficial use and worked perfectly, i.e., none of the numerous unquantified risks materialized, the Companies' proposed Landfill was least-cost across all scenarios analyzed.

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<sup>136</sup> 9/15/15 Hearing Transcript at 16:35:23-16:35:36.

The Companies' PVRR analysis of the Sterling alternative, as the Companies would engineer it to minimize environmental risk and disruption to the community in which the Sterling mine resides, shows that the Trimble County Landfill would be \$49 million to \$55 million less costly to customers over 30 years,<sup>137</sup> and would be \$43 million to \$55 million less costly to customers over 66 years.<sup>138</sup> These results take into account a range of future gas prices (low, medium, and high) and include scenarios in which the Companies' current beneficial reuse levels continue unabated across the entire analysis period.<sup>139</sup> These analyses assume a total capital investment of \$261 million in 2013 dollars for the Sterling alternative, which would include a barge-unloading facility at Steele Bottom, Kentucky, with a barge unloading equipment designed to help minimize fugitive dust concerns, as well as a pipe conveyor and back-up haul road from the barge-unloading station to Sterling's mine, again to minimize dusting concerns and to reduce transportation risk.<sup>140</sup> Although Sterling has stated its disagreement with this approach to its alternative,<sup>141</sup> the Companies believe these investments would be necessary to reduce environmental and liability risks sufficiently before this alternative could even be considered. Of the \$261 million total capital cost of the Steele Bottom version of the Sterling alternative, perhaps all of it, and certainly the \$75 million off-site part of the investment, would be stranded if the Companies made the investment and Sterling were later unable to perform.<sup>142</sup> The costs would likewise be stranded if the Companies later found a less costly beneficial reuse or other disposal opportunity for Trimble County's CCR.

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<sup>137</sup> Sinclair Rebuttal Table 1.

<sup>138</sup> Sinclair Rebuttal Table 2.

<sup>139</sup> Sinclair Rebuttal Tables 1 and 2; Rebuttal Exhibit DSS-1 Attachment Tbl1\_TCLandfillwithSV.xlsx; Rebuttal Exhibit DSS-1 Attachment Tbl2\_TCLandfillwithSV66years.xlsx

<sup>140</sup> Sinclair Rebuttal Table 3.

<sup>141</sup> Walters Direct at 18-19; Sinclair Rebuttal Table 3.

<sup>142</sup> The Companies do not intend to make this investment; this discussion of stranded costs is intended to explain the financial risks associated with Sterling's alternative.

Recognizing that Sterling disagreed with the Steele Bottom approach and preferred an alternative barge-unloading site in the town of Warsaw, Kentucky, approximately ten miles from Sterling's mine, the Companies performed an additional PVRR analysis using nearly all of Sterling's proposed capital-cost reductions, notwithstanding that the Companies would not agree to execute on a plan as risky and poorly designed as Sterling proposed for the Warsaw alternative. The Companies' PVRR analysis of the Warsaw alternative showed that across the same gas-price and beneficial-use scenarios the Companies' proposed landfill was least-cost, with a PVRR between \$3 million and \$23 million less than the Sterling alternative over 30 years and between \$6 million and \$30 million less over 66 years.<sup>143</sup> Although this pared-down version of a Sterling alternative has a capital cost more than \$70 million lower than the Steele Bottom approach, it would still potentially strand almost \$200 million of capital investment—and certainly would strand the \$15 million off-site part of the total investment—if Sterling failed to meet its disposal obligations or if the Companies later found a less costly beneficial reuse or other disposal opportunity for Trimble County's CCR.<sup>144</sup>

It is important to note that the Companies did not attempt to quantify in their analyses a number of potentially large and even likely costs and risks associated with the Sterling alternative because to do so would only have increased the costs of an already uneconomic alternative. The unquantified risks include: (i) that the Sterling mine would fail to have adequate disposal capacity for the entire study life; (ii) that there would be additional environmental constraints on Sterling's ability to dispose of CCR; and (iii) that Sterling's might not remain

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<sup>143</sup> Sinclair Rebuttal Tables 6 and 7.

<sup>144</sup> Sinclair Rebuttal Table 3. It bears repeating that the Companies would not agree to execute a plan as risky as Sterling has suggested concerning Warsaw, namely the unloading of millions of tons of CCR on the Ohio River using a clamshell loader in close proximity to the Gallatin County High, Middle, and Elementary Schools, and trucking the CCR up to 168 round trips per day over about ten miles of two lane road past a number of homes for more than 30 years.

open and in business throughout the periods analyzed.<sup>145</sup> Also, the analyses did not include in the cost of the Sterling alternative any cost of on-site CCR storage at Trimble County in the event of an extended transportation interruption, equipment breakdown, or other temporary event that would prevent CCR from being placed in Sterling's mine.<sup>146</sup> Finally, the PVRR analyses used the same tipping fee for the Sterling mine regardless of the quantity of CCR in each scenario; in fact, Sterling's proposed tipping fee per ton would increase as the quantity of CCR disposed of decreased, so the PVRR benefits of the Trimble County Landfill alternative are understated.<sup>147</sup> Therefore, even when making numerous assumptions in Sterling's favor, the Companies' proposed Trimble County Landfill produces millions of dollars of PVRR benefit to customers, and at substantially lower risk to the reliable operation of the Trimble County units.

Notably, the Companies also did not include in their analyses any cost of a total failure of Sterling to perform, even though such a cost could be substantial. Sterling would have the Commission believe that providing a bond to cover the cost to have CCR trucked from Trimble County to the Ghent Landfill for four years would hold harmless the Companies' customers,<sup>148</sup> but that is far from the truth.

First, if the barge facilities were owned by the Companies as discussed above, the Companies would have significant stranded off-site capital investments (in addition to potentially stranded on-site capital investments for barge-loading and related facilities) that Sterling does not propose to reimburse. Second, the Companies would have to expend resources to obtain permits to temporarily dispose of Trimble County's CCR at Ghent, for which Ghent currently does not have permits. Third, disposing of Trimble County's CCR at Ghent more

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<sup>145</sup> Sinclair Direct at 12; Sinclair Rebuttal at 14.

<sup>146</sup> Sinclair Direct at 12.

<sup>147</sup> Sinclair Rebuttal at 13; Sterling Response to Companies' Supplemental DR No. 18.

<sup>148</sup> 9/15/15 Hearing Transcript at 16:32:23-16:33:40.

rapidly consumes available landfill space at Ghent, which would necessitate accelerating the pace of capital investment in new Landfill phases at Ghent, which could create cross-subsidizations between LG&E and KU ratepayers; Sterling does not propose to cover these costs. Fourth, the nominal cost of a Landfill at Trimble County would likely have increased more rapidly than inflation, so the real cost of the Trimble County Landfill would likely have increased; Sterling does not propose to cover this cost. So there would be a very real and significant cost to the Companies and their customers if Sterling failed to perform in addition to the risk of having to idle the coal-fired units should the interruption be for an extended period of time, but the Companies did not attempt to quantify the cost or the risk of incurring it because the Sterling alternative was already uneconomical. Other than Sterling's unsubstantiated assertions, Sterling provided no tangible proof that it could obtain a bond for its potential failure to perform. No meaningful guarantee of performance has been given to the Companies or the Commission despite the significant risk that Sterling would not be compliant with the CCR Final Rule.

Finally, Sterling has not provided in this proceeding a single PVRR analysis upon which the Commission can rely; only the Companies have provided credible evidence concerning the relative costs and benefits of the Trimble County Landfill versus using Sterling's mine. The analysis Mr. Walters provided in his Direct Testimony relied upon a spreadsheet containing significant errors.<sup>149</sup> When the Companies realized that the erroneous spreadsheet was the basis of Mr. Walters's analysis claiming large PVRR benefits for the Sterling alternative, the Companies quickly provided the correct spreadsheets to Sterling.<sup>150</sup> Sterling had almost a month

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<sup>149</sup> See Companies' Supplemental Response to Sterling's DR 1-14 (Aug. 12, 2015); Companies' Second Supplemental Response to Sterling's DR 1-14 (Aug. 14, 2015).

<sup>150</sup> Companies' Supplemental Response to Sterling's DR 1-14 (Aug. 12, 2015); Companies' Second Supplemental Response to Sterling's DR 1-14 (Aug. 14, 2015). As the Companies explained in their supplemental responses to

to use the correct spreadsheets to perform a new PVRR analysis and to file such an analysis with its rebuttal testimony, but Sterling did not do so. Indeed, Sterling chose to not file any rebuttal evidence in the record. Whatever Sterling's reasons for failing to avail itself of the opportunity to place a corrected PVRR analysis in the record, the fact is that Sterling did not do so, making the Companies' numerous and thorough PVRR analyses the only reliable evidence in the record comparing the Landfill and Sterling proposals. Those analyses, performed making many assumptions favorable to Sterling, show definitively and consistently that the Companies' proposed Landfill is the least-cost feasible means of disposing of Trimble County's CCR.

**V. THE COMMISSION SHOULD REJECT STERLING'S REQUEST FOR A PARTIAL DISALLOWANCE OF THE GHENT LANDFILL BECAUSE IT REMAINS NECESSARY TO SERVE CUSTOMERS AND IS THE LEAST-COST FEASIBLE METHOD OF DISPOSING OF CCR.**

The Ghent Landfill and associated facilities, including the CCRT, have been in commercial operation since December 2014 and are currently providing a necessary and reliable storage solution for the Companies' CCR that complies with federal and state regulations. Both during the 2009 ECR cases and after, the Ghent Landfill was the least-cost method of disposing of the CCR. Sterling's claims that it could have disposed of the gypsum produced at Ghent at a lower cost are not supported by the record; moreover, Sterling's offers were not feasible. No party, including Sterling, has challenged whether the Landfill itself is needed.

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Sterling Ventures' DR 1-14, the Companies inadvertently included the erroneous spreadsheet as a support file in response to Sterling's request for a PVRR calculation for the Trimble County Landfill and all supporting workpapers. As also noted in the Companies' supplemental responses, the Companies did not rely on the calculations in the erroneous spreadsheet for any PVRR analyses presented to the Commission; rather, there were certain correct data inputs in the erroneous spreadsheet that the Companies did use in subsequent analyses. The erroneous spreadsheet contains a calculation error: when the Analysis Term in cell B9 is set to 30 years, it would appear that cells B14:B17 contain the PVRR for each cost category over a 30-year period, but this is not the case for cells B16:B17. Because of the formula modifications in cells AF16:AF17, cells B16:B17 contain PVRR values over a 56-year period, not a 30-year period. As a result, the sum of cells B14:B17 in cell B18 is a nonsensical value and should not be interpreted as the total PVRR for each alternative, yet that is precisely what Mr. Walters appears to have done in his testimony. For that reason, the PVRR analyses Mr. Walters performed on the basis of the erroneous spreadsheet are similarly inaccurate and erroneous.

**A. The Companies satisfied their burden of proof in the 2009 ECR cases.**

The Commission granted a CPCN to the Companies to construct the multi-phase Ghent Landfill, and associated facilities that include a CCRT, in Case Nos. 2009-00197 and 2009-00198.<sup>151</sup> The CPCN for all phases of the Landfill, and ECR cost recovery authority for Phase I, were granted after a thorough investigation by the Commission and numerous intervening parties that included the Office of the Attorney General and the KIUC.

The Companies presented thorough evidence regarding the need for the Ghent Landfill, as well as the numerous alternatives that it evaluated. The Companies initially identified forty-two potential alternatives based on numerous variable combinations regarding storage and CCR transport methods, site locations, and transmission line relocation needs.<sup>152</sup> From this initial evaluation, five storage alternatives were further developed, along with scope of work estimates and net present value evaluations for these alternatives.<sup>153</sup>

As with the Trimble County Landfill project, the Companies also explained the additional facilities that would need to be constructed with the Landfill, which included the CCRT that allows the Companies to convey the CCR in a manner that reduces fugitive dust emissions. The Companies' analysis of these forty-two potential CCR storage alternatives demonstrated that an on-site landfill was the best option from a cost, operations, and environmental risk standpoint. After review, the Commission accepted the Companies' evidence and granted the requested CPCN for all phases of the Ghent Landfill and ECR cost recovery authority for Phase I.<sup>154</sup>

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<sup>151</sup> *In the Matter of: Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00197) (Ky. PSC Dec. 23, 2009); *In the Matter of: Application of Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00198) (Ky. PSC Dec. 23, 2009).

<sup>152</sup> Voyles Direct at 4.

<sup>153</sup> *Id.*

<sup>154</sup> *In the Matter of: Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00197) (Ky.

**B. Subsequent analyses demonstrated that the Ghent Landfill remains the least-cost feasible alternative.**

After obtaining the CPCN to construct the Ghent Landfill, the Companies continued to evaluate the project design changes from a cost perspective, and repeatedly met with the Commission and the Office of the Attorney General to provide updated cost, permitting, and engineering information. The first meeting occurred on November 4, 2010, at which time the Companies explained that the expected cost of Phase I had increased by \$98 million, which was primarily due to the requirements of the CCRT.<sup>155</sup> During a second meeting on June 14, 2013, the Companies explained that significant progress had been made on the landfill itself, as well as the CCRT facility.<sup>156</sup> At the third meeting on February 5, 2015, the Companies provided a photograph of the constructed CCRT that, along with the Landfill, was completed in December 2014.<sup>157</sup>

With respect to considering whether to retrofit the Ghent generating station by obtaining a CCR storage solution (on-site or otherwise) versus retiring the units and replacing the capacity, it was evident in the 2009 ECR cases that obtaining a CCR storage solution was economically favorable by a wide margin. Because of this, the increases in the cost of Phase I of the Ghent Landfill did not alter the ultimate conclusion that obtaining a CCR storage solution is favorable to retiring the units and replacing the capacity. The Landfill and CCRT are now in commercial operation and are providing a compliant and reliable method of disposing of CCR.

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PSC Dec. 23, 2009); *In the Matter of: Application of Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge* (Case No. 2009-00198) (Ky. PSC Dec. 23, 2009).

<sup>155</sup> Voyles Direct at 6-7.

<sup>156</sup> *Id.* at 7.

<sup>157</sup> *Id.* at 8.



**C. Sterling's offers regarding disposal of gypsum were never least-cost.**

As mentioned, Sterling has *never* contested the need for a landfill at Ghent. This is because Sterling never offered to store all of the CCR produced at Ghent; instead, Sterling made sporadic offers over the years to haul and dispose of only gypsum, often tied to a long-term purchase of limestone from the Sterling mine. Even if the Companies had elected to pursue one of Sterling's offers, the Landfill would have remained necessary to dispose of fly ash and bottom ash produced at Ghent.

The unrebutted record in this proceeding shows that the Companies considered and evaluated Sterling's offers regarding hauling and disposing of the gypsum produced at Ghent. Sterling first made an offer to the Companies regarding gypsum disposal in July 2010, at which time it also expressed interest in selling limestone to KU and LG&E.<sup>158</sup> Sterling submitted a revised cost offer to KU in September 2011.<sup>159</sup> The Companies explained to Sterling that the offer could have merit in deferring future phases of the Landfill, but those phases were several years away.<sup>160</sup> Mr. Walters testified at the hearing that KU representatives spoke with Sterling several times and visited the underground mine.<sup>161</sup> After Sterling revised its offer in January 2012, the Companies performed a PVRR analysis that showed that Sterling's cost to transport and store gypsum was \$93 million unfavorable to the Landfill alternative.<sup>162</sup> Sterling made a further overture in 2013 in a bid to supply limestone to the Companies, in which it tied its limestone price (which was not least-cost) to its offer to backhaul and dispose of gypsum, which was again not least-cost.<sup>163</sup> The unrebutted record shows that not only did the Companies continue to evaluate whether the Ghent Landfill was the least-cost alternative as compared to

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<sup>158</sup> *Id.* at 11.

<sup>159</sup> *Id.* at 11-12.

<sup>160</sup> *Id.* at 12.

<sup>161</sup> 9/15/15 Hearing Transcript at 16:03:45-16:04:08.

<sup>162</sup> Voyles Direct at 12.

<sup>163</sup> *Id.* at 12-13.

retiring and replacing the capacity, they likewise evaluated whether the Landfill was the least-cost alternative for gypsum disposal as compared to Sterling's offers.

**D. The CCRT is necessary to the operation of the Landfill.**

As mentioned, Sterling has not challenged the need for the Ghent Landfill, because it would have been required even if the Companies had elected to pursue any of Sterling's offers because Sterling never offered to take fly ash or bottom ash. Instead, in this case Sterling has requested the Commission disallow \$41 million in ECR cost recovery for the Ghent Landfill which, according to Sterling, is the cost of the gypsum-specific components of the CCRT and related operation and maintenance expenses. Sterling claims that the Companies did not have to construct the gypsum portions of the CCRT because Sterling would have removed the gypsum directly from a gypsum stack at the Ghent generating station.<sup>164</sup> This claim is an example of Sterling's piecemeal, haphazard, and imprudent approach to CCR disposal.

From a percentage basis, more gypsum is created during the generation process than fly ash and bottom ash.<sup>165</sup> It would not be prudent to build a CCRT today that cannot transport and treat all CCR, including the type created in the largest volume.<sup>166</sup> As early as the 2009 ECR Cases, which were before Sterling first contacted the Companies regarding gypsum, the Companies explained that the CCRT was necessary to manage the transport of CCR in order to address fugitive dusting concerns associated with the materials.<sup>167</sup> The EPA recently affirmed the prudence of the Companies' decision, as the preamble to the CCR Final Rule recommends conditioning all types of CCR as a dust control measure.<sup>168</sup> Moreover, if Sterling removed the gypsum directly from the stack, which means that it may not be sufficiently dewatered and

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<sup>164</sup> Walters Direct at 10.

<sup>165</sup> Voyles Rebuttal at 8.

<sup>166</sup> *Id.*

<sup>167</sup> *Id.*

<sup>168</sup> *Id.*

treated prior to transport, the weight and volume of the materials to be transported would increase significantly, which would have a consequent increase on transportation costs, as well as adding handling and transporting complexities.<sup>169</sup> The increase in transportation costs further renders Sterling's offers non-economic and casts further doubt on the reliability and feasibility of Sterling's offers. Moreover, because of the increased distances and volumes, there are even more of the same transportation concerns that render Sterling's Trimble County offer rife with uncertainty plagued the gypsum offers as well. For example, in a written offer to the Companies, Sterling proposed to transport the gypsum by "hot seat[ing] [its] trucks" by "operating 20 hours a day, 5 days a week."<sup>170</sup> This overly ambitious trucking schedule, the route of which would pass directly through the entire town of Warsaw, is simply not feasible or prudent.

In addition to these environmental and transportation concerns, had the Companies elected not to construct the gypsum-specific components of the CCRT when the facility was constructed, it would have increased the total cost of the CCRT by extending the Companies' construction cycles.<sup>171</sup> Moreover, it is not consistent with the Companies' Coal Combustion Byproduct Management strategies—or prudent utility planning—to exclude gypsum treatment and transport from the CCRT given the roughly forty years that the Companies expect to generate gypsum at Ghent and the need to condition the gypsum as a dust control measure.<sup>172</sup>

In addition to the imprudence of Sterling's claim, Sterling has wrongly assumed that the gypsum stack (which is the only one of its type within the Companies) is a long-term storage solution from which Sterling could remove gypsum indefinitely.<sup>173</sup> This is incorrect for two critical reasons. First, the stack, which was initially designed to serve only one unit at Ghent,

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<sup>169</sup> *Id.* at 9.

<sup>170</sup> Voyles Direct at 13-14.

<sup>171</sup> Voyles Rebuttal at 10.

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

<sup>173</sup> Walters Direct at 10.

started having capacity concerns after it began serving four units at Ghent with increased gypsum volumes due to the installation of scrubber technologies.<sup>174</sup> The rapidly increasing volumes being stored at the stack also led to stability concerns.<sup>175</sup> Mr. Walters acknowledged at the hearing that the gypsum stack was nearing capacity when Sterling began speaking with the Companies several years ago.<sup>176</sup> Second, it is likely that the Companies will have to close the gypsum stack under the CCR Final Rule.<sup>177</sup>

The Commission reviewed the need for the CCRT in the 2009 ECR cases. The Commission subsequently reviewed and approved the costs associated with Phase I of the Ghent Landfill, including the CCRT, during the Commission's six-month and two-year ECR review proceedings. As mentioned, because these costs were incurred under the CPCN, they are presumed reasonable for rate recovery purposes.<sup>178</sup> No party has challenged the need for the Landfill itself or the non-gypsum specific portions of the CCRT. Sterling has looked at the costs related to the CCRT and requested certain costs be disallowed so that it can claim its offers regarding gypsum would have been least-cost. Respectfully, the Companies cannot merely shift numbers around on a spreadsheet when it comes to making decisions about the responsible management of CCR. Instead, the Companies must consider compliance with federal and state regulations, environmental issues, feasibility, reliable operation of the coal fired units, and the PVRR of the project and alternatives. All of these considerations fully supported the construction of the Ghent Landfill and associated facilities; no disallowance is warranted.

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<sup>174</sup> Voyles Rebuttal at 10.

<sup>175</sup> *Id.*

<sup>176</sup> 9/15/15 Hearing Transcript at 16:02:00-16:02:23.

<sup>177</sup> Voyles Rebuttal at 11.

<sup>178</sup> Case No. 2000-481, *In the Matter of: Application of Northern Kentucky Water District (A) For Authority to Issue Parity Revenue Bonds in the Approximate Amount of \$16,545,000; and (B) A Certificate of Convenience and Necessity for the Construction of Water Main Facilities* (Ky. PSC Oct. 8, 2001).

## **VI. CONCLUSION**

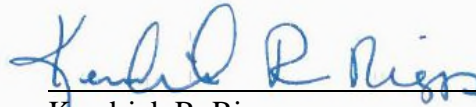
The record in this proceeding shows the demonstrated need for – and the prudence of – the Trimble County and Ghent Landfills and associated facilities. The Companies’ numerous PVRR analyses confirm the Commission’s findings in the 2009 ECR Cases that the Landfills are a reasonable and cost effective method of disposing of CCR. No evidence has been presented of a contrary conclusion. With respect to Trimble County, while costs have changed from the conceptual estimates, the Landfill and associated facilities remain the least-cost feasible means of disposing of CCR. Likewise, the Ghent Landfill and its associated facilities, Phase I of which is in commercial operation, is the least-cost feasible method of CCR disposal and is serving as a reliable and environmentally compliant means by which to dispose of CCR.

Sterling, a sort of unsuccessful “bidder,” has asked for the extraordinary relief of revoking the Trimble County Landfill CPCN and disallowing a considerable portion of the Phase I costs of the Ghent Landfill. The record in this proceeding proves two dispositive points with respect to Sterling. First, it provided no persuasive evidence to support its claims that the Companies did not properly analyze the landfill alternatives. Second, Sterling’s offers for Ghent and Trimble County have never been least-cost and are fraught with critical feasibility concerns that could jeopardize the utilization of the Ghent and Trimble County coal-fired units.

For these reasons, the Companies respectfully request the Commission to issue an order by October 31, 2015 affirming the Companies’ existing CPCN and ECR authority for the Trimble County Landfill and denying Sterling’s requested cost disallowance for the Ghent Landfill, which would affirm the authority the Commission granted to the Companies in Case Nos. 2009-00197 and 2009-00198.

Dated: October 16, 2015

Respectfully submitted,



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*Counsel for Kentucky Utilities Company and  
Louisville Gas and Electric Company*

**CERTIFICATE OF SERVICE**

This is to certify that Kentucky Utilities Company's and Louisville Gas and Electric Company's October 16, 2015 electronic filing of the Post-Hearing Brief 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 October 16, 2015; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that an original and one copy, in paper medium, of the Brief are being mailed by first class U.S. mail, postage prepaid, to the Commission on October 16, 2015.

A handwritten signature in blue ink, reading "Gerald R. Nigg". The signature is written in a cursive style with a long horizontal flourish at the end.

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*Counsel for Kentucky Utilities Company and  
Louisville Gas and Electric Company*

## Appendix A



**Pearce, Jennifer**

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**From:** Somerville, Eric  
**Sent:** Monday, August 03, 2015 2:19 PM  
**To:** J. Steven Gardner  
**Cc:** Doug Myneer; Edmundo Laporte; Jeff Baird  
**Subject:** RE: Sterling Materials & CCR

Yes, Steve. That's true. I have been corresponding with John Walters about the Sterling Ventures Mine. However, I may have misinterpreted your previous email to suggest that LG&E has in fact proposed to send the CCR to the mine, which as far as I know is not the case at all.

That said, I can speak with you about CWA 404, but I am less able to discuss "beneficial use" as that term is used in the final EPA rule on CCR. That rule was promulgated under an EPA regulation that I have no experience with. In fact, I am likely no more familiar with the nuances of beneficial reuse as you might be; my only exposure to the term as it applies here is reading the above referenced rule.

If you would still like to chat, I am available this afternoon and all day tomorrow, except for 11:45am – 12:45pm.

-Eric

Eric Somerville  
U.S. EPA Region 4 | Ocean, Wetlands & Streams Protection Branch  
c/o SESD (F120-6) | 980 College Station Road | Athens, GA 30605-2720  
tel 706.355.8514 | [somerville.eric@epa.gov](mailto:somerville.eric@epa.gov)

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**From:** J. Steven Gardner [mailto:[jsgardner@engrservices.com](mailto:jsgardner@engrservices.com)]  
**Sent:** Monday, August 03, 2015 2:12 PM  
**To:** Somerville, Eric  
**Cc:** Doug Myneer; Edmundo Laporte; Jeff Baird  
**Subject:** RE: Sterling Materials & CCR

Eric,

We were under the impression that you had been talking with John Walters of Sterling Materials about this proposal. I had some additional clarification questions on Beneficial Use that I thought you could help with.

Thanks,

Steve

**J. Steven Gardner, PE, PS, SME-AM**  
**President/CEO**  
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859-806-5826 (mobile)

**From:** Somerville, Eric  
**Sent:** Monday, August 03, 2015 11:56 AM  
**To:** 'J. Steven Gardner'  
**Cc:** Doug Mynear; Edmundo Laporte; Jeff Baird  
**Subject:** RE: Sterling Materials & CCR

Good Day Steven-

I am afraid that I am unaware of any proposal for LG&E to send its CCR from the Trimble County Generating Station to the Sterling Ventures Mine. To my knowledge, LG&E has consistently discounted any such idea as Impractical. So, I am not sure exactly what information you might have that I am unaware of, and in any event I am certainly not familiar enough with any new plans or proposal from LG&E to discuss them.

I am also compelled to reiterate that the Army Corps of Engineers is the lead federal agency on any permitting matters pursuant to Section 404 of the Clean Water Act, and so I would advise that you touch base with them. Ms. Kimberly Simpson is the Louisville District POC for this project, and you may reach her at (502) 315-6691 or [kimberly.j.simpson@usace.army.mil](mailto:kimberly.j.simpson@usace.army.mil).

Regards.

-Eric

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**From:** J. Steven Gardner  
**Sent:** Monday, August 03, 2015 11:39 AM  
**To:** [somerville.eric@epa.gov](mailto:somerville.eric@epa.gov)  
**Cc:** Doug Mynear; Edmundo Laporte; Jeff Baird  
**Subject:** Sterling Materials & CCR

Eric,

We would like to set up a time to discuss the proposal for LG&E to send their CCR from the Trimble plant to the Sterling underground operation today or tomorrow if possible.

Thanks,

Steve

**J. Steven Gardner, PE, PS, SME-RM**  
**President/CEO**  
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