

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

In the Matter of:

Electronic Application Of Kentucky Power            )  
Company For A Certificate Of Public Convenience    )  
And Necessity To Construct A 161 kV                ) Case No. 2017-00328  
Transmission Line In Perry And Leslie Counties,    )  
Kentucky And Associated Facilities                 )  
(Hazard-Wooton Line)                                 )

**Kentucky Power Company's Brief In Support Of Its Application For A Certificate Of  
Public Convenience And Necessity To Construct The Hazard-Wooton 161 kV  
Transmission Line And Associated Facilities**

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Kentucky Power Company submits this brief in support of its application for a certificate of public convenience and necessity to rebuild its Hazard-Wooton transmission line, along with improvement, replacement, and installation work at Kentucky Power's existing Hazard and Wooton substations (collectively the "Project"):

### Introduction

The Project will enable the Company to replace a nearly 75-year old portion of its transmission infrastructure that is deteriorating,<sup>1</sup> alleviate bulk electrical system violations identified by PJM Interconnection, Inc.,<sup>2</sup> while improving the reliability of transmission service for nearly 300 MW of Kentucky Power's load.<sup>3</sup> The proposed route limits the effect of the Project on adjoining landowners and the view shed by rebuilding 5.4 miles of the line in or adjacent to the existing Hazard-Wooton right-of-way,<sup>4</sup> by moving the line farther from existing residences in the vicinity of Hazard High School and the Hazard Substation,<sup>5</sup> and by combining portions of the existing Hazard-Jackson 69 kV line and the existing Hazard-Wooton 161 kV line onto seven double-circuit structures.<sup>6</sup>

The Project is necessary, the construction is reasonable, and will not result in wasteful duplication of facilities. The Commission should grant the requested certificate of public convenience and necessity.

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<sup>1</sup> Direct Testimony of Ranie K. Wohnhas at 5; Direct Testimony of Michael G. Lasslo at 6.

<sup>2</sup> Lasslo Testimony at 11-12, 14-15.

<sup>3</sup> *Id.* at 15.

<sup>4</sup> Direct Testimony of Emily S. Larson at 6-7.

<sup>5</sup> *Id.* at 7.

<sup>6</sup> *Id.* at 8; Kentucky Power Response to AG 1-2(a).

## Argument

### A. The Public Convenience And Necessity Requires The Project.

1. The Proposed Project Will Address The Bulk Electrical System Violations Identified By PJM, The Existing Line's Deteriorating Structures And Conductor, As Well As Other Equipment And Operational Issues At The Hazard And Wooton Substations.

The existing 6.5 mile Hazard-Wooton 161 kV line connects Kentucky Power's Hazard Substation in Perry County with its Wooton Substation located in northeastern Leslie County.<sup>7</sup> The line serves as the principal source for the Hazard Area Transmission System through interconnections with the Tennessee Valley Authority and Kentucky Utilities Company.<sup>8</sup> The Hazard Area Transmission System comprises those portions of Kentucky Power's service territory lying in Breathitt, Knott, Leslie, Letcher, Morgan, and Perry counties.<sup>9</sup> The area's total load is approximately 300 MW and consists primarily of residential load along with some commercial and industrial (principally coal mine) customers.<sup>10</sup>

Forty two of the 45 existing Hazard-Wooton 161 kV line structures are wooden and date to the 1940's.<sup>11</sup> Likewise, most of the conductor is approximately 75 years old.<sup>12</sup> Despite Kentucky Power's maintenance efforts, the existing conductor and structures are deteriorating. Fifty-two "category A" open conditions have been identified in connection with the conductor and structures, including damaged or rotted poles and cross-arms, damaged guy wires, damaged

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<sup>7</sup> Wohnhas Testimony at 4-5.

<sup>8</sup> Lasslo Testimony at 4

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

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

<sup>11</sup> *Id.* at 5.

<sup>12</sup> *Id.* at 5-6.

shield wires, and damaged insulators.<sup>13</sup> In addition, as part of the 2016 PJM Regional Transmission Expansion Plan study PJM identified bulk electrical system violations on both the Hazard-Wooton 161 kV line and in connection with the Hazard 161/138 kV transformer.<sup>14</sup> The PJM problem statement also identified concerns regarding the age and condition of circuit breakers, transformers, and circuit switches at the Hazard Substation, as well as the presence of PCBs, damage to bushings, oil leaks, dielectric damage, and the fact that the number of fault operations experienced was in excess of the manufacturer's recommendation.<sup>15</sup> In addition, safety concerns were noted.<sup>16</sup>

The Company evaluated multiple solutions to address these issues. A sag remediation study indicated that the bulk electrical system violations could be addressed by replacing the 161/138 kV transformer and 22 of the 45 existing transmission structures.<sup>17</sup> But doing so would not address the deteriorating condition of the remaining structures and the conductor.<sup>18</sup> In addition, because the 22 structures were dispersed along the length of the line, the savings from replacing only the 22 structures identified through the sag remediation study would be more limited than they otherwise would have been if the 22 structures had been located contiguously.<sup>19</sup>

The second alternative evaluated by Kentucky Power was to rebuild the Hazard-Wooton 161 kV line in its entirety and to replace the Hazard 161/138 kV transformer with a higher

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<sup>13</sup> *Id.* at 6.

<sup>14</sup> *Id.* at 11-12; Kentucky Power Response to KPSC 1-5.

<sup>15</sup> Kentucky Power's Response to AG 2-2, Attachment 3 at 5.

<sup>16</sup> *Id.* at 6.

<sup>17</sup> Lasslo Testimony at 11.

<sup>18</sup> *Id.* at 11-12.

<sup>19</sup> *Id.* at 11.

capacity (350 MVA nameplate) transformer.<sup>20</sup> The rebuild will use galvanized tubular steel H-frames and galvanized lattice steel towers in lieu of the current, primarily wooden, structures.<sup>21</sup> The second alternative also calls for using a higher capacity conductor to address the conductor-related issues identified by PJM.<sup>22</sup> This alternative would allow Kentucky Power to address the condition of the deteriorating transmission structures<sup>23</sup> and conductor<sup>24</sup> along the entire length of the Hazard-Wooton line. Also included as part of the second alternative was additional work at the Hazard Substation<sup>25</sup> and approximately \$700,000 of work to address legacy engineering issues at the Wooton Substation.<sup>26</sup>

Kentucky Power selected the second alternative. Rebuilding the Hazard-Wooton line in its entirety allows the Company to address both the bulk electrical violations identified by PJM, as well as the condition of the structures and conductor associated with the nearly 75-year old line.<sup>27</sup> Much of this work would have been performed even in the absence of the work required to address the PJM-identified bulk electrical system issues.<sup>28</sup> In addition, the replacement of the Hazard Substation single phase 161/138 kV transformers with a higher capacity three phase transformer, along with the higher capacity conductor (185 MVA) used in the rebuild, addresses

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<sup>20</sup> Kentucky Power Response to KPSC 1-5.

<sup>21</sup> Kentucky Power Response to AG 1-3. The proposed rebuild will use approximately 18 fewer structures than are currently deployed. Application at ¶ 16.

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

<sup>23</sup> Lasslo Testimony at 12.

<sup>24</sup> Kentucky Power Response to KPSC 1-5.

<sup>25</sup> Kentucky Power also examined relocating the Hazard Substation to a different location. The lack of a suitable location because of the mountainous terrain and nearby development, the need also to reroute six transmission circuits and four distribution circuits if the station was relocated, and the resulting high cost (approximately \$35 million) led Kentucky Power to reject this alternative. Response to AG 2-2, Attachment 3 at 7.

<sup>26</sup> Kentucky Power Response to KPSC 1-3; Lasslo Testimony at 8, 9-10.

<sup>27</sup> Lasslo Testimony at 11-12.

<sup>28</sup> *Id.*

the bulk electrical issues identified by PJM.<sup>29</sup> Finally, Kentucky Power is upgrading legacy engineering elements at the Hazard Substation<sup>30</sup> and Wooton Substation<sup>31</sup> to current design standards in conjunction with the proposed rebuild and transformer replacement.<sup>32</sup> Doing so permits Kentucky Power to deploy engineering and construction resources in a more efficient manner by taking advantage of the required outage windows for the Hazard-Wooton work,<sup>33</sup> while addressing safety and operational issues at both substations.<sup>34</sup>

2. The Proposed Project Is Consistent With Kentucky Power And PJM Planning Criteria And Received Full Stakeholder Review.

The need for and utility of the proposed project were identified and confirmed using the PJM annual Regional Transmission Expansion Plan (“RTEP”) process<sup>35</sup> and Kentucky Power (“AEP Guidelines for Transmission Owner Identified Needs”) transmission planning criteria.<sup>37</sup> The rebuild of the Hazard-Wooton 161 kV transmission line and the replacement of the Hazard 161/138 kV transformer were determined by PJM to constitute a Baseline project.<sup>38</sup> “Baseline

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<sup>29</sup> Lasslo Testimony at 8, 9-10.

<sup>30</sup> The work to be completed at the Hazard Substation consists of the 46 improvements detailed in Exhibit 10 to the Company’s application. *Id.* at 9.

<sup>31</sup> Work planned for the Wooton Substation as part of the project includes (a) installation of station class surge arresters attached to the upper beam of the existing 161kV box bay structure on the 161kV Hazard Line position; (b) replacement of devices for line protection and circuit breaker control associated with the 161kV Hazard line position; (c) installation of two coupling capacitor voltage transformers on Phase 2 and Phase 3 of the 161kV bus; (d) replacement of devices for 161kV bus protection; and (e) installation of telecommunication fiber equipment. Application at ¶ 19; Lasslo Testimony at 8.

<sup>32</sup> Lasslo Testimony at 8-10.

<sup>33</sup> *Id.* at 10.

<sup>34</sup> Kentucky Power’s Response to AG 2-2, Attachment 3 at 5-6.

<sup>35</sup> See Lasslo Testimony at 12.

<sup>36</sup> See Kentucky Power Response to AG 2-2, Attachment 4.

<sup>37</sup> Lasslo Testimony at 12-13; Kentucky Power Response to AG 1-1(d) (“PJM and Kentucky Power, in conjunction with AEP, identify needs that must be addressed by Baseline projects... Kentucky Power, in conjunction with AEP, identifies needs that must be addressed by Supplemental projects....”)

<sup>38</sup> Lasslo Testimony at 12.

projects include transmission expansions or enhancements that are required to achieve compliance with respect to PJM’s system reliability, operational performance, or market efficiency requirements....”<sup>39</sup> Baseline projects also include projects that meet Kentucky Power’s local transmission planning criteria.<sup>40</sup> Station work not directly related to rebuilding the Hazard-Wooton 161 kV transmission line and the replacement of the Hazard Substation 161/138 kV transformer is designated a supplemental project.<sup>41</sup> Supplemental projects help “maintain the existing grid as designed, ... meet regulatory requirements, ... and RTO and industry standards.”<sup>42</sup> Although the PJM planning process distinguishes between Baseline and Supplemental projects, a project’s designation as Supplemental does not render the project any less required by the public convenience and necessity.<sup>43</sup>

Both the Baseline and Supplemental aspects of the project were reviewed as part of the PJM planning process.<sup>44</sup> The Baseline portion of the project was reviewed by the PJM Transmission Expansion Advisory Committee on September 15, 2016 and October 6, 2016.<sup>45</sup> The proposal to rebuild the Hazard-Wooton 161 kV line also was reviewed at additional PJM Subregional RTEP meetings on September 11, 2017, and November 2, 2017.<sup>46</sup> The Baseline portion of the project was approved by the PJM Board on December 7, 2017.<sup>47</sup> Further, the Supplemental portions of the project were presented to stakeholders for review at the November

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<sup>39</sup> *Id.* at 13.

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

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

<sup>42</sup> *Id.*

<sup>43</sup> Kentucky Power Response to AG 1-1(b).

<sup>44</sup> Lasslo Testimony at 12; Kentucky Power Response to AG 2-2(c).

<sup>45</sup> Kentucky Power Response to AG 2-2(c).

<sup>46</sup> *Id.*

<sup>47</sup> Kentucky Power Response to KPSC 1-6.



2, 2017 and December 18, 2017 Subregional Committee meetings.<sup>48</sup> As a result of this process, the Project and its components represent the most appropriate, cost-effective, and efficient means of meeting the applicable planning criteria and identified transmission system needs.<sup>49</sup>

The Project and its components also were reviewed internally as part of the four-step process used by the Company to review and schedule Kentucky Power-identified transmission needs.<sup>50</sup> In addition, the capital investment associated with the Project was reviewed and approved by the Subcompany board, as well as Matthew J. Satterwhite, President and Chief Operating Officer of Kentucky Power, A. Wade Smith, Senior Vice President – Grid Development, American Electric Power Company, Inc., Lisa Barton, Executive Vice President – Transmission, American Electric Power, and Nicholas K. Akins, president, chairman, and chief executive officer of American Electric Power.<sup>51</sup> Finally, Kentucky Power solicited local stakeholder input prior to filing the application by hosting an open house on August 24, 2017 at Hazard Community and Technical College, as well as by meeting with landowners, local public officials, the Superintendent of the Hazard Independent Schools, and the principal of Hazard High School.<sup>52</sup>

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

<sup>49</sup> Lasslo Testimony at 14.

<sup>50</sup> *See id.* at 12-13; Kentucky Power Response to AG 2-2, Attachment 4.

<sup>51</sup> Kentucky Power Response to AG 1-6; Kentucky Power Response to AG 2-4; Kentucky Power Response to AG 2-4, Attachment 2.; Wohnhas Testimony at 16. Mr. Akins also serves as chief executive officer of Kentucky Power Company; Ms. Barton also serves as a Vice President of Kentucky Power.

<sup>52</sup> Kentucky Power Response to AG 2-2(b).

3. The Proposed Project Will Benefit The Company And Its Customers.

The Project will provide multiple benefits to Kentucky Power and its customers. In addition to replacing and upgrading a portion of the Company's transmission infrastructure<sup>53</sup> that is at the end of its useful life,<sup>54</sup> the Project will:

- Alleviate the bulk electric system violations identified by PJM, including PJM identified thermal overloads during common mode contingency outage conditions.
- Address infrastructure concerns associated with the existing Hazard- Wooton 161 kV line and associated substation equipment.
- Enhance operational performance and improve reliability of service for approximately 300 MW of load.
- Provide Kentucky Power increased capacity to serve future load.
- Provide the necessary flexibility to allow for routine maintenance of transmission and sub-transmission facilities.<sup>55</sup>

Moreover, because the rebuild and replacement work to be performed will meet or exceed current standards, the Project will help ensure reliable and safe operation of the facilities.<sup>56</sup> For example, the steel structures to be used in connection with the double-circuit section of the rebuilt Hazard-Wooton 161 kV transmission line are designed to exceed current design standards and thus are anticipated to provide greater reliability than the single circuit configuration currently used.<sup>57</sup>

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<sup>53</sup> Lasslo Testimony at 14.

<sup>54</sup> Wohnhas Testimony at 5.

<sup>55</sup> Lasslo Testimony at 15.

<sup>56</sup> Wohnhas Testimony at 5.

<sup>57</sup> Kentucky Power Response to AG 1-2(b).

**B. The Construction Is Reasonable.**

1. The Project Is Designed And Routed To Limit Its Impact On Adjoining Landowners And The View Shed.

The proposed route for the rebuilt Hazard-Wooton 161 kV transmission line limits its impact on adjoining landowners. Approximately 82 percent (approximately 5.4 miles) of the 6.6 mile rebuilt line will lie within or near existing rights-of-way.<sup>58</sup> Using or paralleling the existing right-of-way to the greatest extent possible limits new impacts on residents, vehicular traffic, and the environment.<sup>59</sup>

The proposed line also includes two deviations, totaling approximately 1.2 miles, from the existing right-of-way. The first deviation is approximately 3,200 feet in length and is located near the Hazard High School ball fields.<sup>60</sup> It moves the transmission line north of the existing transmission line.<sup>61</sup> Although the primary purpose of the first deviation is to address constructability and engineering issues,<sup>62</sup> relocating the line to the north of the existing centerline moves the proposed line farther from several residences, including structures currently encroaching the Company's right-of-way, and the Hazard High School ball fields,<sup>63</sup> thereby lessening its impact on its surroundings. A visual buffer also will be established over time by allowing vegetation to grow in the area between Hazard High School and the proposed right-of-way.<sup>64</sup>

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<sup>58</sup> Direct Testimony of Emily S. Larson at 6, 7; Application Exhibit 16 ("Rebuild Study for The Hazard-Wooton 161 kV Transmission Line") ("Rebuild Study") at 9-10.

<sup>59</sup> *Id.*

<sup>60</sup> Wohnhas Testimony at 8; Application Exhibit 1.

<sup>61</sup> *Id.*

<sup>62</sup> Larson Testimony at 9; Rebuild Study at 8.

<sup>63</sup> Rebuild Study at 8-9, 10.

<sup>64</sup> *Id.* at 10.

The second deviation, which addresses constructability and access problems presented by this portion of the existing line,<sup>65</sup> begins near the Perry County-Leslie County boundary and runs approximately 3,000 feet southwest toward the Wooton Substation.<sup>66</sup> The second deviation is located in a remote area where the required clearing is unlikely to be readily visible.<sup>67</sup>

The route of the proposed rebuilt transmission line crosses fewer parcels (48 vs. 50 parcels) than the existing line.<sup>68</sup> In addition, there are fewer residences (20 residences vs. 23 residences) within 250 feet of the proposed centerline than currently lie within the same distance of the existing transmission line.<sup>69</sup> Each of these changes lessens the impact of the proposed rebuild as compared to the existing transmission line.<sup>70</sup>

Further lessening the impact of the proposed line on adjoining property owners and the view shed is the incorporation of the double-circuit portion of the proposed line into the Project. The double-circuit of the proposed line combines the existing Hazard-Jackson 69 kV line and the existing Hazard-Wooton 161 kV line onto approximately seven structures.<sup>71</sup> It begins at the Hazard Substation and runs approximately 1.15 miles west to the first structure north of the North Fork of the Kentucky River.<sup>72</sup> The western portion of the double-circuit portion of the line will comprise a part of the deviation north of the Hazard High School ball fields.<sup>73</sup> The remainder will be built in or adjacent to the existing Hazard-Wooton 161 kV and Hazard-

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<sup>65</sup> Wohnhas Testimony at 8-9; Rebuild Study at 9.

<sup>66</sup> Rebuild Study at 8; Application Exhibit 1.

<sup>67</sup> Rebuild Study at 10.

<sup>68</sup> *Id.* at 9-10.

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

<sup>70</sup> *Id.*

<sup>71</sup> Wohnhas Testimony at 9.

<sup>72</sup> *Id.* at 9-10; Rebuild Study at 8.

<sup>73</sup> Larson Testimony at 9.

Jackson 69 kV rights-of-way, thereby avoiding additional impact on property owners.<sup>74</sup> The double-circuit portion of the proposed rebuild also lessens the impact of the line on adjoining property owners by reducing the number of structures, by avoiding an existing encroaching outbuilding, by maximizing the line's distance from a nearby residential area,<sup>75</sup> and by relocating two transmission lines that currently are parallel onto a single centerline.<sup>76</sup> In addition, the double-circuit portion of the line moves the existing line from the backside of several residences.<sup>77</sup> An existing 34.5 kV distribution line will be relocated and built under or adjacent to the proposed double-circuit portion of the line<sup>78</sup> thereby further reducing the "visual clutter."

The rebuild also will reduce by approximately one-third (from 53 to approximately 35) the number of structures required to support the transmission line.<sup>79</sup> In addition, the work to be performed at the Hazard Substation and the Wooton Substation will be limited to their existing footprints.<sup>80</sup> The reduction in the number of structures<sup>81</sup> and the restriction of the substation

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<sup>74</sup> *Id.* at 8-9.

<sup>75</sup> In fact, the double-circuit portion of the line moves the existing line from the backside of several residences. *Id.* at 8.

<sup>76</sup> *Id.*; Rebuild Study at 8, 10; Application, Exhibit 2; Exhibit 7.

<sup>77</sup> Larson Testimony at 8.

<sup>78</sup> Wohnhas Testimony at 10.

<sup>79</sup> Application at ¶ 16.

<sup>80</sup> *Id.* at ¶ 22; Wohnhas Testimony at 13.

<sup>81</sup> Although fewer structures will be deployed, the higher capacity conductor and longer span lengths will require the use of structures that are on average 20-30 feet taller than the existing structures. Rebuild Study at 10. At least two factors will help to minimize the visual impact of the higher structures. First, most of the adjoining territory is scarcely populated and developed. *Id.* Second, most of the residences and roads are located in valleys and the structures will be located atop ridgelines. *Id.* The mountainous nature of the terrain thus will block or limit the sight lines between most development and vehicular traffic and the structures. *Id.* The most significant exception to this minimized impact is that the higher structures used in connection with the double circuit portion of the transmission line will be more visible to a nearby shopping center and residential area. *Id.* at 8. This increased impact nevertheless is required by the constraints imposed by the nearby development, steep terrain and resulting constructability issues, and the existing electrical infrastructure. *Id.* Importantly, in meetings with key stakeholders, including the Hazard High School principal, the Mayor of the City of Hazard, and the Perry County Judge Executive, the visual simulation illustrating the increased visibility from the shopping center (Rebuild Study, Attachment 2) was well received. *Id.* at 3-4.

work to the existing footprints of the stations also will limit the impact of the Project on adjoining landowners and the view shed.

2. The Requested Filing Corridor And Other Aspects Of The Company's Right-Of-Way Acquisition Program Will Allow The Company To Meet Landowner, Access, And Constructability Concerns.

Consistent with the authority granted the Company in prior transmission project applications for a certificate of public convenience and necessity,<sup>82</sup> Kentucky Power is seeking authority to relocate the centerline and accompanying right-of-way within a filing corridor.<sup>83</sup> The requested filing corridor is either 150 feet (300-foot corridor)<sup>84</sup> or 250 feet (500-foot corridor)<sup>85</sup> on either side of the designated centerline. The requested authority to relocate the centerline within the filing corridor permits Kentucky Power to address access, constructability, and other issues that may not emerge until ground surveys and final engineering is complete.<sup>86</sup>

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<sup>82</sup> See Order, *In the Matter of: The Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Construct A 138 KV Transmission Line In and Associated Facilities in Breathitt, Knott and Perry Counties, Kentucky (Bonnyman-Soft Shell Line)*, Case No. 2011-00295 (Ky. P.S.C. January 26, 2012); Order, *In the Matter of: The Application Of Kentucky Power Company For A Certificate Of Public Convenience And Necessity To Construct A 138 KV Transmission Line In Floyd County, Kentucky*, Case No. 2007-00155 (Ky. P.S.C. August 3, 2007).

<sup>83</sup> Wohnhas Testimony at 10-12.

<sup>84</sup> *Id.* at 10. The 300-foot filing corridor is located in the portion of the proposed rebuild located between the Hazard Substation and Ky. Route. 15. *Id.*

<sup>85</sup> *Id.* at 10-11. The 500-foot corridor comprises the remainder of the proposed rebuild. *Id.* The Company also is seeking a 500-foot corridor for the Hazard-Jackson 69 kV Reconfiguration. *Id.* at 10-11. The Hazard-Jackson 69 kV Reconfiguration, while not part of the Hazard-Wooton 161 kV rebuild, arises from the relocation of a 69 kV structure where the two circuits comprising the double-circuit portion of the Hazard-Wooton 161 kV transmission line split. *Id.* at 14. The 69 kV structure, which will be built to 138 kV standards, is being relocated to a position higher on the slope to optimize line design, to decrease any outage duration during construction, and is expected to reduce the likelihood of slides during construction. *Id.* at 13. With the relocation of the 69 kV Hazard-Jackson structure, an approximately 1,900 foot section of the existing Hazard-Jackson 69 kV line will be reconfigured slightly to the northeast between the last double circuit 161/69 kV structure, the new 69 kV structure (built to 138 kV standards), and the next structure of the existing Hazard-Jackson 69 kV line. *Id.* The reconfigured portion of the Hazard-Jackson 69 kV transmission line is less than 5,280 feet in length and thus standing alone would not require approval under KRS 278.020(2). *Id.* at 13. In addition, the existing Hazard-Jackson 69 kV transmission line is less than 138 kV although the new structure will be built to 138 kV standards. *Id.* Kentucky Power included a description of the Hazard-Jackson 69 kV Reconfiguration in its application to make the Commission fully aware of work that will be taking place in the vicinity of the Hazard-Wooton 161 kV line, and to seek any necessary Commission approvals for the reconfiguration.

<sup>86</sup> *Id.* at 10.

Equally important, the filing corridor also gives the Company the flexibility to address and remedy reasonable landowner concerns that emerge during right-of-way negotiations.<sup>87</sup> For example, with the authority to shift the centerline within the filing corridor, Kentucky Power will have the flexibility to move the line to a different location on a landowner's property or to change the location of a proposed access road when reasonably requested to do so by a landowner.<sup>88</sup>

Kentucky Power also will work with landowners in other ways. For example, the existing line spans Brown Fork Hollow in an area located approximately three miles southwest of the City of Hazard.<sup>89</sup> Currently two occupied homes and two outbuildings encroach onto the Company's existing right-of-way.<sup>90</sup> After examining and rejecting alternate centerlines because of cost, engineering, and other concerns,<sup>91</sup> Kentucky Power met with the landowners on October 11, 2017 and October 12, 2017 to discuss means to eliminate their encroachments.<sup>92</sup> In connection with those discussions, Kentucky Power offered to compensate the landowners for the cost of the expanded right-of-way, moving expenses, the value of the encroaching structures, and the expense of any required utility hook-ups.<sup>93</sup>

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<sup>87</sup> *Id.* at 10-11.

<sup>88</sup> Kentucky Power Response to KPSC 1-8.

<sup>89</sup> Application at ¶ 28.

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

<sup>91</sup> Kentucky Power Response to KPSC 1-1(b).

<sup>92</sup> Kentucky Power Response to KPSC 1-1(a).

<sup>93</sup> *Id.*

3. The Project Will Be Constructed And Operated At A Reasonable Cost.

Kentucky Power's current engineering estimate<sup>94</sup> is that the proposed Project will require a capital investment of approximately \$44.5 million.<sup>95</sup> The Company proposes to fund the Project through its operating cash flow and other internally generated funds.<sup>96</sup> Kentucky Power does not anticipate the need to secure additional debt to complete the Project.<sup>97</sup> Nor will the Project affect the completion of any existing capital project.<sup>98</sup> Finally, the project, which represents an increase of only approximately 1.7 percent in the amount of the Company's assets, net of regulatory assets and deferred charges, will not materially affect Kentucky Power's financial condition.<sup>99</sup>

The reasonableness of the estimated Project cost was reviewed and approved both internally and through the PJM stakeholder process.<sup>100</sup> The internal reviews and approvals, which examined whether the proposed project scope is required to provide adequate service, and whether the estimated costs are reasonable,<sup>101</sup> involved Kentucky Power's president and chief operating officer,<sup>102</sup> as well as senior transmission executives of the Company's parent,<sup>103</sup> and

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<sup>94</sup> The final cost, which may be greater or less, will not be known until the project is complete. Wohnhas Testimony at 17.

<sup>95</sup> *Id.* at 16. Kentucky Power's customers will responsible for approximately \$300,000 of the estimated \$5.9 million revenue requirement associated with the project. Kentucky Power Response to AG 2-1(a).

<sup>96</sup> Wohnhas Testimony at 17.

<sup>97</sup> *Id.*

<sup>98</sup> *Id.* at 18.

<sup>99</sup> *Id.* at 17-18.

<sup>100</sup> Lasslo Testimony at 14; Kentucky Power Response to AG 1-6; Kentucky Power Response to AG 2-4; Kentucky Power Response to AG 2-4, Attachment 2.; Wohnhas Testimony at 16.

<sup>101</sup> Wohnhas Testimony at 16.

<sup>102</sup> Kentucky Power Response to AG 2-4.

<sup>103</sup> *Id.*



finally American Electric Power's chairman, president, and chief executive officer.<sup>104</sup> The PJM stakeholder process, including the approval of the Baseline portion of the project by the PJM board on December 7, 2017,<sup>105</sup> is designed to ensure the project and its components represent the most appropriate, cost-effective, and efficient means of meeting the applicable planning criteria and identified transmission system needs.<sup>106</sup>

Kentucky Power also worked to limit the cost of the project. Most importantly, the decision to locate 5.4 miles of the rebuilt Hazard-Wooton 161 kV transmission line in or adjacent to the existing right-of-way reduced the cost of the rebuild as compared to a greenfield development.<sup>107</sup> In addition, the Company elected not to relocate the Hazard Substation as part of the Project to avoid the high costs required to do so.<sup>108</sup> Costs also were limited by planning to perform much of the work not directly related to the proposed rebuild of the Hazard-Wooton 161 kV line and the replacement of the Hazard Substation 161/138 kV transformer in conjunction with the rebuild and transformer replacement.<sup>109</sup> Finally, the Company will actively manage the Project costs during construction, including using a competitive bidding process for access road construction, transmission line construction, and station work,<sup>110</sup> and by requiring approval by both Kentucky Power and American Electric Power executives, and the Subcompany board, of any increases in the project cost greater than \$5 million.<sup>111</sup>

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<sup>104</sup> *Id.*

<sup>105</sup> Kentucky Power Response to KPSC 1-6.

<sup>106</sup> Lasslo Testimony at 14.

<sup>107</sup> Larson Testimony at 6; Rebuild Study at 7, 11.

<sup>108</sup> Kentucky Power Response to AG 2-2, Attachment 3 at 7.

<sup>109</sup> Lasslo Testimony at 10.

<sup>110</sup> Kentucky Power Response to AG 1-7.

<sup>111</sup> Kentucky Power Response to AG 2-4; Kentucky Power Response to AG 2-5; Kentucky Power Response to AG 1-6.

The estimated annual operating costs of \$16,000, consisting of funds for inspections, minor repairs, and vegetation management, are not anticipated to increase above current levels.<sup>112</sup> Although the ad valorem taxes associated with the new investment are expected to increase over current levels,<sup>113</sup> the additional tax revenues will benefit the service territory.

**C. The Project Will Not Result In Wasteful Duplication.**

The Hazard-Wooton 161 kV line serves as the primary source to the Hazard Area Transmission System.<sup>114</sup> As such it is unique. Moreover, because an existing line is being rebuilt there is no wasteful duplication.<sup>115</sup> Finally, both the problems associated with the aging electrical infrastructure, as well as the bulk electrical system violations addressed by the Project, cannot be remedied in a cost effective fashion through improvements to other utility transmission systems.<sup>116</sup>

Wherefore, Kentucky Power respectfully requests that the Commission issue an Order:

- (a) Granting Kentucky Power a Certificate of Public Convenience and Necessity for the Project, including the Proposed Rebuild, the improvement, replacement, and installation work at Kentucky Power's existing Hazard and Wooton substations;
- (b) Granting approval for the Hazard-Jackson 69 kV Reconfiguration to the extent required; and
- (c) Granting Kentucky Power such other relief as may be appropriate.

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<sup>112</sup> Kentucky Power Response to KPSC 1-3(c); Kentucky Power Response to KPSC 1-9.

<sup>113</sup> Wohnhas Testimony at 18.

<sup>114</sup> Lasslo Testimony at 15-16.

<sup>115</sup> *Id.*

<sup>116</sup> *Id.* at 16.

Respectfully submitted,



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