SELECTION REPORT

Duff-Coleman EHV 345 kV Competitive Transmission Project

December 20, 2016

MISO

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1. Executive Summary

In January 2016, Midcontinent Independent System Operator, Inc. (MISO) kicked off its first FERC-approved Order 1000 competitive developer selection process. MISO issued a Request for Proposals for a market efficiency project known as the Duff-Coleman EHV 345 kV Competitive Transmission Project, a new 345 kV transmission line connecting the Duff substation in southern Indiana to the Coleman EHV substation in western Kentucky. In response to the Request for Proposals, MISO received 11 comprehensive proposals from RFP Respondents,[1] listed alphabetically:

- Ameren Transmission Company of Illinois and PPL TransLink, Inc.
- Duke-American Transmission Company, LLC
- Edison Transmission, LLC
- GridAmerica Holdings, Inc.
- ITC Midcontinent Development, LLC
- Midcontinent MCN, LLC
- NextEra Energy Transmission Midwest, LLC
- Republic Transmission, LLC
- Southern Indiana Gas and Electric Company d/b/a Vectren Energy Delivery of Indiana, Incorporated and Public Service Enterprise Group. Inc.
- Transource Energy, LLC
- Xcel Energy Transmission Development Company, LLC.

Each of these RFP Respondents demonstrated the necessary breadth and scope of capabilities, and the financial wherewithal, to design, finance, construct, operate, and maintain the project. The proposals, however, were sufficiently distinct from one another and each provided varying levels of specificity, certainty, risk mitigation, and cost. MISO wishes to convey its deep appreciation and respect for the tremendous effort and resources all RFP Respondents invested to develop their proposals. The dedication, innovative thinking, and competitive spirit the RFP Respondents brought to this process will benefit MISO, its members, and ultimately all consumers of electricity in helping us build a stronger, more reliable electric grid for today and tomorrow.

MISO is pleased to announce that, following an in-depth comparative analysis of these 11 proposals, Republic Transmission has been designated as the Selected Developer for the Duff-Coleman EHV 345 kV Competitive Transmission Project. Republic Transmission was comparatively advantageous and exhibited the best balance of high-quality design and competitive cost, best-in-class project implementation, and top-tier plans for operations and maintenance.

[1] All RFP Respondents must be MISO Qualified Transmission Developers.

Republic Transmission is a wholly owned subsidiary of LS Power Associates, L.P. and its subsidiaries and affiliates. Republic Transmission's proposal includes one Proposal Participant: Big Rivers Electric Corporation (Big Rivers). Big Rivers is a member-owned, not-for-profit, generation and transmission cooperative headquartered in Henderson, Kentucky.

Republic Transmission excelled among a complement of strong proposals. Republic Transmission's proposal provided the strongest combination of attributes, including but not limited to, the highest degree of certainty and specificity, the lowest risk, and low cost. In selecting Republic Transmission, MISO evaluated Republic Transmission's proposal against four FERC-approved evaluation criteria: cost and design, project implementation, operations and maintenance, and planning participation. MISO was also guided and influenced by the collective application of the four evaluation principles found in MISO's business practices manual: specificity, certainty, cost, and risk mitigation.

For MISO, it comes down to providing the greatest overall value and that, encompasses more than just cost. There are more elements to cost than just the overall number. In MISO's process, cost is a comparative advantage, not an absolute determinate.

Republic Transmission committed to cap several elements of its annual transmission revenue requirement to benefit ratepayers for the life of the project, had a robust, detailed design that is flexible, and proposed the highest conductor capacity. Republic Transmission had the most complete project implementation plan, demonstrating the highest probability of success. Republic Transmission was better than nearly all other proposals in operations and maintenance and exhibited comprehensive capabilities and plans, and had the lowest estimated operations and maintenance cost.

Republic Transmission's performance collectively across MISO's four evaluation criteria was unmatched by any other proposal, scoring 95 out of a possible 100 points. Compared to Republic Transmission's total score of 95, the other proposals scored between 80 and 41 points. As illustrated in Figure 1-1, Republic Transmission is the clear and decisive winner. The second highest score of 80 was awarded to Proposal 107, the designated Alternate Selected Developer.[2] The tables below depict the final scoring results and criteria-level categorizations (as called for in the MISO Tariff and further detailed in the business practices manual) for all of the proposals. The table also refers to all RFP Respondents (other than Republic Transmission) only by numerical designations to protect confidentiality.

As shown in Figure 1-1 , the scores illustrate that each RFP Respondent is capable of acceptably developing and implementing the project. However, the scores reflect distinctions in the proposals and how some are comparatively better positioned based on the facts submitted in their proposals.

[2] MISO is required to keep the identity of the Alternate Selected Developer confidential.

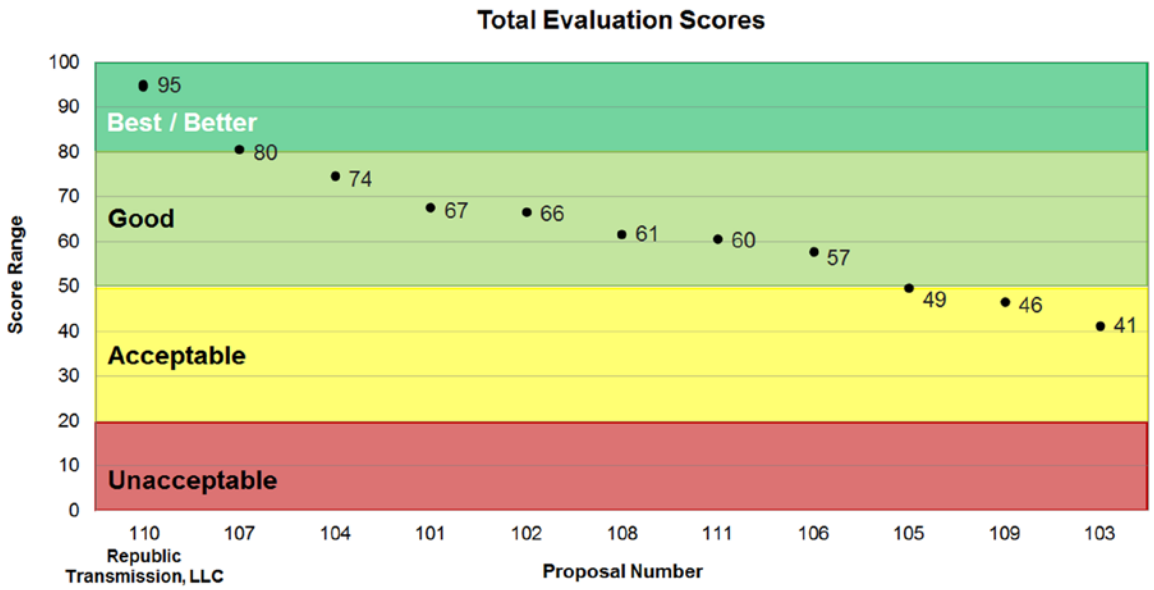

Figure 1-1: Final Scoring Summary

As discussed above, MISO's Tariff requires MISO to evaluate proposals according to four evaluation criteria: cost and design, weighted at 30%; project implementation, weighted at 35%; operations and maintenance, weighted at 30%; and transmission planning participation, weighted at 5%.[3] In order to determine the final evaluation score, all proposals are evaluated against each evaluation criterion, categorized as either 'Best,' 'Better,' 'Good,' 'Acceptable,' or 'Unacceptable,' scored with respect to each criterion, and then assigned final scores.[4] The proposals were evaluated and scored based upon a comparative analysis.

MISO evaluated each proposal based on the information submitted by the RFP Respondents in their respective proposals. The obligations of RFP Respondents to provide the needed information were communicated clearly up front in the Request for Proposals package. MISO's decisions with regard to evaluation, selection, and scoring are steeped in the specific documentation the RFP Respondents submitted and not based on any information obtained from outside the four corners of the submitted proposals.

The proposal considered the best in a given evaluation criterion was categorized as 'Best' for a criterion. The remaining proposals in that same criterion were then categorized into one of the remaining four categories ('Better,' 'Good,' 'Acceptable,' or 'Unacceptable') based upon the merits of the proposal and the application of the evaluation principles, discussed above. A numerical score was then awarded to each proposal, commensurate with its categorization and comparative ranking for each evaluation criterion.

Below is a table that shows MISO's comparative categorizations of all proposals within each of MISO's four evaluation criteria, leading with Republic Transmission's proposal.

[3] MISO Tariff, Attachment FF, Section VIII.E.1.

[4] Business Practices Manual No. 027 – Competitive Transmission Process, (BPM-027), Section 8.2.1.

Comparative Categorization Summary Table

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	REDACTED
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 1-1: Comparative Categorization Summary Table

As shown in this table, Republic Transmission is in the top tier for all criteria and the 'Best' for two criteria. Below are some noteworthy insights from MISO's evaluation of all of the proposals, including the Selected Proposal.

Noteworthy: Cost and Design

MISO's review and analysis of the cost and design information submitted by each proposal revealed the following noteworthy points:

- the cost estimate developed by MISO for the project in the MISO Transmission Expansion Plan for 2015 was $58.9 million and the range submitted in the 11 proposals was $34.0 million to $55.7 million.
- a variety of innovative and novel cost caps, concessions, and commitments were proposed, taking advantage of the freedom to develop new ways to compete on cost and annual transmission revenue requirement within MISO's Competitive Developer Selection Process.[5]
- proposals with lower and more certain annual transmission revenue requirements, compared to other proposals, generally performed well across the spectrum of sensitivity studies conducted to test how resilient different proposals might be with changes to cost drivers.
- the majority of proposed pole structures were direct embedded and steel; only one RFP Respondent proposed wood structures.

[5] See Table 2-2 and Table 2-3 for further information related to cost caps, concessions, and commitments.

- structure types reflected common industry practice (monopole, H-frame, or lattice).
- all RFP Respondents proposed crossing the Ohio River in the same general area.
- a wide variety of conductor sizes, configurations and types were proposed.

MISO determined that Republic Transmission's proposal was the best for cost and design because it combined superior design with competitive upfront costs and robust cost caps with no exclusions beyond those recognized by MISO's Selected Developer Agreement. Republic Transmission's design approach demonstrated rigor and specificity throughout, featuring:

- aggressive competition on every annual transmission revenue requirement allocation factor,
- a well-supported route,
- ample right-of-way to support design flexibility and potential future expansion, and
- a robust conductor with greater capacity than MISO's required minimum, which will better accommodate changes to the transmission grid over time and decrease line losses.

While the estimated implementation costs for Republic Transmission's proposal were roughly average among proposals, the differential between Republic Transmission and other proposals with lower upfront costs became narrower over time, viewed through the lens of ultimate costs to MISO's ratepayers. MISO's evaluation and selection process does not require the lowest cost proposal to be selected. MISO's process includes other criteria, such as project implementation, operations and maintenance, and planning participation that must be evaluated.

Republic Transmission's estimated 40-year annual transmission revenue requirement provided the best long-term certainty by offering:

- low anticipated operations and maintenance costs by leveraging local partners,
- limited return on equity for the life of the project (9.8%), and
- limited equity in capital structure for the life of the project (45%).

Only one proposal submitted a lower estimated annual transmission revenue requirement than Republic Transmission, but did not match Republic Transmission's design quality and rigor. All other proposals were either good or acceptable with respect to cost and design, because their designs were not as strong and they did not demonstrate consistently high levels of rigor, specificity, and certainty comparable to Republic Transmission's proposal.

Noteworthy: Project implementation

MISO's review and analysis of the project implementation information submitted by each RFP Respondent revealed the following noteworthy points:

- Every RFP Respondent demonstrated previous transmission line development experience.
- Every RFP Respondent placed substantial funding and resources in pre-construction surveys and research.
- Many RFP Respondents supplied well-developed project plans and used industry standard project management tools.
- Proposed route lengths varied, anywhere from 28 miles to 36 miles.
- Extensive efforts were placed into understanding the complexity of the regulatory and permitting framework for the project's location; many RFP Respondents had already begun early consultations with regulatory authorities.
- There was wide variability in the approach toward constructing the project.
- The majority of proposals' documentation exceeded MISO's minimum requirements in the Request for Proposals.
- Every RFP Respondent clearly demonstrated the capability to fund their estimated implementation costs for the project.

MISO determined that Republic Transmission's proposal was the best for project implementation because it was the most complete proposal and presented robust documentation for all project implementation sub-criteria (addressing aspects of project implementation such as project schedule, project management, route and site evaluation, regulatory permitting, and engineering and surveying).

One other proposal distinguished itself in most areas of project implementation, but did not exhibit specificity comparable to Republic Transmission's proposal across every sub-criterion within project implementation. Every other proposal was either good or acceptable for project implementation because, compared to the Republic Transmission proposal, they lacked consistent certainty, specificity, and risk mitigation across the full range of sub-criteria for project implementation.

Noteworthy: Operations and Maintenance

MISO's review and analysis of the operations and maintenance information submitted by each RFP Respondent revealed the following noteworthy points:

- All RFP Respondents demonstrated previous experience in maintaining 345 kV transmission line infrastructure, either directly or through contractors.
- Many of the proposed maintenance and forced outage responder contractors are affiliates of the same parent company.

- Most RFP Respondents are proposing to use contractors to perform maintenance on the project.
- RFP Respondents proposed forced outage response times anywhere from less than one hour to three hours; those having shorter forced outage response times generally had shorter emergency repair response times.
- Most RFP Respondents had greater detail with regard to both forced outage and emergency repair time and maintenance plans on the Indiana side of the project; only a few had similar detail for the Kentucky side of the project.
- Operations and maintenance costs ranged from $120,000 per year to $894,000 per year.

MISO determined that Republic Transmission's proposal should be categorized as 'Better' for operations and maintenance because Republic Transmission's operations and maintenance plan was comprehensive and highly specific, with only one area (the sub-criterion for safety plans and performance history) where its documentation was not as robust and project-specific as the 'Best' proposal for operations and maintenance.

Proposal 102 earned the categorization of 'Best' for operations and maintenance because RFP Respondent 102 submitted the most robust information on certainty, specificity, and risk mitigation for all operations and maintenance sub-criteria (consisting of elements such as real-time operations monitoring and control capabilities, switching, forced outage response, emergency repair, preventive and predictive maintenance, spare parts management, and so forth).

Every other proposal was either good or acceptable for operations and maintenance because, compared to the top two proposals (Proposal 102 and Republic Transmission's proposal), they did not demonstrate comparable certainty, specificity, and risk mitigation across the full range of sub-criteria for operations and maintenance.

Noteworthy: Planning Participation

MISO reviewed and verified the planning participation documentation submitted by each RFP Respondent. Planning participation was unique in that it was scored on an all-or-nothing basis, meaning that a proposal was awarded the full planning participation score (5%) if at least one RFP Respondent or Proposal Participant participated in the MISO annual transmission expansion planning process that included the project. Because every proposal but one received credit for planning participation, the planning participation criterion did not differentiate any of the top proposals in MISO's comparative analysis. To avoid revealing the identities of the RFP Respondents (because only one RFP Respondent did not receive planning participation credit), MISO has redacted proposal-specific information about planning participation in this report.

Moving Forward

The balance of this report includes sections with background information on the Duff-Coleman EHV 345 kV Competitive Transmission Project and the RFP requesting proposals to design, build, own, operate, and maintain the project. Section 2.6 explains in detail how MISO performed its comparative analysis for the 11 proposals. Sections 3 and 4 summarize in greater depth the proposals of Republic Transmission and the other RFP Respondents.

MISO is grateful for tremendous stakeholder engagement throughout development and launch of its first Competitive Developer Selection Process under FERC Order 1000, and the invaluable contributions of every RFP Respondent that submitted a proposal. The project implementation process will begin immediately with execution of the Selected Developer Agreement. MISO looks forward to working in partnership with Republic Transmission to support successful, on-time completion of the project, which will deliver substantial, lasting efficiency benefits to MISO's transmission customers and the consumers they serve.

2. Introduction and Overview

2.1 Introduction to Selection Report

This report describes MISO's process to select a qualified developer to design, finance, build, own, operate, and maintain a new 345 kV transmission line connecting the Duff substation in southern Indiana to the Coleman EHV substation in western Kentucky. This project is a component of a larger set of planned facilities, known as the Duff-Rockport-Coleman 345 kV Project, identified in MISO's Transmission Expansion Plan for 2015 (MTEP15). The planned in-service date for the project is January 1, 2021.

Apart from the introduction in this Section 2.1, this document consists of the following elements:

- an executive summary (Section 1),
- a detailed description of the project, issuance of the Request for Proposals (RFP), submission of proposals, and how MISO performed comparative analysis to evaluate all submitted proposals, together with further background information (Sections 2.2 through 2.6),
- summary descriptions of the 11 proposals received by MISO in response to the RFP, together with comparative analysis results (Section 3 for the Selected Proposal, Section 4 for the remaining proposals),[6]
- a glossary of defined terms used in this report (Attachment 1),
- explanations of specialized terminology used in connection with the RFP (Attachments 2 and 3), and
- summary tables correlating information requested in the RFP to Tariff-prescribed evaluation criteria and sub-criteria (Attachment 4).

Of note to the reader, much of the detailed information provided in the RFP Respondents' proposals must be kept confidential. Section 2.5 of this report summarizes the Tariff confidentiality provisions governing the MISO Competitive Developer Selection Process. For this reason, this report is necessarily general when describing attributes of RFP Respondents and their proposals, and refers to all proposals other than the Selected Proposal according to their numerical designations (101 through 111), to mask their identifies as required by the Tariff. Although the Competitive Transmission Executive Committee designates an Alternate Selected Developer at the same time as it announces the Selected Developer, it cannot disclose the identity of the RFP Respondent that has been designated as the Alternate Selected Developer.

[6] MISO has determined criteria-level scores for each proposal in accordance with the Tariff and business practices manual; however, the criteria-level scores are not included in this report. MISO will provide criteria-level scores to each RFP Respondent for its own proposal.

While MISO may disclose the identities of the RFP Respondents, it cannot provide information that correlates the proposals to specific RFP Respondents (except for the Selected Developer). Specific information this report may disclose (masking identities for all RFP Respondents other than the Selected Developer) includes:

- the high-level design for the project,
- the estimated cost of the project,
- the estimated 40-year annual transmission revenue requirement (ATRR) for the project, and
- information relating to any cost-containment measures, cost-caps, and rate-incentives.

There are aspects of the proposals, particularly discussions of high-level project design, that are inherently technical. Use of some specialized terminology is unavoidable in these areas. To assist readers who may not be familiar with concepts used in transmission line design, MISO has included a table with non-technical explanations of common terms in Attachment 2. There is an analogous table with financial terminology in Attachment 3.

2.2 The Competitive Transmission Project

The objective of MISO's Competitive Developer Selection Process is to select a transmission developer to successfully design, finance, construct, own, operate and maintain a Competitive Transmission Facility. MISO uses the developer selection approach, which begins once the MISO Board of Directors approves a MISO Transmission Expansion Plan (MTEP) that includes a transmission project that is regionally cost shared, such as a Market Efficiency Project.[7] MISO issues an RFP for the Competitive Transmission Project and Qualified Transmission Developers submit proposals. MISO then uses comparative analysis to evaluate the proposals and choose a Selected Developer.

MISO followed this process when it determined, after MISO's Board of Directors approved MTEP15, that a component of the Duff-Rockport-Coleman 345 kV Project was eligible for the Competitive Developer Selection Process. This project, known as the Duff-Coleman EHV 345 kV Competitive Transmission Project (or simply the "project," in this report) is a new, single circuit 345 kV transmission line connecting the existing Duff substation located in Dubois County, Indiana with the existing Coleman EHV substation located in Hancock County, Kentucky (Figure 2-1). The project has a MISO-estimated route length of 28 miles.[8]

[7] There are exceptions to this requirement, which are explained in the MISO Tariff, Attachment FF, Section VIII.A.

[8] The RFP does not predetermine the route length for proposals. The length of 28 miles was used for MTEP15 project cost estimation purposes.

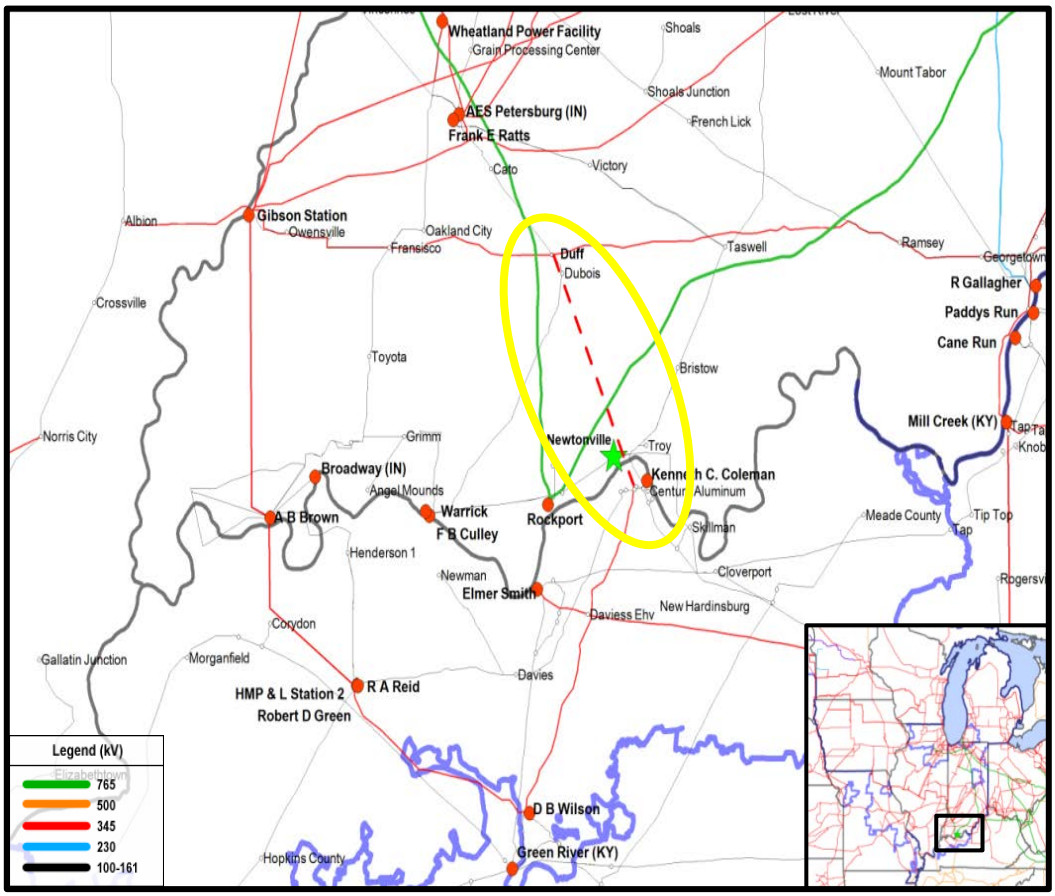

Figure 2-1: Depiction of Duff-Coleman EHV 345 kV Competitive Transmission Project

MTEP15 showed the Duff-Coleman EHV 345 kV Competitive Transmission Project had a weighted benefit to cost ratio of 16.1 to 1, which far exceeds the 1.25 to 1 benefit to cost ratio required for designation of a 345 kV transmission project as a Market Efficiency Project.[9]

2.3 The Request for Proposals

2.3.1 Issuance

MISO issued the RFP[10] for the Duff-Coleman EHV 345 kV Competitive Transmission Project on January 8, 2016 and announced a RFP information meeting for January 26, 2016.[11] This complied with MISO Tariff requirements[12] to post a separate RFP for any Competitive Transmission Project containing one or more Competitive Transmission Facilities approved by

[9] MTEP15: Book 1 – Transmission Studies, p. 109, available at https://www.misoenergy.org/Planning/TransmissionExpansionPlanning/Pages/MTEP15.aspx.

[10] Duff-Coleman EHV 345 kV Competitive Transmission Project Request for Proposal, available at https://www.misoenergy.org/Events/Pages/RFP20160126.aspx. This page has been updated to link to the most updated version of the RFP package, Revision 6.

[11] https://www.misoenergy.org/Events/Pages/RFP20160126.aspx.

[12] Attachment FF, Section VIII.C.

the MISO Board of Directors for inclusion in Appendix A of the MTEP, no later than 30 days following the board's approval.[13]

The RFP provided comprehensive information about the project, proposal submission requirements, and the proposal evaluation process. The RFP package consisted of four parts: Part 1, Request for Proposal; Part 2, Proposal Instructions; Part 3, Proposal Template; and Part 4, Proposal Template Workbook. MISO included a proposal template to enable RFP Respondents to comply with the MISO Tariff proposal requirements and present complete information in a consistent organizational format, enabling MISO to compare and contrast proposal information easily. MISO also supplied a proposal template workbook (consisting of 13 separate, detailed Excel spreadsheets and accompanying instructions) to make sure RFP Respondents understood the scope of cost and financial data required and how these inputs would feed into calculations for project implementation costs, ATRR estimates, and other financial elements of their proposal.[14]

The RFP contained a small amount of Critical Energy Infrastructure Information (CEII), which was redacted in the version posted publicly on the MISO website.[15] The public version of the RFP included instructions to request access to the non-redacted version of the RFP. Access to the non-redacted version of the RFP was restricted to parties who executed all applicable Non-Disclosure Agreements (NDAs) and CEII NDAs required by MISO. Potential respondents who met this requirement could obtain complete RFP information online through a secure File Transfer Protocol (FTP) site.

After the RFP was initially posted, revisions (five in total) to the RFP package were made, mainly to provide clarifications to the proposal template instructions, proposal template, or proposal template workbook. This addressed issues such as typographical and document reference errors, and responded to issues and questions raised by interested parties through the communication protocols and conference calls. These revisions (which were shown as redlined modifications to the RFP package) were posted publicly on the MISO website on February 3, March 31, April 21, June 8, and June 23.[16] The RFP required delivery of proposals in paper and electronic formats by no later than 5:00 p.m. Eastern Time on July 6, 2016 (the Proposal Submission Deadline).

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[13] *Id.* At the time the MISO Board of Directors approved MTEP15, the Tariff required MISO to issue an RFP within 30 days for any Competitive Transmission Facilities identified in the plan. This requirement was subsequently changed to 60 days for future RFPs, through a FERC filing in Docket No. ER16-1746-000 on May 19, 2016. FERC approved the change on June 16, 2016.

[14] Any entity that wished to submit a proposal in the Competitive Developer Selection Process had to have completed the Qualified Transmission Developer application process in accordance with the MISO Tariff and remain in good standing throughout the selection process (and, if chosen as the Selected Developer, throughout project implementation as provided in the Selected Developer Agreement).

[15] https://www.misoenergy.org/_layouts/MISO/ECM/Redirect.aspx?ID=215833.

[16] MISO issued revisions to the RFP and RFP instructions in connection with a September 21 data request asking RFP Respondents to submit further information on how their proposals would address fiber optic communications capabilities. This is discussed further in Section 2.4.

2.3.2 Post-Issuance Informational Meetings and Conference Calls

After issuing the RFP, MISO offered interested parties the opportunity to use the MISO communications protocols[17] to submit questions about the project and the RFP package ahead of the January informational meeting.[18] MISO convened an open informational meeting on January 26, 2016,[19] during which MISO reviewed its anti-trust policy, presented the communication protocols for the Competitive Developer Selection Process, and provided an overview of the RFP and other important information about the project (such as process, timelines, key deadlines, where to access information, contact information, etc.).

MISO voluntarily held additional conference calls on February 29, March 17, April 21, May 23, and June 20 of 2016 to address any further questions from interested parties about the RFP. These additional conference calls were open to all and announced in advance by postings on MISO's website.[20] All questions and responses communicated during these conference calls were recorded in MISO's *Question & Response Log.* If MISO was unable to answer a question immediately during a meeting or call, MISO recorded the question and its follow-up response in the log, which contains a total of 227 questions and answers related to the RFP package. MISO maintained the *Question & Response Log* on the Competitive Transmission Administration section of its website,[21] along with any updates about progress and timeline for the Competitive Developer Selection Process, to ensure every interested developer had access to the information necessary to submit its best proposal.

Throughout the entire evaluation process, MISO also provided monthly status updates on the Competitive Developer Selection Process during regularly scheduled meetings of MISO's Planning Advisory Committee.[22] The Planning Advisory Committee is formed, according to the Transmission Owners Agreement, of interested MISO stakeholders to provide advice to the MISO Planning Staff on policy matters related to the process, adequacy, integrity and fairness of the MISO-wide transmission expansion plan.

2.4 Receipt of Proposals and Completeness Check

As MISO received proposal submissions, MISO sent acknowledgements for the limited purpose of confirming receipt.[23] MISO also assigned each proposal an identification number

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17 https://www.misoenergy.org/_layouts/MISO/ECM/Redirect.aspx?ID=230036.

18 BPM-027, Section 5.4.

19 https://www.misoenergy.org/Events/Pages/RFP20160126.aspx.

20 https://www.misoenergy.org/Planning/Pages/TransDevQualSel.aspx.

21 https://www.misoenergy.org/_layouts/MISO/ECM/Redirect.aspx?ID=239798.

22 The Planning Advisory Committee is a standing committee created in Attachment B to the Transmission Owners Agreement. Attachment B states that "[t]he planning function of the MISO shall be the responsibility of the MISO Planning Staff" and that "the process for carrying out the planning of the MISO shall be collaborative with the Owners, Users, and other interested parties." More information about the Planning Advisory Committee is available at https://www.misoenergy.org/StakeholderCenter/CommitteesWorkGroupsTaskForces/PAC/Pages/home.aspx.

23 Acknowledgements were transmitted by e-mail to the proposal's primary and secondary contact personnel within two business days, as required by in BPM-027, Section 6.4.

(101 through 111). To protect confidentiality, as required by the MISO Tariff,[24] this report refers to proposals (other than the Selected Proposal) according to their proposal identification numbers.

During the 30-day period following receipt, MISO reviewed each proposal for completeness and validated whether the RFP Respondents for each proposal were certified as Qualified Transmission Developers on the dates the proposals were submitted. Any RFP Respondent that submitted a proposal MISO deemed incomplete was notified and given 10 business days (the Proposal Cure Period) to cure the deficiency. Five proposals were deemed complete and had no incompleteness to cure. Six proposals were deemed incomplete; however, following notice, all deficiencies MISO identified were cured within the Proposal Cure Period, and none were subsequently withdrawn.

On August 19, 2016, after completing the validation process, MISO publicly announced that it had received 11 valid and complete proposals from the following RFP Respondents and Proposal Participants:[25]

Lists of Respondents Providing Completed Proposals	
RFP Respondent(s) (sorted alphabetically)	**Proposal Participant(s)**
Ameren Transmission Company of Illinois PPL TransLink, Inc.	N/A
Duke-American Transmission Company, LLC	N/A
Edison Transmission, LLC	N/A
GridAmerica Holdings, Inc.	N/A
ITC Midcontinent Development, LLC	N/A
Midcontinent MCN, LLC	Missouri Joint Municipal Electric Utility Commission
NextEra Energy Transmission Midwest, LLC	N/A
Republic Transmission, LLC	Big Rivers Electric Corporation, Inc.
Southern Indiana Gas and Electric d/b/a Vectren Energy Delivery of Indiana, Inc. Public Service Enterprise Group Inc.	N/A
Transource Energy, LLC	Transource Indiana, LLC Transource Kentucky, LLC
Xcel Energy Transmission Development Company, LLC	N/A

Table 2-1: Announced List of RFP Respondents and Proposal Participants

[24] Attachment FF, Section VIII.D.9.

[25] https://www.misoenergy.org/Library/Repository/Study/Transmission%20Developer/List%20of%20Proposals_Duff-Coleman%20EHV%20345_Final.pdf.

Under the MISO Tariff,[26] MISO has the right, but not the obligation, during the Competitive Developer Selection Process, to request that an RFP Respondent provide clarifications to its submitted proposal. MISO issued nine requests for clarification to individual RFP Respondents, and all nine RFP Respondents provided clarification, and the submitted information was included with their respective proposals and considered during proposal evaluation.

The MISO Tariff also allows MISO to request additional data from all RFP Respondents if MISO determines that additional information is necessary to evaluate the proposals.[27] MISO issued one request for additional data to all RFP Respondents and posted an update to the RFP package in order to clarify the substation owners' minimum interconnection requirements for the protective relaying communication cables. The minimum interconnection requirement provided by the substation owners, which was included in the RFP, was unclear. MISO reviewed with the substation owners and confirmed that the interconnection requirements stated in the RFP were not consistent with their minimum interconnection requirements for this project. All 11 RFP Respondents responded to this data request, and the submitted information was included in their proposals and evaluated.

2.5 Confidentiality, Communication Protocols, and Document Control

2.5.1 Confidentiality

Throughout the process to develop, post, and evaluate responses to the RFP, MISO has been mindful of the importance of transparency. To that end, MISO invited extensive stakeholder feedback as it developed the Competitive Transmission Process (as defined in the Tariff),[28] and convened several informational meetings after issuing the RFP.[29] At the same time, MISO is obligated to treat proposal materials submitted by RFP Respondents as confidential, except with respect to certain elements of the Selected Proposal and other proposals.[30]

The MISO Tariff prescribes three levels of confidentiality with respect to proposal-related information: (a) information that cannot be disclosed to any third party; (b) information that may be disclosed in the selection report about the Selected Developer and, if the identity is masked (through aggregation or the masking of names), all other RFP Respondents; and (c) information that can be disclosed publicly without restriction. In all cases, the information MISO discloses must be reasonably necessary to demonstrate that its designation of the Selected Developer was proper, based on the comparative analysis required by the MISO Tariff.

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[26] MISO Tariff, Attachment FF, Section VIII.D.7; Section 6.11, BPM-027.

[27] MISO Tariff, Attachment FF, Section VIII.D.6.

[28] For example, in 2014 and 2015, MISO facilitated 18 monthly workshops dedicated solely to the development of the Competitive Transmission Process. In preparing the proposed form of Selected Developer Agreement, MISO provided feedback and revisions to address more than 300 separate comments. FERC acknowledged MISO's transparent stakeholder process in its November 13, 2015 *Order on Proposed Tariff Changes*, 153 FERC ¶ 61,168 at P 275.

[29] Section 2.3.2 describes the informational meetings MISO held in 2016 after issuing the RFP.

[30] Attachment FF, Section VIII.D.9.

The first category of information (to be kept confidential in all cases, unless the RFP Respondent has consented to disclosure) includes the following:

- all detailed breakdowns of costs, including but not limited to, the itemized costs for labor and materials,
- all details of an RFP Respondent's financing arrangements (as well as those for any project participants),
- all detailed design, routing, siting, or specialty construction techniques, and
- any other information or portions of documents that an RFP Respondent has clearly designated as confidential (excluding items that are expressly categorized by the MISO Tariff as non-confidential or that MISO has an obligation to make publically available).

The second category of information (may be disclosed in the selection report, but with identities of all RFP Respondents other than the Selected Developer masked) includes the following:

- the high-level design for the project,
- the estimated cost of the project,
- the estimated 40-year annual transmission revenue requirement for the project,
- information relating to any cost-containment measures, cost-caps, and rate-incentives,
- information about the proposed in-service dates of the project,
- the final evaluation score assigned to each proposal, and
- all timetables and milestones agreed to between the Selected Developer and MISO in the Selected Developer Agreement.

The third category of information (not subject to confidentiality restrictions) includes the following:

- the identity of RFP Respondents and Proposal Participants,[31]
- all publically available information,
- any information for which an RFP Respondent or Proposal Participant has provided consent to release, and
- any information MISO must make publicly available according to the applicable Tariff provisions.[32]

To comply with these requirements, this report describes RFP Respondents and their proposals in general terms, to avoid revealing which RFP Respondent submitted which proposal, and to protect commercially sensitive and confidential information.

[31] While the Tariff permits MISO to disclose a list of the organizations that have submitted proposals, MISO must present any information it is allowed to disclose about those proposals in a manner that masks the identities of the RFP Respondents to which the information relates (except in the case of the Selected Developer).

[32] Attachment FF, Section VIII.D.9.

2.5.2 Communication Protocols

MISO adhered to self-imposed communication protocols throughout the Competitive Developer Selection Process, as follows:

- Send all questions to the MISO Client Relations team via the TDQS@misoenergy.org email address
- Interconnecting incumbent Transmission Owner(s) (TO) and MISO staff should not be contacted directly regarding the Request for Proposal (RFP)
- Stakeholders should not engage MISO staff regarding RFP contents or timing, the selection process or variance analysis
- MISO will publicly post a list of questions and/or requests for clarifications it receives at www.misoenergy.org > Planning > Competitive Transmission Information, including MISO's responses to such inquiries
- MISO will only respond to procedural questions during the evaluation / selection phase – we will not respond to substantive questions about the process or RFP
- Information related to competitive projects will be treated as commercially / competitively sensitive.

The communication protocols were posted publicly on MISO's website;[33] were incorporated in part within the RFP and BPM-027; and made part of presentations delivered by the MISO Competitive Transmission Administration team during public stakeholder meetings.

MISO conducted internal training for employees with responsibilities in the Competitive Developer Selection Process, and distributed the protocols to every MISO employee through company-wide e-mails. MISO emphasized the need for confidentiality and announced the communication protocols at every Executive Committee and staff-level meeting where information about the RFP, RFP Respondents, or their proposals was discussed. MISO limited access to all proposal materials to members of the MISO Evaluation Team, who were required to protect the confidentiality of all proposals and associated work products, and refrain from discussing them with entities or individuals that were not part of the MISO Evaluation Team.

All MISO employees and consultants carefully followed the confidentiality and communication protocols established by MISO throughout the Competitive Developer Selection Process, and restricted access and discussions about proposals not only as to external parties, but as to other staff members within MISO who were not part of the MISO Evaluation Team. In addition, to protect the integrity of the evaluation process, MISO required its consultants to attest that they were free from conflicts of interests with Qualified Transmission Developers participating in the RFP, and has kept (and will continue to keep) the identities of its independent consultants confidential.

[33] https://www.misoenergy.org/_layouts/MISO/ECM/Redirect.aspx?ID=230036.

2.5.3 Document Control Procedures

To facilitate secure proposal access and evaluation, MISO set up a restricted-access intranet website where all electronic versions of proposal-related documents were maintained. Hard copies of proposal materials were kept in physically secure locations. Only members of the MISO Evaluation Team were given access to electronic or hard copies of proposal materials.

2.6 Comparative Analysis Process to Evaluate Proposals

2.6.1 Evaluation Team

The MISO Evaluation Team for the project was organized as shown in Figure 2-2.

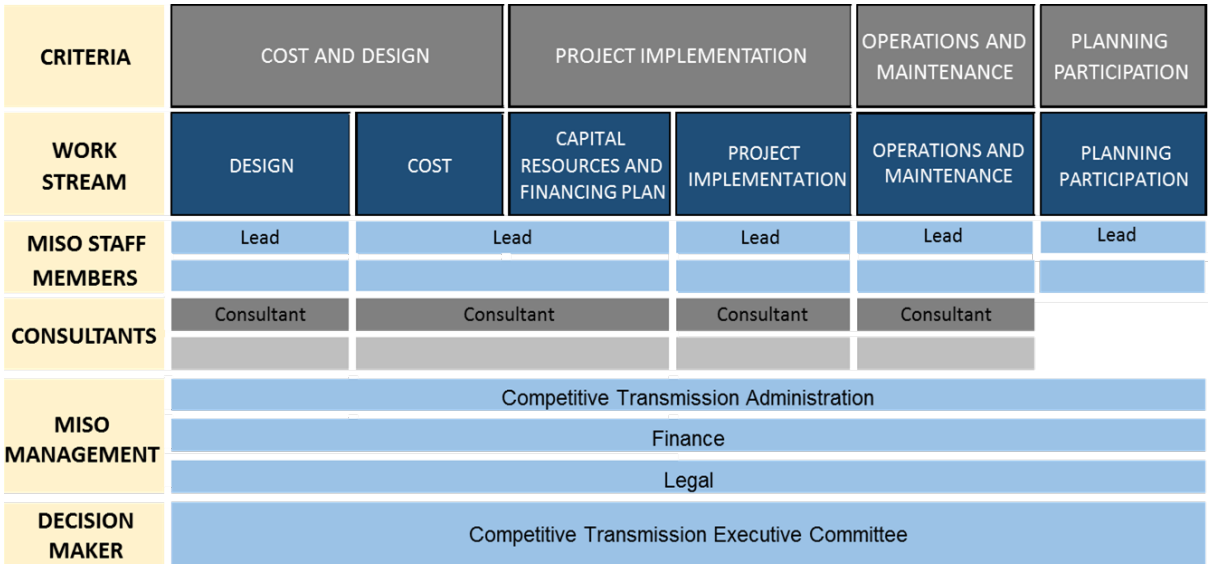

Figure 2-2: Organization of MISO Evaluation Team

Competitive Transmission Executive Committee

The Competitive Transmission Executive Committee consists of four voting MISO executives (with expertise in regulatory matters, transmission, operations, and finance), supported by non-voting legal counsel. The Executive Committee supervised the MISO staff and consultants supporting proposal evaluation. The Executive Committee has exclusive and final decision-making authority over the certification and termination of Qualified Transmission Developers and the evaluation and selection of the proposals, resulting in the designation of the Selected Developer and the Alternate Selected Developer.[34]

[34] Attachment FF, Sections VIII.B.2.2, VIII.B.3.2, and VIII.E; Module A (Definitions), Section 1.C, "Competitive Transmission Executive Committee."

Competitive Transmission Administration

The Competitive Transmission Administration is the department that is responsible for administering the Competitive Developer Selection Process. At the head of the Competitive Developer Administration is its Executive Director, who reports to the Executive Committee and is supported by MISO employees accomplished in a broad range of transmission-related fields, such as planning, design, engineering, project implementation, operations and maintenance, finance and accounting, transmission rates, and legal and regulatory fields. All of the leaders for the work stream teams (described below) are MISO employees who are part of the Competitive Transmission Administration or a supporting MISO department.

MISO Staff and Consultant Subject-Matter Experts

To support the Competitive Developer Selection Process, MISO formed a multi-disciplinary team of staff members and independent consultants with specialized expertise and experience to complement the Competitive Transmission Administration. These staff and consultants on the Evaluation Team were organized into "work streams" corresponding to the four evaluation criteria. Each work stream had a MISO lead with direct experience in the relevant subject area and at least one consultant with specific expertise. As the teams progressed from initial review to comparative analysis, the separate work stream teams for cost and design were combined into a single cost and design team, and team members with expertise in project implementation and capital resources and financing plan integrated into a single work stream for project implementation.

2.6.2 Evaluation Criteria

The Competitive Developer Selection Process requires MISO to apply four evaluation criteria (Figure 2-3), each with specific weightings:[35] (1) 30% for transmission facility cost and design quality; (2) 35% for project implementation capabilities, (3) 30% for transmission operations and maintenance capabilities, and (4) 5% for planning participation.

[35] Attachment FF, Section VIII.E.1(a).

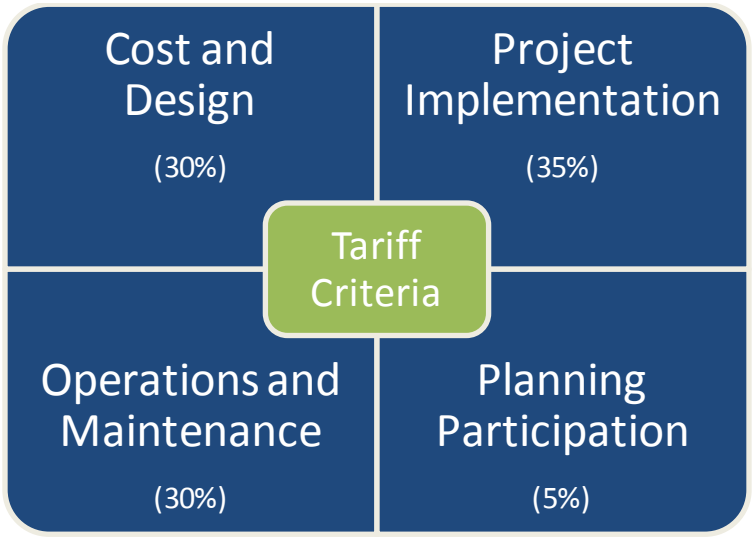

Figure 2-3: Proposal Evaluation Criteria and Weightings

The Competitive Developer Selection Process requires that MISO also apply sub-criteria for each evaluation criterion (Figure 2-4). The sub-criteria are to provide guidance as how to evaluate and what information is necessary for each evaluation criterion, and have no specified weighting in the Tariff.

Cost and Design	Project Implementation	Operations and Maintenance	Planning Participation
• Estimated cost (per facility) • Estimated ATRR (project) • Project Cost (each facility) • Cost estimate rigor • Facility design quality • Facility design rigor	• Project management • Route & site evaluation • Land acquisition • Engineering & surveying • Material procurement • Facility construction • Facility commissioning • Previous experience & demonstrated abilities • Capital resources • Expected cash flow statement • Schedule of significant expenditures • Immediately available funds • Ability to obtain Project Financial Security • Credit ratings	• Forced outage response • Switching • Emergency repair & testing • Spare parts • Preventative/ predictive maintenance • Real-time operations monitoring & control • Major facility replacement • Financial strategy to facilitate major facility replacements	• Solution ideas • Planning studies

Figure 2-4: Proposal Evaluation Criteria and Sub-Criteria

In addition, the RFP and proposal instructions were designed specifically to ask for information to enable MISO to evaluate each one of these sub-criteria.

2.6.3 Evaluation Principles

MISO's evaluation principles (Figure 2-5) guide and influence MISO's collective application of the evaluation criteria and sub-criteria to ascertain the meaningful differences among proposals.

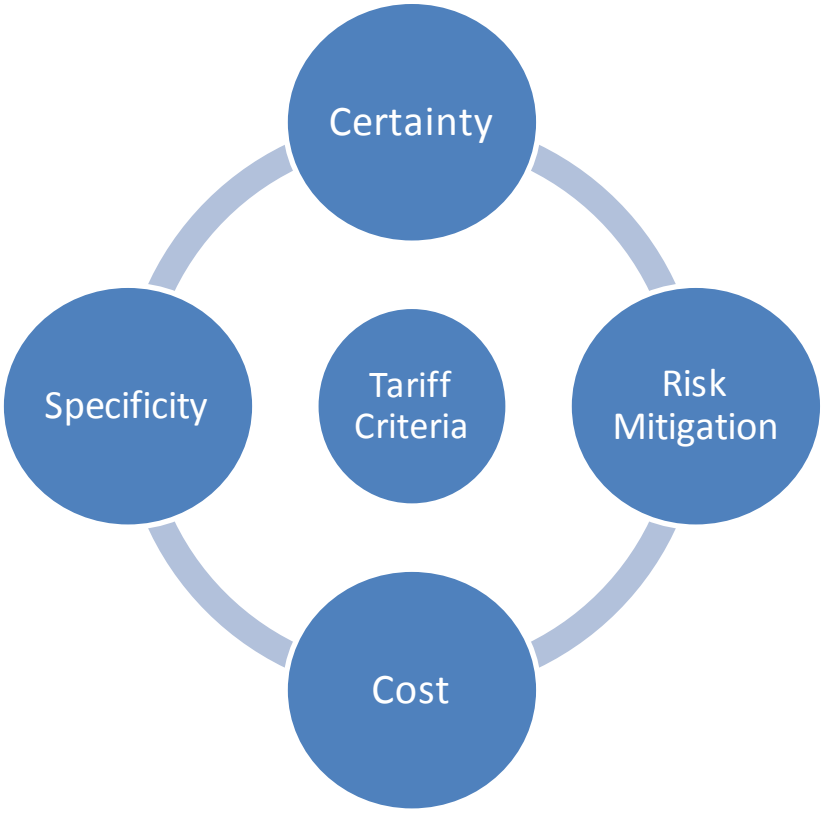

Figure 2-5: MISO's Evaluation Principles

MISO used these evaluation principles[36] as it applied the four evaluation criteria and their associated sub-criteria in the Competitive Developer Selection Process, along with reasonable judgment about the information included in each proposal. RFP Respondents that clearly articulated how various aspects of their proposals provided certainty, specificity, reduced or mitigated risk, and lowered cost performed better in the Competitive Developer Selection Process.

[36] BPM-027 expands on the meaning of these evaluation principles as follows: **certainty** – providing a high degree of certainty and predictability; **risk mitigation** – reflecting the lowest risk to the success of the project; **cost** – meeting all requirements at the lowest overall cost; and **specificity** – providing a high degree of specificity and detail. BPM-027, Section 8.1.

2.6.4 Evaluation Scorecard

The evaluation scorecard below (Figure 2-6) illustrates how MISO synthesized the evaluation criteria, sub-criteria, and evaluation principles to develop categorizations and final scores in the Competitive Developer Selection Process.[37]

Evaluation Principles Applied (Certianity, Risk Mitigation, Cost, & Specificity)	Tariff Criteria		Tariff subcriteria	Categorization	Score
	Cost & Design	30%	Estimated Project Cost and Rigor	('Best', 'Better', 'Good', 'Acceptable', or 'Unacceptable')	0-30 pts.
			Estimated ATRR and Rigor		
			Facility Design and Rigor		
	Project Implementation	35%	Project Implementation Schedule	('Best', 'Better', 'Good', 'Acceptable', or 'Unacceptable')	0-35 pts.
			Project Management		
			Route and Site Evaluation		
			Right-of-Way and Land Acquisition		
			Engineering and Surveying		
			Material Procurement		
			Regulatory Permitting		
			Construction		
			Commissioning		
			Previous Experiences		
			Capital Resources and Financing Plan		
	O & M	30%	Local Balancing Authority	('Best', 'Better', 'Good', 'Acceptable', or 'Unacceptable')	0-30 pts.
			Real-Time Operations Mointoring and Control		
			Switching		
			Preventative/Predictive Maintenance		
			Spare Parts, Structures, & Equipment		
			Forced Outage Response		
			Emergency Repair & Testing		
			Major Facility Replacement Capabilities		
	Planning Participation	5%	Transmission Solution Idea Submittal Form	Yes or No	0 or 5 pts.
				Total Score:	0-100 pts.

Figure 2-6: Proposal Evaluation Scorecard

The Executive Committee exercised its exclusive and final decision-making authority to determine the Selected Developer and the Alternate Selected Developer by categorizing and scoring each proposal.[38] The maximum total score was 100 points. The proposal the Executive Committee determined to be best for a given evaluation criterion was awarded the maximum points available for that criterion.[39] Planning participation was scored on an all-or-nothing basis,

[37] MISO has determined criteria-level scores for each proposal in accordance with the Tariff and business practices manual; however, the criteria-level scores are not included in this report. MISO will provide criteria-level scores to each RFP Respondent for its own proposal.

[38] MISO Tariff, Attachment FF, Section, VIII.E.2; Module A (Definitions), Section 1.C, "Competitive Transmission Executive Committee."

[39] BPM-027, Section 8.2.1.

meaning that a proposal was awarded the full planning participation score if at least one RFP Respondent or Proposal Participant participated in MTEP15. If not, a proposal received zero points for planning participation. To protect confidentiality, MISO has redacted proposal-specific information about planning participation in this report.

All proposals were scored commensurate with their categorization and comparative performance within each of the evaluation criteria. The RFP Respondent that submitted the proposal to which the Executive Committee awarded the highest aggregate score was designated as the Selected Developer. The RFP Respondent that submitted the proposal the Executive Committee determined to be the second-highest-scoring proposal was designated as the Alternate Selected Developer (whose identity MISO is required to keep confidential).

2.6.5 Evaluation Process

With the tremendous volume of information that accompanied 11 comprehensive proposals, the Evaluation Team began work to support the Competitive Developer Selection Process as soon as all submittals were received. Collaborating as work stream teams, the Evaluation Team members conducted iterative cycles of analysis for each of the proposals, using structured, quantitative and qualitative processes to synthesize the extensive proposal information from each RFP Respondent. During the Competitive Developer Selection Process, the Evaluation Team convened more than 80 meetings over a period of 21 weeks. Figure 2-7 illustrates the four steps MISO used to carry out its comparative analysis. (Note that "CTEC" refers in the figures below to the Competitive Transmission Executive Committee, or "Executive Committee".)

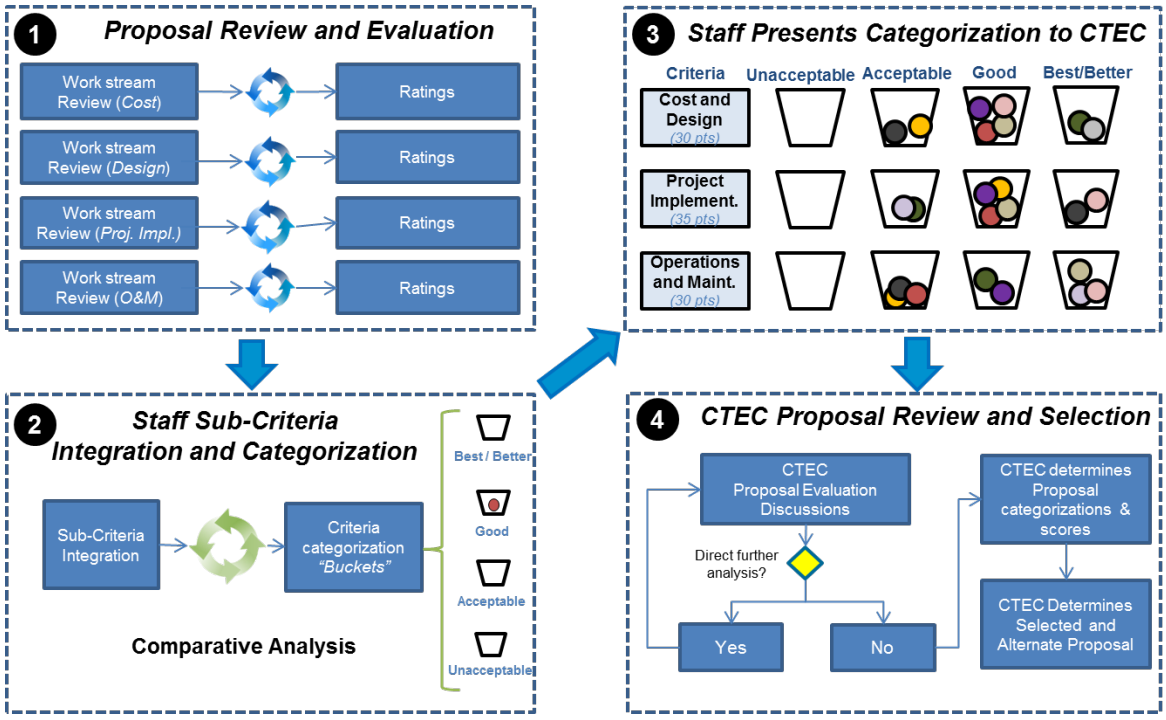

Figure 2-7: Illustrative Overview of MISO Evaluation Process

The Evaluation Team used this four-step process to facilitate a highly qualitative approach with appropriate flexibility, complemented by analytical tools. The Evaluation Team was guided and influenced by the evaluation principles as it applied the four evaluation criteria and their associated sub-criteria in the Competitive Developer Selection Process. The Evaluation Team remained focused on the evaluation criteria, sub-criteria and evaluation principles, using tools and templates through each step of the process to assess the relative merits of each proposal, as opposed to ranking them against a static, absolute scale.

2.6.6 Work Stream Team Analytical Framework

The discussion below presents a high-level description of the approach the work stream teams used to carry out their respective responsibilities in the Competitive Developer Selection Process. The information presented here is not an exhaustive account of every element and dimension of the evaluation process, but provides a general flavor of the analytical framework the work stream teams employed.

2.6.6.1 Cost and Design

In evaluating the project cost and rigor, and project ATRR and rigor of each proposal, MISO used the associated factors, as shown in the tables in Attachment 4, which correspond to information requested in the RFP.

The RFP contained a proposal template workbook to foster consistency in proposal format and content, particularly for financial data. Even so, the proposals differed, sometimes subtly and sometimes more profoundly, within the proposal template structure. For example, RFP Respondents differed not only in proposed design, materials, right-of-way, and implementation costs for their projects, but in areas such as cost containment provisions, estimated cost of debt, return on equity, and assumed property tax rates. For some proposals, there were also differences between inputs entered into the proposal template workbook and values provided in narrative text or submitted attachments. Where this occurred, MISO used the values from the proposal template workbook unless the difference was material, in which case MISO requested clarification from the applicable RFP Respondent.

Because the Tariff evaluation criteria direct MISO to analyze cost information in conjunction with project design, MISO used a cross-disciplinary approach to evaluate estimated implementation costs and ATRRs. MISO's internal and external finance and rate analysis experts collaborated with Evaluation Team members specializing not only in transmission line design, but project implementation and operations and maintenance as well. This enabled MISO to blend financial and technical expertise to assess how well proposal features and resulting costs would align to deliver a high-value, cost-effective solution.

To facilitate thorough and consistent comparison across proposals, the Evaluation Team used a range of tools and perspectives to analyze cost information provided by the RFP Respondents. MISO evaluated submitted values, but also ran sensitivity studies to test how resilient or variable different proposals might be with changes to particular cost drivers such as higher than estimated capital expenditures for implementation, depreciation schedules, approved return on equity, cost of debt, debt and equity share of capital structure, taxes,

inflation and operations and maintenance costs. MISO modeled ATRR estimates using common and proposal-specific values where appropriate across a range of possible scenarios and under varying discount rates for net present value analysis. This enabled MISO to compare the rigor of submitted cost estimates and assess resulting certainty and risk mitigation offered to ratepayers in MISO while taking into account all relevant binding cost caps and concessions.

RFP Respondents proposed a wide range of cost caps, concessions, and other cost-containment commitments in their proposals. The instructions and templates in the RFP package were designed to enable RFP Respondents to approach cost competition creatively, but with rigor and specificity (including sample contract language). Although this flexible approach entailed greater complexity, it enhanced the Competitive Developer Selection Process.

To illustrate the wide range of innovative cost elements included in the proposals, Table 2-2 summarizes the cost caps, concessions, and commitments of all of the proposals. Table 2-3 provides supporting explanation about exceptions or limitations some proposals included.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ i			✓	✓ ii	✓ iii	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ iv	✓ v	✓	✓ iv		✓	✓	✓	✓ iv	✓	✓ iv
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 2-2: Summary of Cost Caps, Concessions, and Commitments

Proposal Exceptions to Cost Caps, Concessions, and Commitments	
1. Project Routing	Some proposals exclude routing changes due to unforseen soil conditions, river crossings, etc. Combintion of general outs and specific per mile cost values (with/without dead band).
2. Material Escalation Costs	Some proposals include exceptions for construction costs that rise above inflation ratse.
3. Condemnation and Property Rights	Some proposals allow an increase to the construction cost cap for condemnation and property rights costs that exceed a specified percentage or dollar value.
4. Five Year or Initial Filing Commitments	Some proposals commit to a cap for only the first five years in service or until a subsequent FERC filing.
5. Regulatory	Some proposals note exclusions for environmental permitting, remediation, and mitigation.
6. Non-Developer Driven Changes	Most proposals allow an increase to the construction cap for costs driven by changes from regulatory government agencies, local utilities, MISO, and Force Majeure.

Table 2-3: Summary of Exceptions to Cost Caps, Concessions, and Commitments

In evaluating the reasonably descriptive facility design and rigor of each proposal, MISO used the associated factors, as shown in the tables in Attachment 4, which correspond to information requested in the RFP. These factors included items such as: conductor selection, flexibility of design, galloping and vibration, geotechnical, grounding, lightning protection, line ratings, foundation types, estimated positive sequence line impedance and pi-equivalent susceptance, optical ground wire or communication system, estimated line length, structure materials, structure types, road crossings, utility crossings, and Ohio River crossing.

Through in-depth review of these factors collectively, MISO gained a thorough understanding of each RFP Respondent's ability to successfully design the project with appropriate specificity, certainty, and risk mitigation measures. The cost sub-criterion was considered in the cost aspect of the evaluation. With regard to certainty, MISO focused on the rigor of design data collection and supporting design studies. Some examples of this include acquisition of geotechnical data; acquisition or consideration of routing data including parcel crossings, road crossings, line crossings, and river crossings; and consideration of potential environmental and external impacts on the design (river flooding levels, lightning frequency, etc.). A proposal with a higher level of certainty is less likely to be exposed to major design changes down the road.

With regard to risk, MISO evaluated the ability of the design to perform well throughout its expected life. Some examples of this include the proposed load ratings relative to the minimum specified load ratings, relative thermal conductor stress levels associated with proposed ratings, shielding angles for lightning protection, targeted ground resistance levels, conductor tension levels (when supplied) relative to maximum levels specified by relevant codes (such as National Electrical Safety Code), proposed vertical and horizontal clearance buffers, proposed measures

to mitigate adverse impacts from various types of conductor vibrations and motion, maximum distance allowed between dead-end structures for cascading containment, and similar considerations. A design with lower risk increases the likelihood the line will perform in an adequate and reliable manner over its life.

With regard to specificity, MISO assessed the relative levels of detail the RFP Respondents provided to support their proposals. For example, MISO considered whether the proposal included plan and profile drawings, structure detailed drawings, assembly detail drawings (such as insulator assemblies, guying assemblies, ground assemblies, etc.), descriptions of line, river, and road crossings, and similar types of documents and considerations.

2.6.6.2 Project Implementation

MISO evaluated proposals for project implementation based on sub-criteria identified in the Tariff, including project implementation schedule, project management, route and site evaluation, regulatory permitting, right-of-way and land acquisitions, engineering and surveying, material procurement, construction, commissioning and energization, safety assurances, description of capital resources, expected capital cash flows, schedule of significant expenditures, capital reserves, credit ratings, audited and *pro forma* financial statements, and previous applicable experience and/or demonstrated ability.

To analyze how the proposals performed against these sub-criteria, the project implementation team used the associated factors, as shown in the tables in Attachment 4, which correspond to information requested in the RFP. These factors included items such as the experience of the project team; rigor of the submitted schedule; identification of potential route and reasonableness of the route identified; safety reputation; constructability; acquisition of right-of-way; regulatory permitting plan, staff, and experience; plan for commissioning and energization; and capability and plan to finance project implementation. Through in-depth review of these factors collectively, guided and influenced by the evaluation principles, the project implementation team gained a holistic view of each RFP Respondent's ability to successfully implement the project while managing costs and risks.

2.6.6.3 Operations and Maintenance

MISO evaluated proposals for operations and maintenance based on sub-criteria identified in the Tariff, including forced outage response; switching, emergency repair; preventive and predictive maintenance (including vegetation management); maintenance or management of spare parts, spare structures, and/or spare equipment inventories (including any description of any agreements to share spare equipment, spare parts, and spare structures with any other transmission entities); real-time operations monitoring and control capabilities; major facility replacement or rebuilds (including financial strategy to facilitate timely replacement and rebuilds); and safety assurances.

To analyze how the proposals performed against these sub-criteria, the operations and maintenance team used the associated factors, as shown in the tables in Attachment 4, which correspond to information requested in the RFP. These factors included items such as: plan to

incorporate the project into a MISO Local Balancing Authority; policies, processes, and procedures for overall maintenance program; proximity of internal and external staff relative to proposed line; detailed maintenance staffing plan; vegetation management and aerial inspection programs; spare materials operational plan and policies or procedures; forced outage response time and proximity of resources; reliability metrics; emergency repair and testing operational plan and policies or procedures; catastrophic restoration policies and operational plan description; major facility replacement financial plan description; safety plan and proven safety reputation; and previous experience. Through in-depth review of these factors collectively, guided and influenced by the evaluation principles, the operations and maintenance team gained a holistic view of each RFP Respondent's ability to successfully operate and maintain the project.

2.6.6.4 Transmission Planning Participation

The Tariff directs MISO to consider whether at least one RFP Respondent or Proposal Participant associated with a given proposal has conducted relevant planning studies and provided associated results to MISO during the planning process. Part of this consideration includes whether an RFP Respondent or Proposal Participant has submitted any transmission project ideas submitted as potential solutions to address the same issues the project is intended to address.[40]

Planning participation was scored on an all-or-nothing basis, meaning that a proposal was awarded the full planning participation score if at least one RFP Respondent or Proposal Participant participated in MTEP15. If not, a proposal received zero points for planning participation.[41]

2.6.7 Proposal Review and Evaluation

The four work stream teams examined and compared the detailed factors in Step 1 (Figure 2-8) against the information provided in each proposal, to enable MISO to better understand the RFP Respondents' capabilities and strengths within each criterion. These factors, which are shown in the correlation tables in Attachment 4, were organized according to the Tariff-based evaluation criteria and sub-criteria. These factors correlate directly to the detailed information requested in RFP. For example, where the Tariff calls for "reasonably descriptive facility design," RFP Respondents were asked to submit details in such areas as structure materials, optical ground wire, and geotechnical investigation.

[40] Attachment FF, Section VIII.E.1.4.

[41] BPM-027, Section 8.2.2. To avoid revealing the identities of RFP Respondents, MISO has redacted proposal-specific information about planning participation in this report.

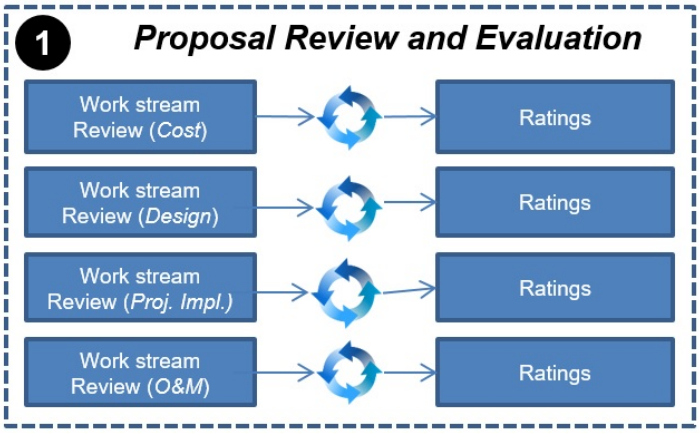

Figure 2-8: Step 1 - Proposal Review and Evaluation

Applying the framework described in Section 2.6.6, the work stream teams drilled into the complexity of the responses, using analytical tools to support professional judgment, always recognizing the importance of consistency, discipline, and rigor. Guided and influenced by the evaluation principles, the Evaluation Team members reviewed each of the proposals from top to bottom, but also side-by-side across the full range of factors and sub-criteria, building up to a comprehensive understanding of each proposal. The work stream teams arrived at consensus to assign initial ratings, and then calibrated results across all criteria and all proposals to facilitate comparative analysis, highlight trade-offs, and ensure consistency and repeatability.

These early work stream meetings ultimately produced high-level syntheses of distinguishing attributes of the various proposals, captured in narrative overviews and condensed summaries of how the work stream teams believed those distinguishing attributes reflected the proposals relative certainty, specificity, risk mitigation, and cost as to each of the evaluation criteria and sub-criteria.

2.6.8 Sub-Criteria Integration and Criteria-Level Categorization

Sub-Criteria Integration

Each work stream deliberated until it reached consensus to categorize each proposal ('Best/Better,' 'Good,' 'Acceptable,' or 'Unacceptable'[42]) with respect to the evaluation criterion for which the team was responsible (Figure 2-9). The teams began this process by identified preliminary categorizations for each of the sub-criteria within their respective evaluation criteria, and treated 'Best/Better' as a combined category to allow time for further analysis and to recognize the Executive Committee's prerogative to determine the single proposal to be categorized as 'Best' for each separate evaluation criterion. Each work stream team (with cost and design now merged into a single team) assessed and reviewed the sub-criteria level categorization to validate their preliminary assignments and integrate them into one overarching

[42] BPM-027, Section 8.2.1.

category for the corresponding evaluation criterion. Each work stream team calibrated across all proposals for their own evaluation criterion for consistency, discipline, and rigor.

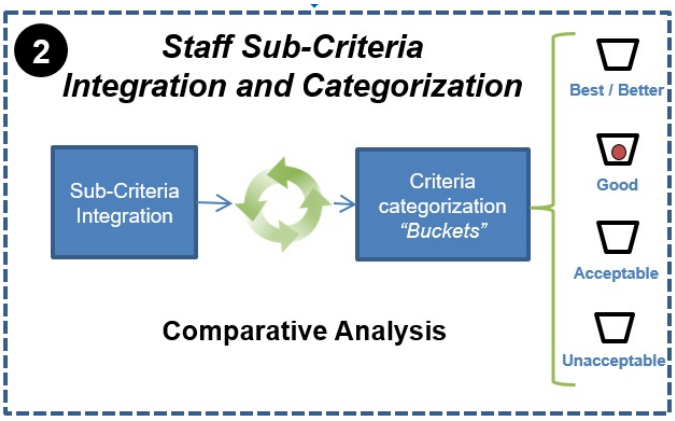

Figure 2-9: Step 2 - Sub-Criteria Integration and Criteria Categorization

Criteria-Level Categorization

The next step in the process was for all work streams to meet to peer-review qualitative analysis for each evaluation criterion, by proposal, to sharpen their understanding of all proposals. All work streams:

- reviewed the comparative analysis results across all proposals for each evaluation criterion for consistency, discipline, and rigor,
- calibrated categorizations across all evaluation criteria and all proposals to comparatively evaluate and discuss tradeoffs, and
- reached consensus to ratify or change preliminary categorization for a criteria (that is, 'Best/Better,' 'Good,' 'Acceptable,' or 'Unacceptable').

In parallel to these efforts, other members of the Evaluation Team reviewed MISO planning participation records to determine which of the proposals submitted were entitled to credit for planning participation. MISO determined that 10 of the 11 proposals were entitled to receive planning participation credit.

2.6.9 Presentation of Categorization to Executive Committee

Upon completion of Step 2, the Evaluation Team prepared comprehensive reporting packages to present to the Executive Committee for every proposal (Figure 2-10). These reporting packages provided proposal information on each criterion, highlighted the distinguishing attributes of each proposal, and synthesized the results of the comparative analysis undertaken in Step 1 and Step 2. All information tied directly to the four evaluation criteria, their sub-criteria, and the four evaluation principles.

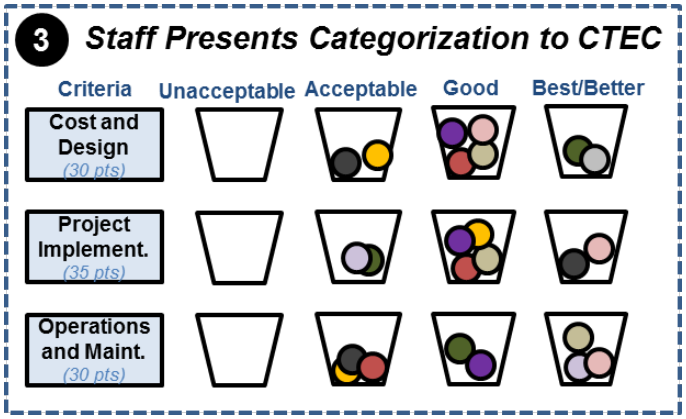

Figure 2-10: Step 3 - Presentation to Executive Committee

2.6.10 Executive Committee Proposal Review and Selection

As the Evaluation Team progressed through successive levels of comparative analysis, they met with the Executive Committee to review and discuss the proposals and the relative merits and tradeoffs they embodied. The Executive Committee evaluated every proposal against all of the evaluation criteria and sub-criteria, carefully taking time to examine each proposal thoroughly, guided by the evaluation principles of cost, risk mitigation, certainty, and specificity.

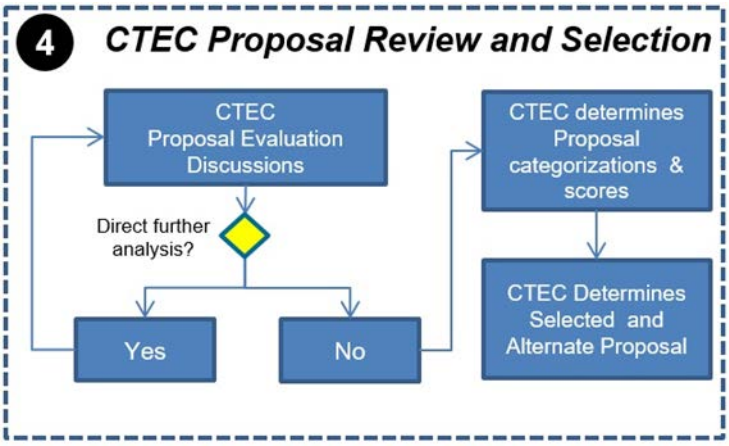

Figure 2-11: Step 4 – Executive Committee Proposal Review and Selection

Following this in-depth, multi-stage review, the Executive Committee deliberated, directing the Evaluation Team to perform further analysis as needed. The last step in the comparative analysis process was for the Executive Committee to categorize each of the proposals by evaluation criterion, assign them criterion-level scores, and determine final aggregate scores.[43] The final scores determined the designation of the Selected Developer and the Alternate Selected Developer (Figure 2-11).

[43] BPM-027, Section 8.2.3.

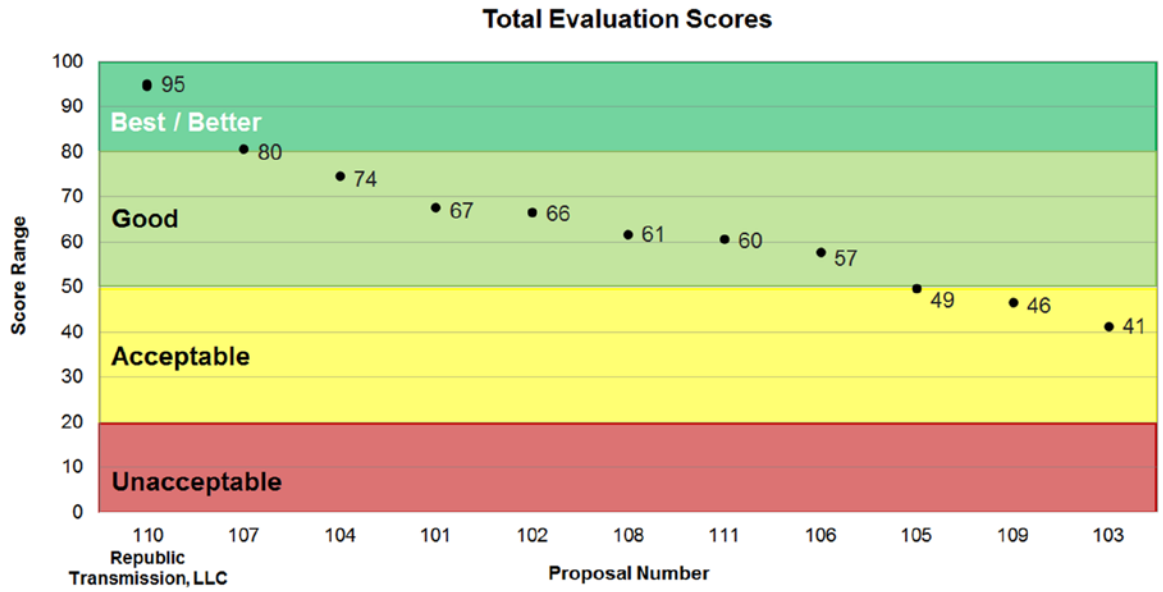

Figure 2-12: Final Comparative Analysis Scoring Results

Figure 2-12 depicts the scoring results for all proposals, with the scoring range shown along the left edge and the numerical proposal designations shown across the bottom. The total scores are composites of each proposal's scores with respect to each of the evaluation criteria. The color bands above are illustrative of the composite categorization results.

For example, the proposal categorized as 'Best' in cost and design (in this case, Proposal 110—Republic Transmission's proposal) received the maximum available score (30 points). The Executive Committee assigned the remaining proposals to the other categories as it determined whether they should be designated as 'Better,' 'Good,' 'Acceptable,' or 'Unacceptable.' This process was repeated for project implementation (maximum 35 points) and operations and maintenance (maximum 30 points). The Executive Committee also awarded 5 additional points to each RFP Respondent that earned credit for planning participation. These criteria-level scores were then aggregated to yield the total scores shown above.

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	REDACTED
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 2-4: Comparative Categorization Summary Table

Table 2-4 summarizes how the Executive Committee categorized each of the proposals, according to the evaluation criteria of cost and design, project implementation, and operations and maintenance. The boxes are color coded by category (dark green for 'Best' or 'Better,' light green for 'Good,' and yellow for 'Acceptable.') Planning participation was not categorized, but rather flagged as either yes or no to indicate eligibility for planning participation credit. As discussed earlier, the planning participation information has been redacted to protect confidentiality.

The final result of the Executive Committee's assignment of comparative categories in this instance was one 'Best' proposal for each evaluation criterion, with all remaining proposals falling into the categories of either 'Better,' 'Good,' or 'Acceptable.'

3. The Selected Proposal

The Selected Proposal for the Duff-Coleman EHV 345 kV Competitive Transmission Project was submitted by Republic Transmission, LLC. Republic Transmission is a wholly owned subsidiary of LS Power Associates, L.P. and its subsidiaries and affiliates. LS Power is a privately held power generation and transmission company. LS Power owns and manages a large and diverse independent power generation and transmission portfolio. Republic Transmission's headquarters is located in St. Louis, Missouri.

Republic Transmission's proposal includes one Proposal Participant: Big Rivers Electric Corporation (Big Rivers). Big Rivers is a member-owned, not-for-profit, generation and transmission cooperative headquartered in Henderson, Kentucky. It serves three distribution cooperatives that provide power to 22 Kentucky counties. Big Rivers owns, operates, and maintains approximately 1,300 miles of transmission in Kentucky (including 345 kV) and is a MISO Transmission Owner.

The Executive Committee determined that Republic Transmission's proposal provided the strongest combination of attributes, including but not limited to, the highest degree of certainty and specificity, the lowest risk, and low cost. It distinguished itself across the collective evaluation criteria in a way no other proposal matched. It was the best proposal for project implementation. It provided the best balance of high-quality design and competitive cost. It was in the top tier for operations and maintenance.

Republic Transmission impressed the Executive Committee with its outstanding combination of high-quality design at competitive long-term costs, rigor throughout its proposal, and thoughtful choices to enhance value to ratepayers. Within a complement of strong proposals, Republic Transmission rose to the top by providing the greatest value with the highest probability of project success.

3.1 Summary Description of the Selected Proposal

3.1.1 Overview of Selected Proposal

The Executive Committee found many features of Republic Transmission's proposal compelling, including:

- A well-thought-out route that adhered to industry best practices for selecting and securing transmission line routes. The proposed route was selected in a manner that is rigorous in addressing potential constraints to lower uncertainties and risk and enhance feasibility.
- Ample right-of-way width to allow both design flexibility and optionality for potential future expansion.
- Robust conductor selection, which provides lower line losses, longer life span, and the flexibility for additional capacity in the future over time as the requirements of the transmission grid within which the project operates changes.

- Solid design criteria that minimize the risk of poor performance or inadequate capability, such as very safe conductor operating temperature limits that are well within industry norms.

Republic Transmission strengthened the cost elements of its proposal through an array of cost-containment features that lower risks and constrain costs to ratepayers over time. These include:

- low anticipated operations and maintenance costs by leveraging local partners,
- limited return on equity for the life of the project (9.8%), and
- limited equity in capital structure for the life of the project (45%).

Republic Transmission proposed one of the lowest ATRR costs to ratepayers even though they did not propose the lowest project implementation costs. Republic Transmission's proposal was thorough and detailed, providing a high level of specificity relative to other proposals and performed well across a wide variety of sensitivity studies. The project right-of-way was the widest among proposals, which would afford design flexibility and accommodate future expansion. Republic Transmission performed due diligence and laid out rationales that strengthen numerous aspects of its proposal. The proposed conductor is the largest of all proposals, far exceeding MISO emergency rating requirements, and providing the highest available electrical capacity and the lowest estimated line losses.

Republic Transmission had one of the strongest cost caps with few exceptions for the life of the project, providing increased certainty to ratepayers. The selected conductor would provide a good balance between upfront costs and operational costs over time. The preferred project route appeared to be one of the more feasible routes proposed. The approach to operations and maintenance was sound and cost-effective. Because the Selected Proposal was strong in every respect, as compared to the other proposals, MISO believes it will provide very good value to ratepayers.

As shown in Figure 3-1 below, the Executive Committee assigned Republic Transmission's proposal a final score of 95. In addition, Table 3-1 the Criteria-Level Categorization Table, highlights the category designations Republic Transmission earned for cost and design ('Best'), project implementation ('Best'), and operations and maintenance ('Better').

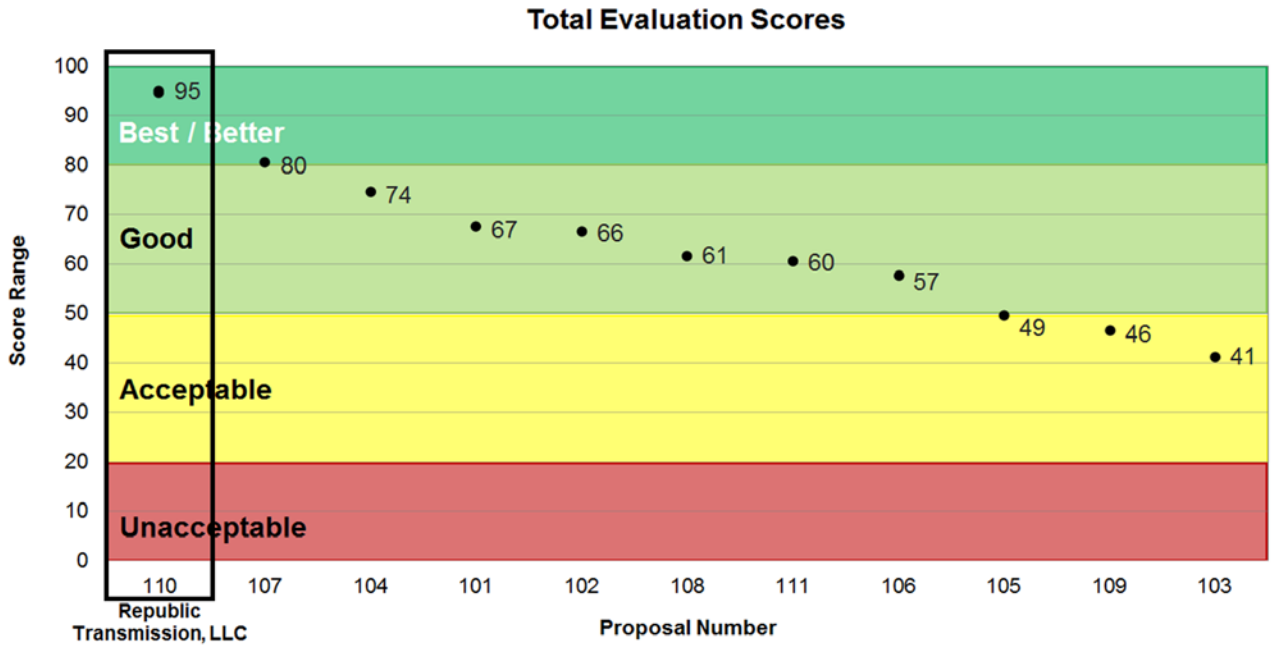

Figure 3-1: Selected Proposal Final Scoring Summary

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	
107	Good	Better	Good	REDACTED
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 3-1: Selected Proposal Criteria-Level Categorization

3.1.2 Project Cost and Design for the Selected Proposal

In evaluating cost and design, MISO found Republic Transmission's proposal was the 'Best' compared to the other proposals, as depicted in Table 3-1.

MISO evaluated Republic Transmission's estimated project cost and rigor. Republic Transmission submitted an implementation cost estimate of $49.8 million (in 2016 dollars).[44] The median implementation cost estimate for the 11 proposals was $48.8 million. Republic Transmission offered a $58.1 million "firm rate base cap" ($47 million in 2016 dollars), which was one of the strongest among all proposals, because it covered all relevant costs with the fewest exceptions. This reduced risk that ratepayers would end up bearing costs higher than the project implementation cost estimate. Because Republic Transmission structured its cost cap as a "firm base rate cap," it has assumed risks related to escalation and administrative and general cost increases, as well as AFUDC. The proposal also provided specific discussion of the reasoning and risk mitigation provided by the design and implementation options that resulted in higher project implementation costs than the alternatives considered. Republic Transmission's proposal demonstrated value for higher-cost design elements. In addition to the strong construction cost cap with few exceptions, the proposal included firm pricing quotes from its contractors.

MISO evaluated Republic Transmission's estimated ATRR and rigor. Republic Transmission submitted the second-lowest ATRR estimate, at $45 million, which was lower than the median of $56 million. In addition to capping upfront project costs, Republic Transmission lowered its ATRR estimates by committing to cap other elements of ATRR costs as well—specifically, return on equity at 9.8% and capital structure at no more than 45% equity for the life of the project. Additionally, there were estimated savings for tax-exempt ownership and the lowest estimated operations and maintenance costs achieved by leveraging local business partners. Republic Transmission's proposal also stood out with clear narrative and detailed and relevant supporting information for its ATRR estimates. In the analysis described in Section 2.6.6.1, Republic Transmission's proposal consistently finished among the lower-cost proposals for estimated ATRR.

[44] The term "project implementation cost" (or simply "implementation cost") refers to the cost estimate (in 2016 dollars) for fully implementing the proposal and placing the project into service.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	101	102	103	104	105	106	107	108	109	110	111
ROE		✓		✓ i			✓	✓ ii	✓ iii	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ iv	✓ v	✓	✓ iv		✓	✓	✓	✓ iv	✓	✓ iv
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap
ii Cap on weighted average cost of capital (includes ROE), limited duration
iii No ROE cap, but will forego ROE incentive adders in initial FERC filing
iv AFUDC is not included in the cap
v Only a portion of construction costs are capped

Table 3-2: Selected Proposal Cost Cap Summary

MISO evaluated Republic Transmission's facility design quality and rigor. Republic Transmission's project route would be 33 miles long, which is among the longest routes proposed. The project would use direct-embedded galvanized steel H-frame tangent structures, direct-embedded galvanized steel H-frame and three-pole running angle structures, and direct-embedded galvanized steel guyed three-pole dead-end structures, with one self-supporting galvanized steel three-pole dead-end structure on concrete drilled pier foundations (at a point where guying is not feasible). Typical distance between dead-end (failure containment) structures would be 2 miles, and no more than 5 miles.

Republic Transmission included a desktop geotechnical study based on historical data and publicly available information, as well as inputs from the project area and major foundation contracting firms. This additional information, together with methodology discussion supported by drawings of direct embeds and foundations, provided greater certainty in the proposed foundation design. The proposal also provided an overview of future geotechnical investigation, which was to include soil borings taken at various structure locations.

Republic Transmission thoroughly explained its design criteria, and submitted structure outline drawings with insulator and hardware details for all structure types. Republic Transmission's proposal also included plan and profile drawings, design specifications (including conductor tensions and structure loading), and steel H-Frame tangent structure design calculations.

The right-of-way for the majority of project would be 175 feet wide. At the Ohio River crossing, it would be 210 feet wide. These right-of-way values were higher than for any of the other proposals, and would provide design flexibility as well as accommodating future expansion. Republic Transmission explained how it determined its proposed right-of-way widths.

The Ohio River crossing in the proposed design would use structures heights of less than 200 feet, reducing the need to coordinate with the Federal Aviation Administration. Clearance

over the water surface would be 123 feet. Republic Transmission planned one of the highest river-crossing clearances among proposals, supported by in-depth discussion of how it determined the required clearance.

Republic Transmission's proposal included a table listing all major crossings. Plan and profile drawings showed the location where the project would cross under an existing 765 kV transmission line, while maintaining optical ground wire in a standard position. Republic Transmission did not separately address structure types for the 765 kV transmission line crossing, although several other proposals did. Plan and profile drawings included some other utility crossings, but did not show road crossings. There were design criteria applicable to road crossings, along with maps showing crossing angles of 90 degrees.

Republic Transmission completed a detailed conductor selection study, which considered conductor, structure, foundation, and line-loss costs for various conductor sizes. The selected conductor would be ACSS Lapwing two-bundle configuration for the line excluding the river crossing, and ACSS Lapwing high-strength conductor for the river crossing. The maximum conductor emergency summer rating is proposed to be 3,896 amps at 347°F (175°C) maximum conductor temperature. This conductor is the largest among all proposals and would far exceed MISO emergency rating requirements, with the highest available electrical capacity and the lowest estimated line losses. Republic Transmission fully explained its rating parameters and uses what MISO considered to be reasonable assumptions.

Republic Transmission's proposal would design for a vertical buffer of 2 feet over NESC minimum ground clearance requirement. All other minimum electrical clearances would meet or exceed NESC requirements.

Republic Transmission's proposal indicated a typical shield angle of 30 degrees, with lightning performance criteria of one outage or less per 100 miles per year. The proposal did not include a preliminary lightning study, but discussed plans to perform a future study. The grounding resistance target would be 15 ohms, which is lower than most proposals. Republic Transmission's proposal included discussion of multiple grounding strategies (ground rods and counterpoise), but did not include specific drawings.

Republic Transmission' addressed mitigation of galloping and vibration in detail, and described future study work to be performed. Its proposal included information on galloping load cases and maximum conductor tension values, noting anticipated use of spacers and Stockbridge dampers where recommended by manufacturers.

Republic Transmission discussed briefly how the project would tie into the substations at either end of the line, mainly in the context of describing contractor duties.

3.1.3 Project Implementation for the Selected Proposal

In evaluating project implementation, MISO found Republic Transmission was the 'Best' compared to the other proposals, as depicted in Table 3-1.

MISO evaluated Republic Transmission's project implementation schedule.[45] The schedule addressed agency review times, provided good details on engineering tasks, and allowed sufficient time for procurement and materials delivery. It allowed seven months of schedule "float," four of which were allocated to the construction schedule (including 15 days for weather delays). MISO determined the schedule was adequate to complete the project.

MISO evaluated Republic Transmission's project management plan. Republic Transmission's proposal included a project plan that touched on the appropriate areas, but was less detailed than some other proposals in areas such as organizational charts and supporting discussion for the risk register.

MISO evaluated Republic Transmission's route and site evaluation. Republic Transmission submitted separate, complete routing studies for Indiana and Kentucky (and was the only RFP Respondent to do so). The studies were rigorous, recognized regulator-preferred methodology, and appeared to be ready for submittal. Republic Transmission identified a preferred route adjacent to an existing transmission line for a large portion of the route, seeking to take advantage of existing roads, rail, and other transmission lines where possible. The route recognized and addressed issues related to a nearby airport. There was a separate section, along with maps, discussing utility crossings (although with less information related to pipelines and railroads). Republic Transmission explained its methodology and how various routing decisions would reduce risk.

MISO evaluated Republic Transmission's proposal for land and right-of-way acquisition. Republic Transmission's proposal identified specific parcels for new right-of-way in both Indiana and Kentucky, and had taken proactive steps to increase certainty by acquiring some of the necessary land rights. The wide right-of-way for the project (175 feet for most of the route; 210 feet at the Ohio River crossing) could confer benefits in design flexibility and opportunities for future upgrades, but could affect costs and increase permitting challenges. The land acquisition team identified by Republic Transmission appeared sufficiently staffed and well qualified.

MISO evaluated Republic Transmission's proposal for engineering and surveying. The treatment of project surveying needs was comprehensive, including right-of-way, construction, and as-builts (with LiDAR support for final design and as-builts). Republic Transmission's proposal separately discussed ground surveys for crossings and culturally sensitive areas.

MISO evaluated Republic Transmission's material procurement plan. Republic Transmission fully laid out its quality assurance and quality control plan for its procurement process, the most specific among proposals. A named third party, with extensive experience on large transmission projects, would be responsible for materials management (including site visits and materials receipt and inspection processes).

[45] MISO finds, based on the project schedule for the Selected Proposal, Republic Transmission needs to obtain necessary regulatory approvals from the Indiana Utility Regulatory Commission and the Kentucky Public Service Commission (or a construction certificate from the Kentucky State Board on Electric Generation and Transmission Siting) by no later than January 1, 2019 to allow project construction to start with sufficient lead time to meet the project in-service date of January 1, 2021.

MISO evaluated Republic Transmission's proposal for regulatory permitting. Republic Transmission also included a robust permitting plan—the most comprehensive among submitted proposals—with detailed discussion of the federal, state, and local permitting requirements specific to this project. Republic Transmission researched upstream and downstream bridges to determine the necessary clearance for the Ohio River crossing, and addressed Section 10 permitting in depth. The proposal included clearance requirements for 345 kV transmission lines as well. Republic Transmission had begun early consultation with regulatory authorities, and explained its outreach plan.

MISO evaluated Republic Transmission's plan for construction and commissioning. Republic Transmission's construction plan was detailed, feasible, reflected due diligence during proposal development, and appeared to minimize risk. Republic Transmission identified its primary construction contractor, as well as some subcontractors (such as for tree clearing). Republic Transmission's proposal addressed wire-pull setups, drilling crews and timing, use of helicopters during construction, roads and access plans, spoils removal, and restoration in ample detail. In a small number of areas, Republic Transmission's proposal was less specific than other proposals (no designated construction liaison; no equipment lists, detailed access maps, or designated haul routes).

MISO evaluated Republic Transmission's commissioning experience. Republic Transmission submitted a detailed commissioning and testing plan for the project, with adequate time for all necessary tasks. It included testing of optical ground wire, site cleanup, and re-performing LiDAR surveys after the project is complete.

MISO evaluated Republic Transmission's previous applicable experience and capital resources, financing plans, and credit ratings. Republic Transmission showed strong financing capability and a strong financing plan for the project. Republic Transmission demonstrated good experience with past 345 kV projects, supported by team member résumés and descriptions of numerous previous projects. The proposed transmission line contractor also has extensive experience with transmission line projects of all sizes, including 345 kV and 765 kV.

MISO evaluated Republic Transmission's safety performance. Republic Transmission included a safety plan with some site-specific information. The proposal discussed procedures to protect workers from risk of electric shock, job hazard analysis, and daily tailgates at worksites. There would be a designated individual responsible for safety on the project, although the proposal did not call out stop work authority. Safety metrics provided for Republic Transmission and its primary construction contractor were in line with general industry performance.

3.1.4 Operations and Maintenance for the Selected Proposal

In evaluating operations and maintenance, MISO found Republic Transmission to be 'Better' compared to the other proposals, as depicted in Table 3-1.

MISO evaluated Republic Transmission's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. Republic Transmission explained, at a high level,

how it would work with the substation owners to incorporate the project into existing Local Balancing Authority operations, as well as monitor operation of the line in real time and coordinate switching. Republic Transmission cited to established procedures (including three-part communication) and provided an example of a switching order.

MISO evaluated Republic Transmission's forced outage response and emergency repair and testing abilities. Republic Transmission's proposal showed equal strength in forced outage response capabilities and risk plans, as well as those for emergency repair and testing. Republic Transmission laid out detailed process descriptions, including coordination among utilities in the local project area, and explained how the project would be incorporated into them.

MISO evaluated Republic Transmission's description of predictive and preventive maintenance and testing abilities as well as access to spare parts, structures, and equipment. The preventive and predictive maintenance and testing program for Republic Transmission would rely on staff personnel for most tasks (except for vegetation management, which would be performed by a contractor). Personnel would be stationed in the local project area, with anticipated response times of an hour or less. Republic Transmission would integrate the project into its existing procedures and risk plans, supported by a computerized system that coordinates maintenance and asset management.

Republic Transmission provided thorough descriptions of maintenance activities in many areas, including twice-yearly aerial inspections, walking line inspections every five years, right-of-way inspections every four years, maintenance of access roads, and use of infrared sensors. Republic Transmission explained what it looks for when inspecting conductors, optical ground wire, insulators, and other components, and how resulting information is captured in a database. The descriptions of spare parts capabilities and strategy for Republic Transmission's proposal were among the strongest and most detailed submitted, reflecting leading experience and a best-in-class risk plan.

Republic Transmission would maintain spare parts inventory sufficient to replace 2 miles of materials such as conductor, optical ground wire, and hardwire, as well as 1 mile of structures (including H-Frame structures for the Ohio River crossing). Republic Transmission would use its coordinated maintenance and management system to dispatch spare parts from multiple locations and draw on sharing agreements as necessary. Republic Transmission's proposal included a map of inventory locations, supporting mobilization and delivery of spare parts within a few hours.

MISO evaluated Republic Transmission's major facility replacement capabilities and financial strategy for replacements and rebuilds. Republic Transmission did not anticipate significant facility replacements or rebuild over the life of the project, but still provided thorough explanations of facility replacement capabilities and restoration policies, with detailed appendices. Republic Transmission estimated that, should it be needed, the process to restore 1 mile of project line would take approximately one week.

MISO evaluated Republic Transmission's previous applicable experience. Republic Transmission stated that it operates and maintains more than 3,000 miles of transmission lines.

Statistics for customer outages and durations of service interruption over the past five years compared favorably to peer utilities (although they pertained primarily to distribution metrics). Taken as a whole, Republic Transmission's proposal offered a compelling account of its ability to leverage existing programs, manpower, equipment, policies, and procedures for the benefit of the project.

MISO evaluated Republic Transmission's safety performance with respect to operations and maintenance. Information on general safety procedures was comprehensive, but not tailored into a specific safety plan for this project, and appeared outdated in some areas. Discussion of safety history was limited (and did not address safety performance by maintenance contractors), but highlighted prior industry recognition.

3.1.5 Planning Participation for the Selected Proposal

MISO evaluated planning participation for Republic Transmission, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4. Proposal Summaries

This section summarizes MISO's comparative analysis results for the proposals submitted by all of the RFP Respondents other than Republic Transmission (the Selected Developer). It includes an overview of each proposal, together with discussion of how each proposal performed with respect to the four Tariff evaluation criteria (cost and design, project implementation, operations and maintenance, and planning participation).

For ease of reference, in the following proposal summaries, the designation "RFP Respondent" followed by a number signifies the entity that submitted the proposal associated with that identification number. For example, "RFP Respondent 101" refers to the entity that submitted Proposal 101.

4.1 Proposal 101

4.1.1 Overview of Proposal 101

The Executive Committee assigned Proposal 101 a total evaluation score of 67 and found it to be generally good, as compared to the other proposals (Figure 4-1).

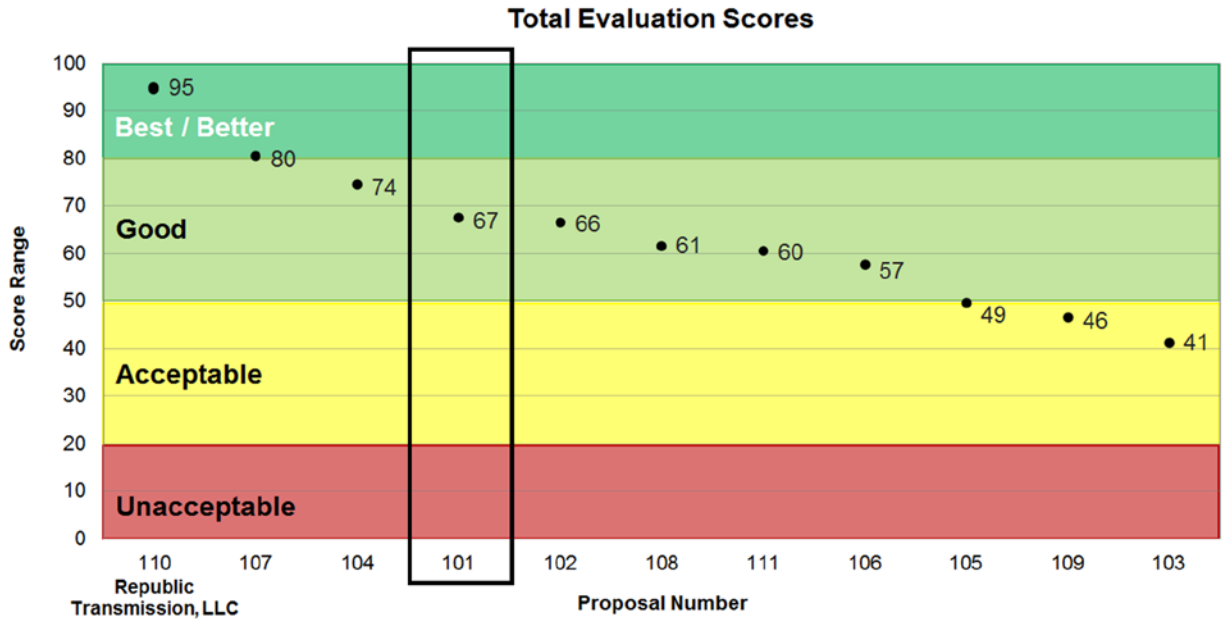

Figure 4-1: Proposal 101 Final Scoring Summary

In evaluating Proposal 101 against the four Tariff evaluation criteria, MISO categorized it as 'Good' in cost and design, 'Acceptable' in project implementation, and 'Good' in operations and maintenance, as compared to the other proposals (Table 4-1).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	REDACTED
108	Good	Good	Acceptable	
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-1: Proposal 101 Criteria-Level Categorization

4.1.2 Project Cost and Design for Proposal 101

In evaluating cost and design, MISO found Proposal 101 to be 'Good' compared to other proposals, as depicted in Table 4-1.

MISO evaluated Proposal 101's estimated project cost and rigor. Proposal 101 submitted an implementation cost estimate of $48.8 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. Proposal 101 submitted a guaranteed maximum price construction cost cap of $45.7 million, equal to its cost estimate excluding AFUDC, and the cost cap did not cover inflation. There is an exclusion to the cap for additional costs stemming from environmental permitting, remediation and mitigation. RFP Respondent 101 discussed costs for multiple possible routes it examined with input from vendors.

MISO evaluated Proposal 101's estimated ATRR and rigor. Proposal 101 submitted an ATRR estimate of $71 million, which was higher than the median of $56 million. The submitted ATRR estimates for Proposal 101 were higher than other proposals due to higher-than-average estimates for return on equity and cost of debt, as well as a capital structure greater than 50% equity. Proposal 101 provided no cost containment measures or forgone rate incentives specific to its ATRR estimate to enhance certainty. In the analysis described in Section 2.6.6.1, Proposal 101 consistently finished among the higher-cost proposals for estimated ATRR.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ i			✓	✓ ii	✓ iii	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ iv	✓ v	✓	✓ iv		✓	✓	✓	✓ iv	✓	✓ iv
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-2: Proposal 101 Cost Cap Summary

MISO evaluated Proposal 101's facility design quality and rigor. RFP Respondent 101 proposed to construct the line connecting the Coleman EHV and Duff substations along a 28-mile route, one of the shortest routes among the 11 proposals. The project would use direct-embedded weathering steel monopole tangent structures.

Proposal 101 included more supporting documentation than most other proposals for line and foundation design. Preliminary line design was based on recent, site-specific, LiDAR survey information, which allowed for more certainty in its preliminary structure locations and heights. The proposal also included load and design drawings, guying details, and a pole design report prepared by a third-party vendor.

Proposal 101 was unique among proposals in taking several project-specific soil borings along the proposed route to provide additional certainty on foundation design and resulting costs. The foundation schedule showed diameters and depth information, but did not show whether river crossing structure foundations would stay above flood level. Proposal 101's discussion of future geotechnical work was not as specific as some other proposals.

Proposal 101 provided plan and profile drawings that were average in detail, showing structure proximity to objects along the right-of-way, structure heights and locations, clearances and related information, but with less specific information on utility crossing locations. Accompanying maps identified affected parcels and crossings, but related only to a preferred route (no alternate route information was submitted).

The proposed right-of-way for the project would be 100 feet wide for most of the route, which is the narrowest among all proposals, except at the river crossing area, where it would be 120 feet wide. Relative to the right-of-way widths specified in other proposals, this comparatively narrow right-of-way increases the risk profile of the line routing and could limit design flexibility.

The conductor for Proposal 101 would be ACSS Cardinal in a two-bundle configuration for the line. Using the parameters provided by RFP Respondent 101, the conductor emergency summer rating is proposed to be 3,480 amps at 202°C maximum conductor temperature. The estimated line losses for this conductor were average among proposals.

Proposal 101 provided more specificity on its conductor selection compared to other proposals. While it did not include actual study results, RFP Respondent 101 had performed and briefly discussed a conductor study, as well studies on electric and magnetic fields.

The Ohio River crossing would use structure heights more than 200 feet tall, which would require increased coordination with the Federal Aviation Administration. Proposal 101's planned clearance above the water surface was 125 feet, which was among the highest of the proposals. Proposal 101 included information on the river-crossing structures from a pole study conducted by a third-party vendor.

Proposal 101 addressed structure types for the 765 kV transmission line crossing. Information on other types of crossings (highways, roads, railroads, pipelines, other utility lines, and so forth) was less specific. Proposal 101 contemplated one of the highest vertical clearance buffers above NESC minimum clearances.

The RFP did not require proposals to specify lightning performance criteria, but RFP Respondent 101 stated that its line would be designed for one outage due to lighting strike per 100 circuit miles per year or less, which is in line with industry standards. RFP Respondent 101 said it had performed, but did not submit, a preliminary lightning study. Proposal 101 specified a

comparatively smaller shield angle for optical ground wire. Proposal 101 targeted an average ground resistance value.

RFP Respondent 101 had performed a conductor vibration study, and included it with its proposal (along with detailed drawings). There was no discussion of galloping. Substation tie-in was shown on plan and profile drawings, but not discussed in the proposal.

4.1.3 Project Implementation for Proposal 101

MISO evaluated Proposal 101's project implementation plan, finding it to be 'Acceptable' overall.

MISO evaluated Proposal 101's project schedule, which included details and discussions on regulatory permitting, land acquisitions, material procurement, construction, commissioning, and energization. The proposed schedule was reasonable in most areas, but, compared to other proposals, Proposal 101 lacked specificity, and lacked some details related to float, engineering, and materials management needs. In general, the scheduling information for Proposal 101 was less detailed than several other proposals and included some contradictory information that decreased certainty in the proposed schedule.

MISO reviewed Proposal 101's project management plan and experience. The proposed project execution plan was tailored specifically to this project and had good treatment of routing and siting processes, MISO schedule requirements, meetings and reports, and executive sponsorship, but lacked some of the specificity found in other proposals. Although Proposal 101 included a risk register, it was general and did not address cost or schedule impacts that were found in other proposals' risk registers. Some proposed resources to support the project did not appear to have the previous experience with 345 kV transmission comparable to other proposals.

Proposal 101 considered several routing options, but supplied information only on its proposed route. Proposal 101 included mapping of cultural resources, identified landowners, land use considerations, and other projected impacts, but there appeared to be misalignment between the proposed route and the routing studies that were performed that MISO did not see in other proposals. Proposal 101's regulatory consultation plan included the majority of federal agencies that would be involved in this project, but the Proposal did not mention meeting with state regulators about proposed routing. Other proposals were more specific in this area. The regulatory approach for Kentucky was less clearly described than in other proposals.

Proposal 101 identified parcels and landowners for new project right-of-way, with a proposed width of 100 feet and substantial diagonal portions of the route. Although a diagonal route would be shorter, and therefore lower materials costs, Proposal 101 did not emphasize following existing corridors. The need for substantial new right-of-way could increase risks in permitting and land acquisition as compared to other proposals, and the narrower right-of-way could limit design flexibility.

Proposal 101 provided a good upfront review of topography and design supplemented by desktop analysis and some LiDAR studies. The engineering and survey plan included specificity

of environmental needs. Discussion of the Ohio River crossing was less specific, and not as thorough as some other proposals. The proposed plan conveyed uncertainty about the structure heights and locations, and the ability of Proposal 101 to permit a structure in an area with an identified cultural resource.

MISO evaluated Proposal 101's abilities with materials procurement, construction, commissioning and safety. When compared to others, MISO found Proposal 101 to be less specific and with higher levels of uncertainty than other proposals. Proposal 101 provided significant details related to construction planning including access plans, laydown yard siting construction techniques and wire pull plans that were more specific than other proposals, but MISO could not ascertain from the information in Proposal 101 whether the designated contractor had transmission experience, or if other key contractors had experience with 345 kV transmission. Discussion of the commissioning process in Proposal 101 lacked some specifics and the schedule for testing appeared shorter than expected. This increased potential risk for Proposal 101 compared to other proposals.

MISO evaluated Proposal 101's safety performance. Proposal 101 discussed safety performance, safety requirements and included examples of safety tracking documentation, but it was unclear whether safety history information related specifically to transmission development, either for RFP Respondent 101 or its selected contractors. This created greater uncertainty in this area than some other proposals.

4.1.4 Operations and Maintenance for Proposal 101

MISO evaluated Proposal 101's description of RFP Respondent 101's operations and maintenance abilities, finding it to be 'Good' overall.

MISO evaluated Proposal 101's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. Most notable was its experience in coordinating switching between several substation owners (including its use of three-way communications), which are linked to Reliability Coordinator outage coordination software. Proposal 101 demonstrated an ability to integrate the project into system operations and maintenance programs, with capabilities comparable to those of other RFP Respondents with 345 kV transmission facilities. RFP Respondent 101 included a specific plan to integrate the project into a MISO Local Balancing Authority, including data exchange with the substation owners, and its 24-hour transmission system operations center.

MISO evaluated Proposal 101's forced outage response and emergency repair and testing abilities. Proposal 101 compared favorably to other proposals in its forced outage response capabilities, including a discussion of its coordination with a Reliability Coordinator and adjacent utilities. RFP Respondent 101 would rely on fault distance relaying to improve staff and contractor response times by more quickly identifying fault location, and would dispatch a helicopter during widespread events. Proposal 101 also had substantial experience with emergency preparedness for storms and other events, detailing equipment (including temporary structures), capabilities, and sharing arrangements with adjacent utilities; however, it lacked the specificity and certainty provided by some other proposals.

MISO evaluated Proposal 101's abilities with predictive and preventive maintenance, testing, and its access to spare parts, structures, and equipment. Proposal 101's predictive and preventive maintenance program uses a designated contractor, along with internal resources (transmission line specialists) based at reporting locations near the project area. This facilitates maintenance response times of 50 to 65 minutes, depending on where along the line work would be needed, with on-call linemen available within 60 to 90 minutes. Proposal 101 furnished significant details on inspections, which include visual, camera, corona, and infrared. Inspection results are tracked through spreadsheets.

Predictive programs include steel pole coating and insulator assembly condition. RFP Respondent 101 would perform two vegetation inspections per year (ground inspection in the spring and aerial during the fall), with an internal team (including a NERC-certified inspector) to oversee compliance with the NERC transmission vegetation management standard and cited favorable results in numerous previous NERC compliance audits. Proposal 101 also reviewed a range of policies and procedures for maintenance activities, including aviation ball replacement, dampers, assembly structures, encroachment, corona inspection, and ground inspection every five years. Although Proposal 101's design for the project includes some guyed structures, these were not discussed from a maintenance perspective. Discussion of training programs (apart from safety training) was limited. RFP Respondent 101 would source from a single warehouse, where it stocks items for both emergency and routine maintenance, including 345 kV facilities. RFP Respondent 101 would establish a critical spare agreement with a vendor as backup.

MISO evaluated Proposal 101's major facility replacement capabilities and financial strategy for replacements and rebuilds, which included a description of its process for responding to catastrophic events, as well as resources for major facility replacement or rebuilds. These include in-house engineering and construction personnel, on-site contracted construction crews, and participation in mutual assistance groups, all of which enable it to quickly assess damage and undertake necessary repairs or replacement. Proposal 101 summarized past experience with disaster recovery, as well as previous industry recognition for reliability.

MISO evaluated Proposal 101's safety performance. Proposal 101 discussed safety performance in the context of project construction (such as safety certifications for contractors and a safety manager) and provided a safety manual, but did not provide specific safety procedures and history related to operations and maintenance.

4.1.5 Planning Participation for Proposal 101

MISO evaluated planning participation for Proposal 101, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4.2 Proposal 102

4.2.1 Overview of Proposal 102

The Executive Committee assigned Proposal 102 a total evaluation score of 66 and found it to be generally good, as compared to the other proposals (Figure 4-2).

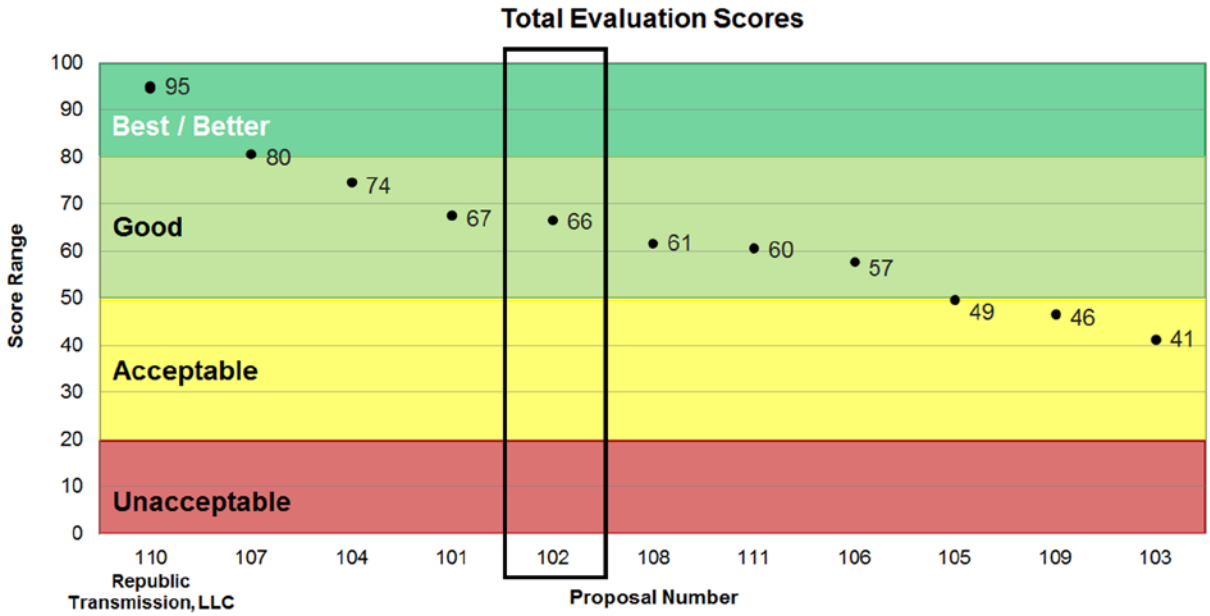

Figure 4-2: Proposal 102 Final Scoring Summary

In evaluating Proposal 102 against the four Tariff evaluation criteria, MISO categorized it as 'Acceptable' in cost and design, 'Good' in project implementation, and 'Best' in operations and maintenance, as compared to the other proposals (Table 4-3).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	REDACTED
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-3: Proposal 102 Criteria-Level Categorization

4.2.2 Project Cost and Design for Proposal 102

MISO evaluated Proposal 102's cost and design, and found Proposal 102 to be 'Acceptable' compared to other proposals, as depicted in Table 4-3.

MISO evaluated Proposal 102's estimated project cost and rigor. Proposal 102 submitted the highest implementation cost estimate, at $55.7 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. Proposal 102 offered a construction cost cap of $47.0 million, which covered some (but not all) implementation costs. The cost cap covers inflation and excludes AFUDC. Construction and materials related implementation costs are generally covered on a "per unit" basis, while the conductor material, right-of-way, and permitting related costs were excluded from the cap. The cap was fixed for engineering and project management related costs. Proposal 102 provided specific project details and submitted relevant materials, but provided limited vendor information to support its cost estimates.

MISO evaluated Proposal 102's estimated ATRR and rigor. Proposal 102 submitted an ATRR estimate of $49 million, which was lower than the median of $56 million, due mainly to lower-than-average project depreciation cost estimates during the 40-year time frame of the required estimate. Proposal 102 did offer to cap the base return on equity for the project at 10.32% and the equity percentage of the capital structure at 50%, enhancing certainty. In the analysis described in Section 2.6.6.1, Proposal 102 consistently finished among the higher-cost proposals for estimated ATRR, due mainly its high implementation cost estimate. Proposal 102 supported its ATRR cost estimates with relevant ATRR cost caps, narrative, and detail, especially with respect to the tax and debt estimates.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ [i]			✓	✓ [ii]	✓ [iii]	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ [iv]	✓ [v]	✓	✓ [iv]		✓	✓	✓	✓ [iv]	✓	✓ [iv]
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-4: Proposal 102 Cost Cap Summary

MISO evaluated Proposal 102's facility design quality and rigor. The project route for Proposal 102 would be 29 miles long, which is comparatively one of the shorter routes proposed. Proposal 102 would use a well-defined structure family consisting of light, medium and heavy weathering steel monopole tangent structures with direct-embedded and drilled pier foundations. The line design for Proposal 102 was based on publicly available terrain data (which was comparable to other proposals), and included specific line design criteria.

Proposal 102 provided approximate sizes for structure foundations, but did not provide foundation design criteria or explain how these values were determined. RFP Respondent 102 had performed a preliminary geotechnical desktop study using topographical and geological data to summarize general subsurface conditions along the proposed route.

Proposal 102 included plan and profile drawings, which showed structure proximity to objects along the right-of-way, structure height and location, and clearances, but overall lacked the specificity seen in other proposals. Also, the area near the Coleman EHV substation was not shown in the plan and profile drawings. The project right-of-way throughout the route would be 130 feet wide, which was average among proposals.

The selected conductor would be ACSR Cardinal in a two-bundle configuration. Based on the line rating parameters provided in Proposal 102, the maximum conductor emergency summer stressed conductor rating is proposed to be 3,090 amps at 302°F (150°C) maximum conductor temperature. The estimated line loss value was average among proposals.

To cross the Ohio River, the project would use structure heights more than 200 feet tall, which would require increased coordination with the Federal Aviation Administration. Proposal 102's planned clearance above the water surface was 75 feet, which was among the lowest clearances of any proposal. RFP Respondent 102 did indicate that it had contacted representatives of an airport near the route for clearance information.

Proposal 102 gave an overall count of crossings along the route and showed crossings in plan and profile drawings, but with limited specificity. Apart from the river crossing and the need to pass under an existing 765 kV transmission line (where Proposal 102 specified types of structures), narrative treatment of crossing issues was minimal.

Proposal 102 included information on lightning protection (including a smaller shield angle than most other proposals), but did not specify lightning performance targets. The discussion of grounding was thorough, and included specific grounding procedures. RFP Respondent 102 indicated target ground resistance value that was average among proposals.

Proposal 102 included a detailed discussion of galloping and vibration, although the galloping mitigation portions were less specific than several other proposals. Proposal 102 contemplated vertical clearance buffers above the NESC minimum, which could provide some additional construction tolerances, but was less than several other proposals.

Details on substation tie-in at either end of the line were lacking compared to other proposals, particularly because the area leading into the Coleman EHV substation was not shown in plan and profile drawings.

4.2.3 Project Implementation for Proposal 102

MISO evaluated Proposal 102's project implementation plan and abilities, finding it to be 'Good' overall, as compared to other proposals.

MISO evaluated Proposal 102's project schedule, which appeared sufficient, however was less detailed than some other proposals, particularly in the areas of surveying and construction intervals. The schedule as a whole was comparable to those submitted in other proposals, but was inconsistent and had less breakout information and fewer milestones than other proposals. The schedule provided sufficient time for engineering and allowed three months of float during project development and two months of float during construction.

The project management portion of Proposal 102 was heavily focused on engineering and had good organizational charts, but was less specific than several other proposals. It included a risk register with some high-level mitigation discussion, but did not address schedule or cost impacts as thoroughly as some other proposals. The proposal outlined tasks for various segments the project team, discussed the project crossing under existing 765 kV lines, and touched on a public outreach program. The overall construction plan was not very detailed and did not address haul routes.

Proposal 102 provided maps that showed the route study area, opportunities and constraints, study segments, natural environment, land use, historic resources, the Ohio River crossing, and a potential preferred route with explanation of some decisions made in selecting the route, with particular focus on the Ohio River and 765 kV transmission line crossings. The route selected was more directly diagonal than most other proposals, therefore requiring more new right-of-way and potentially increasing risk related to permitting and land acquisition in comparison to other proposals.

RFP Respondent 102 discussed obtaining regulatory approvals in Indiana and Kentucky. RFP Respondent 102 expected to form a new entity for project-related purposes in Kentucky, but did not address how that entity would obtain eminent domain rights in Kentucky. Proposal 102 did not describe any early consultation with state agencies to discuss the proposed project route, but in general Proposal 102 demonstrated relevant knowledge and staff experienced with the applicable regulatory processes.

Proposal 102 included a matrix that identified the agency, required action, time frame, and approach for required permits. RFP Respondent 102 had done some initial outreach to landowners in the river crossing area and proposed to coordinate with the U.S. Army Corps of Engineers early in the process. There was also limited treatment of railroad crossing and no discussion of pipelines. Proposal 102 identified affected parcels and landowners, but did not lay out a clear plan for acquiring necessary land rights for the right-of-way along the project route.

Other proposals addressed this task with more specificity and certainty. Land acquisition staff appeared appropriate, with demonstrated experience in both Indiana and Kentucky.

Proposal 102 contained a cursory discussion on material procurement and quality assurance programs, and referenced existing contractor relationships, laydown yards, staffing levels, and materials inspection upon arrival, but did not address material ordering or staging. The level of specificity in this area was less than other proposals. The construction plan provided with the proposal was general, addressed topics such as the vegetation plan, equipment and staffing levels, but did not address wire pull plans or pull sites, access plans, areas of concern, or weather impacts to construction. Discussion of construction at the Ohio River crossing, project commissioning and energization was less specific than found in other proposals.

Proposal 102 provided good information on safety history, which showed performance comparable to other utility industry participants, but other proposals provided a more robust and project specific safety plan.

RFP Respondent 102 demonstrated strong financing capabilities, as supported by its credit ratings and track record with past projects. RFP Respondent 102 demonstrated significant previous experience in 345 kV transmission construction that was comparable to other participants. The financial plan for Proposal 102 mitigated the risk of higher capital costs for ratepayers and was specific to this project.

4.2.4 Operations and Maintenance for Proposal 102

MISO evaluated Proposal 102's description of RFP Respondent 102's operations and maintenance abilities, and found it to be the 'Best' overall among the 11 proposals received.

MISO evaluated Proposal 102's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. The proposal contemplated a memorandum of understanding to integrate the project into an existing Local Balancing Authority within MISO. RFP Respondent 102 would perform real-time monitoring for the project through a remote transmission operations center, supported by data exchange with the owners of the Coleman EHV and Duff substations. RFP Respondent 102 also detailed its switching plan for the project where it again envisioned a memorandum of understanding that recognized the Coleman EHV and Duff substation owners' responsibility for switching within the substations to place the line in and out of service. Proposal 102 also included a switching and tagging manual from RFP Respondent 102 and described the switching procedures it currently has in place, along with information showing very high switching accuracy.

MISO evaluated Proposal 102's information on forced outage response and emergency repair and testing abilities. Proposal 102's discussion of forced outage response showed significant detail and specificity, relying on local presence for outage patrols and assessments and an incident command system to streamline decision making during forced outages. The plan covered the number of crews, vehicle assistance groups, extensive use of helicopters for assessment, and noted a state-of-the-art training center. However, Proposal 102 did not explain

the process for finding fault locations. The emergency repair plans for RFP Respondent 102 featured an incident commander, experienced line crews, and pre-approved contract crews that could be redirected as needed. Local presence would facilitate crew response for repairs within two hours, with helicopter support for rapid restoration. The incident command system streamlines decision-making, optimizes use of resources, and coordinates access to multiple mutual aid groups.

MISO evaluated Proposal 102's discussion of predictive and preventive maintenance and testing abilities as well as its access to spare parts, structures, and equipment. Proposal 102 provided significant detail about its preventive and predictive maintenance programs. RFP Respondent 102 would deploy resources from multiple locations in Indiana (except for contractors to provide vegetation management and aerial inspections), which it anticipated could reduce maintenance-related costs. Aerial vegetation inspections would occur twice a year (spring and fall), using internal resources to develop work plans based on inspection findings. Aerial inspections for line condition would occur once each year.

Proposal 102 provided comprehensive discussion of its asset management program, along with internal guidelines for inspections and policies for assessment, prioritization, funding, staffing, scheduling, and oversight of it maintenance programs. RFP Respondent 102 indicated maintenance programs are supported by a state-of-the-art training facility for internal resources with both theory and hands-on training. RFP Respondent 102 explained its spare parts strategy in significant detail, which included an "integrator" supplier coordinating with other second-tier suppliers. RFP Respondent 102 would source from multiple warehouses within four to six hours of the project area, and would rely on its own inventory (which includes spare wood poles for temporary emergency use), a company-wide sharing program, and strategic partnerships with other suppliers.

MISO evaluated Proposal 102's major facility replacement capabilities and financial strategy for replacements and rebuilds. RFP Respondent 102 cited similar capabilities for major facility rebuilds, supplemented by a transmission circuit hardening and optimization tool to assess line condition and prioritize necessary rebuilds, as well as maintaining replacement inventory.

MISO evaluated Proposal 102's previous applicable experience. RFP Respondent 102 described, in detail, its experience and abilities with owning, operating, and maintaining 345 kV transmission lines.

MISO evaluated Proposal 102's safety performance. Proposal 102 described a robust safety program, which includes a safety manager, a human performance program, and minimum qualifications for all contractors. Contractors are required to maintain OSHA recordable rates of less than 3.0. RFP Respondent 102 also provided safety history showing its lost-time rate relative to transmission hours worked.

4.2.5 Planning Participation for Proposal 102

MISO evaluated planning participation for Proposal 102, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4.3 Proposal 103

4.3.1 Overview of Proposal 103

The Executive Committee assigned Proposal 103 a total evaluation score of 41 and found it to be generally acceptable, as compared to the other proposals (Figure 4-3).

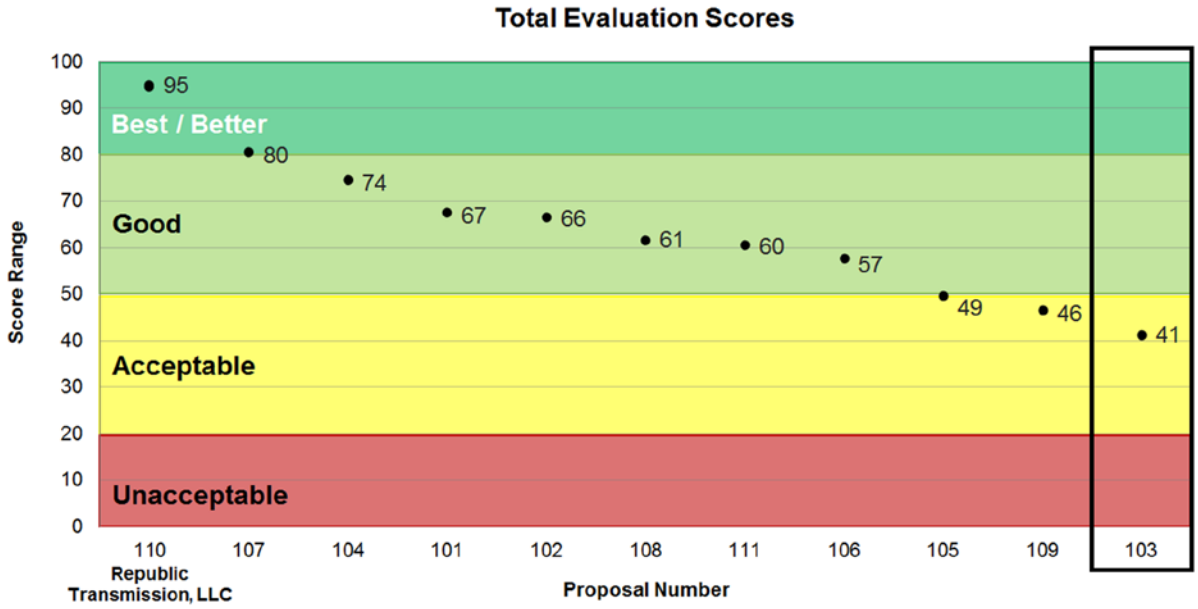

Figure 4-3: Proposal 103 Final Scoring Summary

In evaluating Proposal 103 against the four Tariff evaluation criteria, MISO categorized it as 'Acceptable' in cost and design, 'Acceptable' in project implementation, and 'Acceptable' in operations and maintenance, as compared to the other proposals (Table 4-5).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	REDACTED
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-5: Proposal 103 Criteria-Level Categorization

4.3.2 Project Cost and Design for Proposal 103

MISO evaluated Proposal 103's cost and design, and found it to be 'Acceptable' compared to other proposals, as depicted in Table 4-5.

MISO evaluated Proposal 103's estimated project cost and rigor. Proposal 103 submitted an implementation cost estimate of $48.0 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. It submitted a construction cost cap of $44.0 million, with a separate cap on AFUDC of $4 million such that the cap was set at its implementation cost estimate. There was an exclusion to the cap for additional costs stemming from schedule delays due to interconnecting utilities' substation delays. Proposal 103 provided specific project details and submitted relevant supporting information for the cost estimates.

MISO evaluated Proposal 103's estimated ATRR and rigor. Proposal 103 submitted an ATRR estimate of $61 million, which was higher than the median of $56 million. The submitted ATRR estimates for Proposal 103 were higher than other proposals due to the shortest estimated depreciation schedule and higher-than-average tax estimates. Proposal 103 provided no cost containment measures or forgone rate incentives specific to its ATRR estimate to enhance certainty. In the analysis described in Section 2.6.6.1, Proposal 103 consistently finished among the average-cost proposals for estimated ATRR. Proposal 103 had the lowest estimated cost of debt of the 11 proposals but did not provide the narrative and supporting information for this estimate as requested in the RFP's proposal template instructions.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ [i]			✓	✓ [ii]	✓ [iii]	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ [iv]	✓ [v]	✓	✓ [iv]		✓	✓	✓	✓ [iv]	✓	✓ [iv]
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-6: Proposal 103 Cost Cap Summary

MISO evaluated Proposal 103's facility design quality and rigor. Proposal 103 had an estimated route length of 29 miles, which was one of the shortest routes proposed, and would use direct-embedded, weathering steel light and heavy tangent H-frame structures.

RFP Respondent 103 performed a geotechnical desktop study, using publicly available terrain data, to support the proposal phase of the project, which was fairly typical among the 11 submitted proposals. Proposal 103 provided a high-level project design (including load and design drawings), as well as plan and profile drawings that showed anticipated structures and elevations along the proposed route, but were lacking in certain aspects.

The proposed right-of-way for the project was 150 feet wide, which was above average among proposals. For the Ohio River crossing, Proposal 103 would use structure heights more than 200 feet tall, which would require increased coordination with the Federal Aviation Administration. Proposal 103 planned clearance above water surface of 118 feet, which was among the highest of the proposals. Proposal 103 did not discuss consulting with the U.S. Army Corps of Engineers, how clearances for the river crossing would be determined, or how the proposed structure heights were derived.

Unlike most of the other proposals, Proposal 103 did not discuss structure types or management of optical ground wire where the project would cross under an existing 765 kV transmission line. And, although Proposal 103 showed crossings on the route selection table it provided (as well as providing a count of total crossings and calling the major crossing out in the plan and profile drawings), there was limited specificity of the river crossing strategy.

The proposed conductor for Proposal 103 would be a two-bundle ACSS Cardinal conductor. The discussion of conductor selection was brief and lacked specificity compared to other proposals. The Ohio River crossing would also use higher-strength conductor and high-strength suspension, but the proposal lacked specificity in its discussion of conductor ratings.

Proposal 103 lacked narrative discussion of minimum electrical clearances, as well as insulator and assembly details. The plan and profile drawings showed only clearance line without labeling it.

Proposal 103 proposed an average shielding angle value. There was no indication that RFP Respondent 103 had performed a preliminary lightning study, and, unlike several other proposals, Proposal 103 lacked specificity in the lightning performance criteria. Proposal 103 stated an average maximum ground value.

The discussion of galloping and vibration in Proposal 103 was less detailed than other proposals. Optical ground wire was shown in drawing notes, but these differed from descriptions included in the proposal and there were no manufacturer specifications.

Proposal 103 described how the project would tie into the substations at either end of the line, and reflected this information in plan and profile drawings. RFP Respondent 103 said it intended to work with the substation owners to complete the interconnection process.

4.3.3 Project Implementation for Proposal 103

MISO evaluated Proposal 103's project implementation plan and abilities, finding it to be 'Acceptable' overall.

Proposal 103 submitted a project schedule that provided ample time for construction and restoration and showed understanding of basic permitting and regulatory time frames. Detailed scheduling diagrams at times were inconsistent with narrative discussion, and appeared to assume regulatory processes would conclude without appeals. These conflicts and assumptions produced a higher risk profile than found in other proposals schedules.

Proposal 103 supplied detailed schedules for tree clearing and construction which were more specific than other proposals, however the proposed dates may have an increased risk profile due to potential impacts on wildlife, and the apparent completion of land acquisition, engineering, procurement, and design before regulatory permits are approved. The proposal recognized the impacts of weather on the construction schedule, however did not provide background regarding how float was allocated or a discussion of potential schedule mitigation measures to the degree of detail that was found in other proposals.

In general, discussion of project implementation in Proposal 103 offered high-level summaries. It was not as well supported by initial investigation and research as many of the other proposals, particularly with respect to project routing. Proposal 103 deferred providing specific plans on various segments of the project until a future date, and anticipated the potential for changes in the final design process. Proposal 103 provided a generalized discussion of what would typically occur on a project. Many other proposals provided more specific information regarding project management tools and capabilities such as project risk register, however, 103 did not. At times, information in one portion of the proposal would conflict with information elsewhere. This increased the risk profile of the proposal in comparison to other proposals that provided more detailed, specific and certain implementation, project and construction management plans.

Proposal 103 anticipated overseeing project implementation from a remote base of operations. Though a field office would be located centrally along the project route, monthly project management meetings would be conducted at the out-of-region office, rather than at or near the work site. Proposal 103 did not designate a single project manager to oversee construction, emphasizing instead its expectation to hire reputable contractors and rely on them to bring the necessary expertise. The organization chart illustrating project management capabilities primarily identified categories of roles and functions, rather than identifying specific individuals with relevant qualifications. Proposal 103 provided less specificity and certainty than other proposals.

Proposal 103 included a list of proposed project permits and the accompanying discussion relied more on general process descriptions, rather than detailing a clear plan tailored to this project that was found in many other proposals. RFP Respondent 103 did not fully explain its approach to regulatory approvals in Kentucky. There was good discussion of outreach programs

and environmental issues, but more uncertainty regarding permitting needs than was found in other proposals.

Proposal 103 proposed structure heights more than 200 feet tall on the Kentucky side of the Ohio River; however they did not mention coordination with the Federal Aviation Administration or addressed consultation with the U.S. Army Corps of Engineers. Other proposals provided more specific information regarding these consultations. Some information provided in tabular form seemed to differ from information on maps of the river crossing area, and was difficult to correlate because of inconsistent labeling conventions.

MISO found the plan and profile drawings for Proposal 103's preferred route helpful, but they did not fully reflect the constraints and routing issues that were identified in detailed tables elsewhere in the proposal. RFP Respondent 103 considered more than 50 routing alternatives. RFP Respondent 103 self-imposed a constraint to keep the route less than 29.25 miles, but did not explain the basis for this cutoff. The preferred route for Proposal 103 followed a comparatively direct diagonal path between the Coleman EHV and Duff substations. MISO recognized this could yield distance and materials efficiencies, but thought it might present greater permitting and land acquisition challenges than routes proposed by other RFP Respondents. In the main, Proposal 103 outlined procedures for most aspects of the project, but less clear in explaining how the project would ultimately be routed and constructed than other proposals.

Proposal 103 provided ample time for right-of-way acquisition, 22 months, but the schedule seemed to begin the acquisition process before receiving regulatory approvals. Proposal 103 did not identify parcels or landowners, and did not explain how it would obtain necessary land rights in Kentucky. Other proposals provided this specificity.

Proposal 103 provided a high-level discussion of materials procurement and inspections and the need for quality assurance and quality control programs, however there was no indication that RFP Respondent 103 had sought or obtained preliminary bids from potential vendors. Proposal 103 would rely on local contractors for most construction elements, but none were identified and the construction process was described in less detail than other proposals. There was no information on construction access routes or laydown yards, and, although the proposal mentioned a plan for roughly 20 structures per wire pull, additional details were sparse. Other proposals provided much greater specificity and certainty in construction and commissioning than Proposal 103.

Proposal 103 provided a high-level narrative of how they would address safety on the project, but did not include a project-specific safety plan, reserving this as a task to follow project award. Although there was some discussion of safety, particularly in connection with the Ohio River crossing, there was no safety plan for the proposed construction subcontractor. In general, although Proposal 103 addressed safety in many areas, it was address in less detail than most of the other proposals.

RFP Respondent 103 demonstrated sufficient financing capabilities, as supported by its credit ratings and track record with past projects. The financial plan submitted with Proposal 103

was less specific and provided less risk mitigation than some other proposals; however Respondent 103 provided information showing significant experience with prior transmission projects and included good descriptions of previous projects.

4.3.4 Operations and Maintenance for Proposal 103

MISO evaluated Proposal 103's description of RFP Respondent 103's operations and maintenance abilities and found it 'Acceptable'. As with other areas, Proposal 103 met all requirements of the RFP for operations and maintenance, but provided less detail and rigor than many of the other proposals.

MISO evaluated Proposal 103's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. RFP Respondent 103 said it would negotiate an arrangement with an existing Local Balancing Authority to serve the project. It would explore potential coordination with local utilities to install supervisory control and data acquisition (SCADA) capabilities to enable project operation from its existing control facilities. Proposal 103 conveyed good understanding of the significance of interconnected switching in a multi-owner environment. RFP Respondent 103 described pre-arranged procedures with other utilities for remote-end switching coordination for lines that adjoin other transmission systems, and would use a similar approach for the project.

MISO evaluated Proposal 103's forced outage response and emergency repair and testing abilities. RFP Respondent 103 stated that it can monitor transmission line conditions and clearances remotely. It would address emergency repair and testing, as well as forced outages, through its company-wide incident management system and award-winning electric emergency response plan. RFP Respondent 103 said it would create a new program with high-level oversight to manage project maintenance if it were chosen as the Selected Developer. Like almost all of the other proposals, RFP Respondent 103 would use contractors to perform actual maintenance work. Both oversight and contractor bases of operations would be remote from the project.

MISO evaluated Proposal 103's information on predictive and preventive maintenance and testing abilities, as well as RFP Respondent 103's access to spare parts, structures, and equipment. Proposal 103 recognized the underlying goal of maintaining and inspecting is to minimize service interruptions. The project maintenance program would comply with NERC standards for transmission vegetation management by performing vegetation inspections at least once every calendar year, and never further apart than 18 months. Infrared and aerial inspections are important for detecting and preventing maintenance issues (as are inspections of steel structure foundations), but Proposal 103 did not fully explain what these inspections look for, how resulting data are reported, or how decisions to prioritize maintenance tasks are made. There was some discussion of the staffing and capabilities of a primary maintenance contractor. Proposal 103 described a spare parts program and inventory very similar to those of other proposals (including an expectation that necessary spare parts be available within an hour), but did not elaborate on associated policies and procedures or explain how this would be accomplished.

MISO evaluated Proposal 103's major facility replacement capabilities and financial strategy for replacements and rebuilds. Proposal 103 explained its existing project management procedures and guidelines for facility replacement; however, Proposal 103 was less detailed and rigorous than many of the other proposals.

MISO evaluated Proposal 103's previous applicable experience. While Proposal 103 was less detailed than several of the other proposals, RFP Respondent 103 demonstrated a long history of successful utility operations with the personnel, experience, and capability to complete the project.

MISO evaluated Proposal 103's safety performance. Although Proposal 103 discussed safety performance in the context of operations and maintenance, most of the supporting information (such as contractor safety requirements and safety performance metrics) appeared to relate to transmission construction activities, rather than operations and maintenance.

4.3.5 Planning Participation for Proposal 103

MISO evaluated planning participation for Proposal 103, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4.4 Proposal 104

4.4.1 Overview of Proposal 104

The Executive Committee assigned Proposal 104 a total evaluation score of 74 and found it to be generally good, as compared to the other proposals (Figure 4-4).

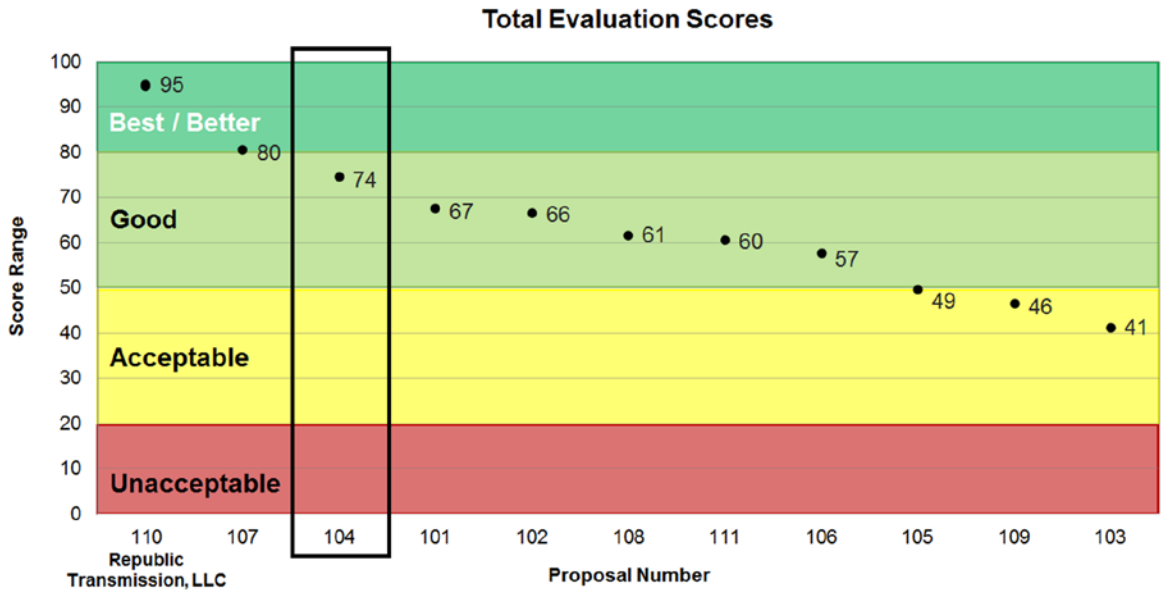

Figure 4-4: Proposal 104 Final Scoring Summary

Proposal 104 earned the third-highest total evaluation score of the 11 proposals MISO evaluated, based on its categorization in each of the four Tariff evaluation criteria. In evaluating Proposal 104, MISO categorized it as 'Better' in cost and design, 'Good' in project implementation, and 'Good' in operations and maintenance, as compared to the other proposals (Table 4-7).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	REDACTED
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-7: Proposal 104 Criteria-Level Categorization

4.4.2 Project Cost and Design for Proposal 104

In evaluating Proposal 104's cost and design, MISO found it to be 'Better' compared to other proposals, as depicted in Table 4-7.

MISO evaluated Proposal 104's estimated project cost and rigor. Proposal 104 submitted the second-lowest implementation cost estimate, at $35.2 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. Proposal 104 included a construction cost cap, equal to its cost estimate of $32.2 million, which excluded AFUDC. This cap was set at a level notably lower than that of the other proposals, including Republic Transmission's proposal. There were some noteworthy elements to the cost cap provisions—among them, a cost cap less than the costs RFP Respondent 104 expected to incur, an exclusion if the route length increased and resulted in higher costs beyond a $1 million "dead band," and an adjustment to inflation greater than Proposal 104's assumed level of 2.5%, based on a relevant industry escalation index. For these reasons, the construction cost cap provided less certainty than that of Republic Transmission's proposal. Proposal 104 submitted a fixed-price engineering, procurement, and construction contract with its primary contractor and highly detailed supporting information for its cost estimates.

MISO evaluated Proposal 104's estimated ATRR and rigor. Proposal 104 submitted the lowest ATRR estimate, at $37 million, which was lower than the median of $56 million. The submitted ATRR estimate for Proposal 104 was lower than other proposals due to the low implementation cost and the longest depreciation schedule proposed. RFP Respondent 104 offered to cap several ATRR cost elements. RFP Respondent 104 would cap equity in capital structure (at 50%) for the life of the project. Proposal 104 also offered five-year caps on base return on equity (capped at 10%, not including any adders) and operations and maintenance costs. Republic Transmission's proposal capped the equity in capital structure at 45% for the life of the project, and return on equity (including adders) at 9.8%. In the analysis described in Section 2.6.6.1, Proposal 104 consistently finished among the lower-cost proposals for estimated ATRR, as did Republic Transmission's proposal. Proposal 104 submitted relevant project details and information in support of its estimates.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ i			✓	✓ ii	✓ iii	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ iv	✓ v	✓	✓ iv		✓	✓	✓	✓ iv	✓	✓ iv
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-8: Proposal 104 Cost Cap Summary

MISO evaluated Proposal 104's facility design quality and rigor. Proposal 104 provided for a project route length of 31.2 miles, which was average among the 11 proposals. The line would feature direct-embedded weathering steel H-frame tangent structures.

The proposed right-of-way for the project would be 150 feet wide, which is above average among proposals. The project would follow existing easements for part of the route. Preliminary desktop geotechnical analysis was verified with some fieldwork.

Proposal 104 included a crossing report table, which gave a crossing count, but was not accompanied by drawings. The proposal recognized the need to cross under an existing 765 kV transmission line, but lacked some specificity relative to other proposals. Information on other utility lines and crossing types was also limited.

Proposal 104 proposed to use ACSS/TW Fraser in a two-bundle configuration. The conductor for the span across the Ohio River would be ACCR/TW Curlew conductor in the same two-bundle configuration. The conductor size proposed by Proposal 104 is smaller relative to Republic Transmission's proposal. The maximum conductor emergency summer rating is proposed to be 3,002 amps at 426°F (219°C) maximum conductor temperature. The estimated line loss value was average among the proposals received, and higher than that of Republic Transmission's proposal.

The crossing at the Ohio River would use structure heights less than 200 feet tall, reducing the need to coordinate with the Federal Aviation Administration. Proposal 104 planned conductor clearance above the water surface of approximately 100 feet, which is average among proposals. The design criteria document submitted with Proposal 104 specified a buffer

over NESC minimum ground clearance requirements that was average among proposals but slightly more than Republic Transmission's proposal.

Proposal 104 discussed lightning protection only with respect to shield angle, which was average relative to other proposals and smaller than that of Republic Transmission. The proposal lacked specificity in lightning performance criteria. The ground resistance target would be the lowest among proposals, which would help to minimize line outages due to lightning strikes. Submitted drawings showed some grounding information. Proposal 104 also included a specification sheet for optical ground wire.

Proposal 104 had very brief discussion of galloping and vibration considerations. The proposal lacked specificity on how the project would tie into the Coleman EHV and Duff substations

4.4.3 Project Implementation for Proposal 104

MISO evaluated Proposal 104's project implementation plan and abilities, finding it to be 'Good' in comparison to other proposals.

MISO evaluated Proposal 104's project schedule, which included details and discussions on regulatory permitting, land acquisition, procurement and construction. The engineering aspects of the schedule appeared short and comparatively were less certain than other proposals. Information on construction durations lacked relevant details such as weather assumptions and wire-pulls plans, but the construction schedule address minimization of crop damages during construction. Durations for tree clearing and the obtaining railroad permits were shorter than other proposals, and the schedule provided no time for as-built work. The proposed schedule supplied less specificity and certainty than other proposals, including that provided by Republic Transmission (Proposal 110).

MISO evaluated Proposal 104's project management plan and experience. Proposal 104 lacked a detailed project plan, which was something most other proposals included. There was a risk register that identified 40 possible risk items, but did not address associated costs or mitigation efforts that were found in other proposals.

Proposal 104 designated a potential preferred route and an alternate route, supported by a complete routing report and maps, stakeholder meetings, field verified desktop analysis and a helicopter survey of the proposed route. Proposal 104 provided a good explanation of its routing development. It would locate structures for the Ohio River crossing adjacent to existing facilities, avoiding a known cultural site on the Indiana side, and, in general, use existing rights-of-way as feasible along the project route. The specifics supplied and the risk mitigation efforts involved in the routing process compared favorably to other proposals, although they were not as detailed as those supplied by Republic Transmission (Proposal 110).

Proposal 104's permitting process was well explained. RFP Respondent 104 stated it had met with local, state, and federal regulators in person or through scoping letters and identified supporting staff and legal counsel with relevant permitting experience to assist with the process. The specificity supplied in the proposal provided certainty and presented a lower permitting risk

than other proposals. Proposal 104 identified parcels and landowners for new right-of-way. As previously noted, RFP Respondent 104 has secured options on portions of the proposed route, which was something other respondents had not completed. RFP Respondent 104 anticipated having the right of eminent domain in Kentucky, but did not explain how it would obtain this right, which was addressed by other proposals.

Proposal 104 provided a high-level quality assurance and quality control plan but did not otherwise discuss procurement to the depth and specificity found in other proposals. RFP Respondent 104 submitted a fully negotiated, fixed-price engineering, procurement, and construction (EPC) contract with a reputable contractor who would be responsible for providing a construction plan upon award. Proposal 104 had fewer construction details than many other proposals in such areas as helicopter stringing, wire pull plans, access and haul routes, location of laydown yards, approach at the Ohio River crossing, designation of a construction liaison, responsibility for environmental compliance during construction, and mitigation plans. In contrast, Republic Transmission had most of these details included. The fixed-priced EPC contract provided some certainty that was not present in some other proposals; however, the lack of specificity and certainty in the construction plan increased the implementation risk profile higher than other proposals. This increased the implementation risk and outweighed the cost containment attributes of the fixed-priced EPC contract. Proposal 104's discussion of commissioning and energization was thorough, including tests of grounding arrangements and optical ground wire and was more specific than many proposals in this area.

MISO evaluated Proposal 104's safety performance. The proposal appended a complete safety manual used by the primary construction contractor, which discussed job hazard analysis and included sample rescue plans. RFP Respondent 104 did not provide safety information specific to this project, but explained its internal safety recognition program, committed to designate a site safety manager before breaking ground on the project, and supplied examples of safe work plans and safety documentation.

RFP Respondent 104 demonstrated a good history and familiarity with 345 kV transmission projects and construction, supported by example projects and information from several previous 345 kV transmission projects. Proposal 104 showed strong financing capability, with high investment grade credit ratings, and included a solid financial plan for the project.

4.4.4 Operations and Maintenance for Proposal 104

MISO evaluated Proposal 104's description of RFP Respondent 104's operations and maintenance abilities, and found it to be 'Good' overall compared to the other proposals received. Proposal 104 met all requirements of the RFP for operations and maintenance, but specificity varied across different subject areas—with more detail in some, less in others. There was also frequent mention of unexecuted term sheets that RFP Respondent 104 had negotiated with local utilities to provide services. These fully negotiated but unexecuted terms sheets increased certainty as compared to some proposals, but were less certain than proposals with executed agreements, such as that furnished by Republic Transmission (Proposal 110).

MISO evaluated Proposal 104's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. RFP Respondent 104 proposed to engage an entity that does not currently operate in MISO to serve as the Local Balancing Authority for the project. From MISO's perspective, the discussion did not appear to fully reflect the distinctions between operating a NERC-registered Balancing Authority and the functions of a Local Balancing Authority within the MISO system. Proposal 104 anticipated the Local Balancing Authority would monitor line status in real time, relying on data exchange with the owners of the Coleman EHV and Duff substations. Switching would likewise be coordinated with the substation owners, but Proposal 104 provided fewer specific details than furnished by Republic Transmission (Proposal 110).

MISO evaluated Proposal 104's forced outage response and emergency repair and testing abilities. Proposal 104 contemplated forced outage response through its unexecuted term sheets with local utilities and arrangements with its primary maintenance contractor, which could dispatch from a large equipment fleet according to the closest resources. Expected response time was less than an hour. The local utilities' role would include patrolling the line to assess damage and determine repair plans. RFP Respondent 104 described its experience, restoration process, and associated operational plan for emergency repair and testing. Coordination with local utilities and contractors would be integral to emergency response, using the same arrangements as for forced outages.

MISO evaluated Proposal 104's description of predictive and preventive maintenance and testing abilities as well as access to spare parts, structures, and equipment. The proposal outlined RFP Respondent 104's preventive and predictive maintenance program, supported by a letter of intent with a primary provider of maintenance services. The proposal noted anticipated response times of an hour or less, but did not identify a specific base of operations. RFP Respondent 104 would hire an asset manager, to be stationed in Indiana. The vegetation management program would require yearly inspections, including trimming and applying herbicide. This portion of the proposal provided good detail, including use of video cameras, and, in MISO's view, would meet the applicable NERC transmission vegetation management standard. Proposal 104 also described a yearly aerial inspection program, with good details on video, ultraviolet sensor, LiDAR, high-resolution still-frame photography, and radiometric thermographic capabilities. Findings would be captured and analyzed to facilitate prioritization, scheduling, and event response. RFP Respondent 104 specifically mentioned capability for hot-line maintenance and a plan to repair access roads to allow vehicle passage.

RFP Respondent 104 anticipated its line design would minimize the need for a large spare parts inventory, and did not intend to carry spare structure assemblies. Conductors, insulators, and fiber optics would be stored locally, with temporary wood replacement poles readily available. The designated asset manager would coordinate spare parts inventory with local utilities and regionally with the primary maintenance contractor, as needed.

MISO evaluated Proposal 104's major facility replacement capabilities and financial strategy for replacements and rebuilds. RFP Respondent 104 would rely on its primary construction and maintenance contractors (including specific teams and tools designated for

storm damage assessment) to manage any major facility replacement or rebuild. The locally stationed asset manager would coordinate activities. Proposal 104's discussion around funding for major facility rebuilds and replacements was the most robust among proposals. RFP Respondent 104 indicated that its leadership team and staff, as well as the local utilities and contractors with which it would coordinate for operations and management, had extensive relevant experience.

MISO evaluated Proposal 104's previous applicable experience. Proposal 104 provided information detailing the maintenance experience of its primary contractor with utilities in the area of the project.

MISO evaluated Proposal 104's safety performance. As noted in the Project Implementation section, RFP Respondent 104 submitted an entire safety manual for its primary construction contractor, together with examples of safety recognition and near-miss programs for itself. Proposal 104 included information on OSHA reporting frequency rate by calendar year, showing a declining trend, but it was unclear whether the information was company-wide or specific to transmission.

4.4.5 Planning Participation for Proposal 104

MISO evaluated planning participation for Proposal 104, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4.5 Proposal 105

4.5.1 Overview of Proposal 105

The Executive Committee assigned Proposal 105 a total evaluation score of 49 and found it to be generally acceptable, as compared to the other proposals (Figure 4-5).

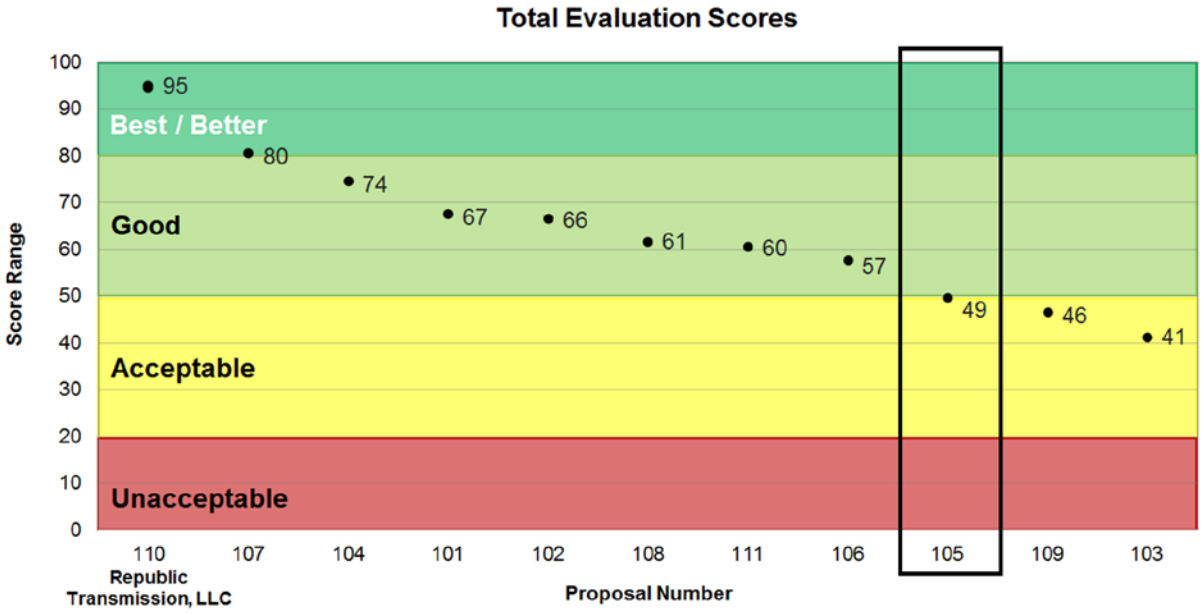

Figure 4-5: Proposal 105 Final Scoring Summary

In evaluating Proposal 105 against the four Tariff evaluation criteria, MISO categorized it as 'Acceptable' in cost and design, 'Acceptable' in project implementation, and 'Good' in operations and maintenance, as compared to the other proposals (Table 4-9).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	REDACTED
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-9: Proposal 105 Criteria-Level Categorization

4.5.2 Project Cost and Design for Proposal 105

In evaluating cost and design, MISO found Proposal 105 to be 'Acceptable' compared to other proposals, as depicted in Table 4-9.

MISO evaluated Proposal 105's estimated project cost and rigor. Proposal 105 submitted the lowest implementation cost estimate of $34.0 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. This estimate, however, appeared to be based primarily on RFP Respondent 105's past experience, rather than on inputs specific to this project. For example, Proposal 105 identified no specific vendors for this project, and provided less supporting information for its cost estimates than most other proposals. Proposal 105 was the only proposal that did not offer cost caps or containment measures in any form. Given the relatively preliminary nature of much of the cost estimate information, together with the absence of any cost containment commitments, MISO was less confident that Proposal 105's actual implementation costs would be as low as its estimates.

MISO evaluated Proposal 105's estimated ATRR and rigor. Proposal 105 submitted an ATRR estimate of $47 million, which was lower than the median of $56 million. In the analysis described in Section 2.6.6.1, Proposal 105 consistently finished among the lower-cost proposals for estimated ATRR. However, RFP Respondent 105 cited strong reliance on internal cost containment measures, but nothing inherent in Proposal 105 would protect ratepayers from ultimately shouldering greater ATRR costs if the assumptions on which the cost estimates were based prove incorrect. As previously noted, the low ATRR estimate of $47 million was without commitment to constrain any of the underlying inputs (such as implementation costs, the debt-to-equity ratio for capital structure, return on equity, or operations and maintenance costs).

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ [i]			✓	✓ [ii]	✓ [iii]	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ [iv]	✓ [v]	✓	✓ [iv]		✓	✓	✓	✓ [iv]	✓	✓ [iv]
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-10: Proposal 105 Cost Cap Summary

MISO evaluated Proposal 105's facility design quality and rigor. Proposal 105 specified a 29.8-mile-long transmission line, supported by direct-embedded galvanized monopole and H-Frame tangent structures. The project right-of-way would be 150 feet wide throughout the route, which is above average for all proposals. RFP Respondent 105 completed a geotechnical desktop study based on publicly available and historical information, along with preliminary foundation designs.

Proposal 105 would use structure heights less than 200 feet tall for the Ohio River crossing, reducing the need for coordination with the Federal Aviation Administration. Minimum conductor clearance over the water surface would be 100 feet, which was average among proposals. The plan and profile drawings for Proposal 105 illustrated how the project would cross under an existing 765 kV transmission line, but discussion of optical ground wire configuration and supporting narrative lacked specificity.

The project conductor would be an ACSS Drake in a two-bundle configuration, one of the smallest proposed. The conductor is proposed to have an emergency summer rating of 3,018 amps at the maximum allowable conductor temperature of 410°F (210°C). The estimated line losses for this conductor type were comparatively high versus other proposals.

The plan and profile drawings for Proposal 105 showed ground clearance buffers above NESC minimums, and they were above average relative to other proposals. All other clearances would be based on NESC minimum requirements.

Proposal 105 included good discussion of galloping and vibration mitigation. Proposal 105 discussed lightning protection in terms of shield angle, which was comparatively smaller relative to other proposals, but lacked specificity in lightning performance criteria. Proposal 105 proposed an average ground resistance target value.

Proposal 105 recognized the need to coordinate project interconnection with the substation owners at either end of the line, and illustrated proposed tie-in configurations in its plan and profile drawings.

4.5.3 Project Implementation for Proposal 105

MISO evaluated Proposal 105's project implementation plan and abilities finding it to be 'Acceptable' overall.

Proposal 105 included a project schedule detailing necessary project elements, including routing, permitting, land acquisitions, material procurement, construction, and commissioning. The pre-construction durations appear adequate however lacked the specificity found in other proposals. The accompanying narrative laid out the thought process behind the schedule, which, on the whole, appeared sufficient, including time for field surveys and habitat assessments. The proposed construction schedule lacked specificity and allocated only seven months to complete approximately 30 miles of transmission line construction, and the schedule did not discuss weather assumptions or identify float time for unexpected delays. The lack of specificity regarding float and weather assumptions in conjunction with the aggressive construction schedule presents a higher risk profile than other proposals.

MISO reviewed Proposal 105's project management plan and experience. Proposal 105 supplied résumés for its project implementation team, including a project manager with 30 years of experiences and proposed a plan in which some members of the team were based remotely. Proposal 105 did not submit a project execution plan or a risk register, committing instead to formulate a plan and undertake a number of other tasks following project award. The lack of this information decreased the certainty of this proposal's project management capability in comparison to other proposals that supplied additional specificity and detail.

Proposal 105 states that RFP Respondent 105 conducted detailed studies of potential line routes, evaluating 103 different routing alternatives and provided a good discussion of the relevant issues. However, RFP Respondent 105 elected not to submit a complete routing study, but used a weighted analysis, desktop evaluation, site visits and a LiDAR survey of the preferred route to support permitting.

Proposal 105 provided a good overview of many permitting needs and processes, along with a matrix of environmental permits identifying the applicable agency, requirements, permit time requirements, time needed to prepare and submit applications, and agency review and approval times frames. Whereas other proposals had already begun early coordination with regulatory agencies, Proposal 105 did not indicate early consultation with federal or state regulators and agencies, and did not address permitting issues at the county level, but included good background discussion and a detailed process for post-award permitting work

Proposal 105 provided detailed maps, including pole placement, for both the preferred and alternate routes, both of which appear to follow existing transmission line corridors for at least one-third of their length, and had alignment similar to other proposals. Supporting information may not have encompassed all known issues, but adequately identified risks and constraints.

Proposal 105 identified affected parcels and landowners for new project right-of-way in Indiana and Kentucky and listed a vendor for the right-of-way acquisition process, but did not identify specific team members or designate a construction liaison. Other proposals supplied this level of information and specificity and certainty. Proposal 105 showed good practices and a sound overall plan for right-of-way acquisition, expecting continued involvement throughout the construction process, but did not explain how eminent domain rights would be granted in Kentucky if needed. This issue was more thoroughly addressed in other proposals.

MISO evaluated the materials procurement, construction, and commissioning plan supplied by Proposal 105. Proposal 105's discussion of material issues and concerns was thorough and compared very well to other proposals, and was well supported by supply chain documentation and auditing. Proposal 105 did not identify a principal construction contractor, intending instead to solicit bids after project award. Discussion of the construction process was generally high level, and did not address wire pull plans, access routes, potential weather impacts, or equipment needs. Proposal 105 submitted less specific information than other proposals and the lack of an identified contractor increased the risk profile of the project. Proposal 105 provided a comprehensive commissioning plan that compared to other proposals provided good specificity and understanding of the commissioning process.

MISO evaluated Proposal 105's safety materials. RFP Respondent 105 supplied general safety documentation, pointing primarily toward future tasks to be undertaken after project award. Among the safety practices RFP Respondent 105 noted were job hazard analysis, lockout and tagout procedures, and incident investigation. Information on safety metrics was consistent with industry norms, but related only to the performance of RFP Respondent 105 and not the proposed construction contractor. The discussion of safety was not as specific as other proposals and the lack of an identified contractor with safety metrics increased the risk profile of Proposal 105 in comparison to other more specific proposals.

RFP Respondent 105 provided several examples to demonstrate its previous experience with 345 kV transmission construction projects, but did not submit corresponding information and background for key contractors. Proposal 105 included an acceptable financial plan, and demonstrated that RFP Respondent 105 had strong financing capability with high investment-grade credit ratings.

4.5.4 Operations and Maintenance for Proposal 105

MISO evaluated Proposal 105's operations and maintenance abilities, and found it to be 'Good' overall compared to the other proposals. Proposal 105's discussion of operations and maintenance highlighted RFP Respondent 105's knowledge base from existing utility operations. It featured good detail on an overall preventive maintenance plan, outage response, and general operations abilities, as well as an innovative strategy to maintain and deploy spare parts inventory. RFP Respondent 105 would leverage its current major storm response capabilities for any emergency repairs or major facility rebuilds needed for the project.

MISO evaluated Proposal 105's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. RFP Respondent 105 said it would contract with one of the substation owners to provide Local Balancing Authority services for the project. RFP Respondent 105 also proposed to open a new operations center in the immediate vicinity of the project, to be staffed by an on-call high-voltage specialist and a manager, with support from a large and reputable contractor with which it already has existing agreements. Switching would be the responsibility of the owners of the substations to which the project is connected, but line status would be monitored from a remote control center, supported by advance fault location capabilities. There would be cameras at the river and critical road crossings.

MISO evaluated Proposal 105's forced outage response and emergency repair and testing abilities. Proposal 105 described a forced outage response strategy supported by systems that send staff at the local operations center text messages with fault locating information. Patrols would be dispatched within an hour to form a plan for repair, with contractors to follow within two to three hours to begin repairs. RFP Respondent 105 would coordinate with local utilities as needed, and follow up on outages through an event response process to determine root cause.

MISO evaluated Proposal 105's predictive and preventive maintenance and testing abilities as well as access to spare parts, structures, and equipment. Proposal 105 included good documentation of RFP Respondent 105's overall maintenance framework, describing many different types of inspections, event response, and an asset management system.

Contractors would perform aerial and ground inspections on a yearly basis (including thermovision capability), with testing of all grounding elements incorporated into the ground patrols. Proactive maintenance would be performed based on inspection results and analysis of issues found in the field. Based on the service provider it would retain, RFP Respondent 105 anticipated maintenance response time of one to two hours, with supplemental contractor assistance available within four hours. Discussion of maintenance staffing did not extend much beyond the contractor RFP Respondent 105 would propose to use. Proposal 105's treatment of vegetation management was brief, and, although Proposal 105 did not mention the NERC vegetation management standard, it did commit generally to comply with NERC requirements.

RFP Respondent 105 would use a risk-based approach to manage spare parts inventory, which considered cascading. The goal is to maintain sufficient inventory to cover 2 miles of line, as well as a spare tangent structure. Some spare parts (such as insulators, guys, splices, connectors) would be stored in boxes and ready for easy transportation. Additional resources would be available through a sharing program across RFP Respondent 105's corporate family (although none are currently based close to the project area), as well as through participating vendors.

MISO evaluated Proposal 105's major facility replacement capabilities and financial strategy for replacements and rebuilds. RFP Respondent 105 would rely on its existing vendor agreements and corporate-wide major storm response plan, which it views as industry best, to manage emergency repair and testing and well as major facility replacement. RFP Respondent 105 reported prior experience with a broad range of natural disasters.

MISO evaluated Proposal 105's previous applicable experience. RFP Respondent 105 summarized its experience of operating and maintaining thousands of miles of transmission lines.

MISO evaluated Proposal 105's safety performance. RFP Respondent 105's safety assurance program covered operations and grounding practices, included descriptions of general safety practices as well as those specific to transmission, and mentioned better-than-industry-average safety history. A substantial number of RFP Respondent 105's operating sites have received OSHA recognition for exemplary achievement and continuous improvement of its safety and health management systems.

4.5.5 Planning Participation for Proposal 105

MISO evaluated planning participation for Proposal 105, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4.6 Proposal 106

4.6.1 Overview of Proposal 106

The Executive Committee assigned Proposal 106 a total evaluation score of 57 and found it to be generally good, as compared to the other proposals (Figure 4-6).

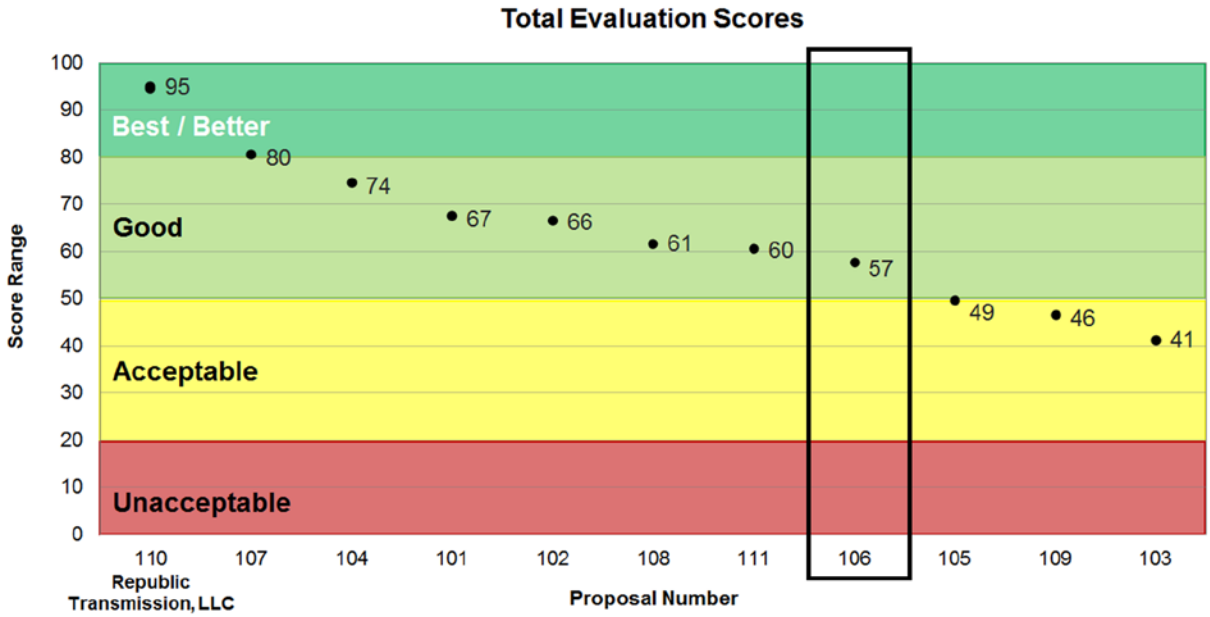

Figure 4-6: Proposal 106 Final Scoring Summary

In evaluating Proposal 106 against the four Tariff evaluation criteria, MISO categorized it as 'Good' in cost and design, 'Acceptable' in project implementation, and 'Good' in operations and maintenance, as compared to the other proposals (Table 4-11).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	REDACTED
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-11: Proposal 106 Criteria-Level Categorization

4.6.2 Project Cost and Design for Proposal 106

In evaluating cost and design, MISO found Proposal 106 to be 'Good' compared to other proposals, as depicted in Table 4-11.

MISO evaluated Proposal 106's estimated project cost and rigor. Proposal 106 submitted an implementation cost estimate of $40.0 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. It submitted a construction cost cap of $40.0 million set at its cost estimate and the cap includes AFUDC. This was the second-lowest binding construction cost cap on implementation costs. There was an exclusion to the cap for additional costs resulting from changes that would increase route mileage above 31 miles. Proposal 106 submitted cost information for materials vendors and route analysis in support of its cost estimates.

MISO evaluated Proposal 106's estimated project cost and rigor. Proposal 106 submitted an ATRR estimate of $70 million, which was higher than the median of $56 million. The submitted ATRR estimates for Proposal 106 were higher than other proposals due to a capital structure greater than 50% equity and higher-than-average estimates for cost of debt and return on equity. Proposal 106 did not offer a cap on any specific ATRR component, but proposed to apply a 3% discount in its ATRR rate filings. In the analysis described in Section 2.6.6.1, Proposal 106 consistently finished among the lower-cost proposals for estimated ATRR. Proposal 106 demonstrated relevant experience and capabilities in support of its ATRR estimates.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ i			✓	✓ ii	✓ iii	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ iv	✓ v	✓	✓ iv		✓	✓	✓	✓ iv	✓	✓ iv
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-12: Proposal 106 Cost Cap Summary

MISO evaluated Proposal 106's facility design quality and rigor. RFP Respondent 106 proposed a 30-mile long transmission line to connect the Coleman EHV and Duff substations, which is average for proposals. Proposal 106 would use direct-embedded weathering steel monopole tangent structures.

The proposed right-of-way for the project would be 150 feet wide throughout the route, which was above average. The preferred route was neither the shortest nor the longest, but apparently geared toward lowering risk. Proposal 106 would make use of shared corridors for roughly a quarter of the route. RFP Respondent 106 performed a desktop analysis, using historical and publicly available information, but lacked some specificity.

The conductor for the project would be an ACSR Drake with four sub-conductors per phase. The maximum conductor emergency summer rating is proposed to be 3,016 amps at 236°F (113°C) maximum conductor temperature. The estimated line losses were lower compared to other proposals.

The Ohio River crossing would use structure heights less than 200 feet tall, reducing the need for coordination with the Federal Aviation Administration. Although the narrative portions of Proposal 106 do not discuss the river crossing clearance, the plan and profile drawings show clearance over the water surface that would be less than that of most other proposals.

Proposal 106 included a list of crossings, but did not necessarily incorporate this information into plan and profile drawings or provide thorough supporting discussion. The plan and profile drawings show the point at which the project would cross under an existing 765 kV transmission line, but Proposal 106 did not address optical ground wire transition from overhead to underground at the crossing. While many other proposals separately called out crossing issues at Interstate Highway 64, Proposal 106 did not do so.

Proposal 106 discussed mitigation of conductor galloping and vibration in detail. Proposal 106's stated lightning performance goal was less than one outage per 100 miles per year, but this was not substantiated by a preliminary lightning study. Optical ground wire shielding angle was larger than average for other proposals. Proposal 106 indicated a lower target ground resistance value relative to other proposals.

The design criteria document included with Proposal 106 indicated vertical ground clearance parameters well above NESC minimum ground clearance requirements, which is one of the highest among submitted proposals. Proposal 106 also provided good certainty for how the project would tie into the substations at either end of the line.

4.6.3 Project Implementation for Proposal 106

MISO evaluated Proposal 106's project implementation plan and abilities, finding it to be 'Acceptable' compared to other proposals.

MISO evaluated Proposal 106's project schedule, which included information on regulatory permitting, environmental permits, routing, right-of-way clearance, and land acquisition. Overall the project schedule, which was laid out in a single page, did not address

any major planning issues and lacked detail compared to most other proposals. Engineering details were sparse, and construction durations and other information given in different portions of Proposal 106. Proposal 106 provided significantly less detail on the construction schedule than other proposals.

There were several aspects of project management most other proposals addressed, but Proposal 106 did not. These included, a project plan, a risk register, the change order process, a staffing chart, access planning and examples of project tracking documentation. Staffing levels for the project were unclear, although Proposal 106 provided time estimates for staffing. There was a high-level discussion of the resources and experience RFP Respondent 106 could bring to the project, but little to demonstrate what that would mean for this particular project.

RFP Respondent 106 identified a potential preferred route and attached a routing study with good tables of route comparisons. The preferred route parallels existing transmission lines for approximately a quarter of its length, with the stated goal of minimizing impacts to resources identified in the study. Maps accompanying the routing study were not as detailed as those submitted by other proposals, but did identify archaeological issues and flag existing transmission lines, airports, roadways, railroads, residences, cemeteries, churches, schools, communication towers, parks and forests, wetlands, and municipal boundaries. In general, Proposal 106 provided less specific information on regulatory permitting processes than other proposals. Proposal 106 did not identify any specific staff to oversee the permitting process, but did provide a table identifying relevant regulatory permits, but not siting permits. RFP Respondent 106 described significant prior experience with siting 345 kV transmission facilities.

RFP Respondent 106 proposed to apply for utility status in Indiana. MISO found discussion of permitting in Kentucky less certain than other proposals, calling for both a construction certificate and a Certificate of Public Convenience and Necessity for eminent domain. The minimal detail on crossing the Ohio River and suggested clearance of 55 feet over the river surface presented a higher risk in permitting than other proposals.

Proposal 106 identified parcels and landowners along the new, 150-foot right-of-way for the project, but did not reflect the parcels on accompanying maps. Proposal 106 provided a general process overview, including outreach programs, but did not identify right-of-way staff. Other proposals submitted substantially more specific information that provided more certainty regarding the land acquisition process and related risk mitigation.

Proposal 106 submitted a list of preferred vendors, but did not designate any particular vendors from among them. There was minimal treatment of material procurement issues, no discussion of quality assurance or quality control. The discussion of field inspections was limited to specifying a number of field inspectors and their cumulative experience. There was no mention of staging or final inspections. Details on the construction phase of the project were likewise scant. Although Proposal 106 identified a proposed construction contractor, there was no construction plan, no equipment list, no staffing lists, no risk table, no discussion of weather assumptions, and no identification of wire pull sites. There was no discussion of testing (other than for optical ground wire) or inspections or cleanup. The information provided by Proposal

106 for materials, construction and testing was comparatively less specific and provided less certainty in the constructability of the project.

Unlike other proposals, the safety materials and supporting documentation submitted with Proposal 106 were not related specifically to the Duff-Coleman EHV 345 kV project and project site. RFP Respondent 106 did not identify a safety manager and did not address job safety analysis or stop-work authority. There was no information on reporting to OSHA or other job safety oversight authorities. Other proposals supplied much more robust and specific safety and risk mitigation information.

RFP Respondent 106 demonstrated good financing capability, with high investment-grade credit ratings, and provided a good financial plan for the project. RFP Respondent 106 provided information showing considerable past experience with high-voltage transmission projects, and submitted short descriptions of five previous example projects.

4.6.4 Operations and Maintenance for Proposal 106

MISO evaluated Proposal 106's description of RFP Respondent's operations and maintenance abilities, and found it to be 'Good' overall compared to the other proposals.

MISO evaluated Proposal 106's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. Proposal 106 contemplates that the owner of one of the substations to which the project will interconnect (already operating a Local Balancing Authority) would provide Local Balancing Authority services for the project, with a fallback option for an operating utility within RFP Respondent 106's corporate family to provide these services. There were few supporting details. RFP Respondent 106 would perform real-time monitoring for the project from an existing transmission control center, relying on data exchange with the Coleman EHV and Duff substation owners. Proposal 106 did not provide much specificity on the process for coordinating switching with the substation owners.

MISO evaluated Proposal 106's forced outage response and emergency repair and testing abilities. As was the case with some of the other proposals, Proposal 106 treated forced outage response and emergency repair and testing as essentially a combined topic. RFP Respondent 106 would develop a coordinated plan with one of the substation owners, supported by its incident command system to prioritize decisions and timely response for forced outages and emergencies, with access to mutual aid groups as needed.

MISO evaluated Proposal 106's predictive and preventive maintenance and testing abilities, as well as its access to spare parts, structures, and equipment. Proposal 106 provided a general overview on preventive and predictive maintenance and testing, which met the requirements of the RFP, but lacked specificity in several areas. Proposal 106 identified a primary maintenance contractor and its base of operations. Supporting discussion covered anticipated staffing levels (eight lineman, three foremen), as well as outage performance and safety records (with best-in-class recognition in numerous reliability and safety metrics), but did not address training or explain which maintenance tasks RFP Respondent 106 would perform, the criteria it would apply, or how it makes decisions.

Proposal 106 provided a good plan for vegetation management and recognized the need to meet the applicable NERC reliability standard. RFP Respondent 106 would target one aerial inspection per year (with not more than 18 months between inspections) and ground inspections once every three years, but the proposal did not elaborate further. Proposal 106 touched on several other areas, such as hotline maintenance capability (though not specifically for 345 kV facilities) and work related to vehicle access, but did not detail any training programs related to maintenance.

MISO evaluated Proposal 106's major facility replacement capabilities and financial strategy for replacements and rebuilds. RFP Respondent 106 would manage its spare parts from multiple warehouses in multiple states. It would also locate resources strategically along the project route to provide critical parts for minor restoration activities (not involving structural damage to towers). RFP Respondent 106 would maintain sufficient inventory to replace 2 miles' worth of facilities, including conductor, fiber optic line, and at least two dead-end and 12 tangent structures. RFP Respondent 106 would integrate the project into its capital maintenance program, which provides for systematic upgrades of aging or obsolete equipment. RFP Respondent 106 would rely on a major facility replacement program to provide the necessary resources and plans to timely respond to a widespread damage to the project, supplemented by mutual aid groups. RFP Respondent 106 would use its emergency operations plan as the framework for responding to and recovering from all emergencies.

MISO evaluated Proposal 106's discussion of previous applicable experience. RFP Respondent 106 stated that it participates in the ownership, operation, and maintenance of many miles of transmission line, including 345 kV, with the goal of complying with NERC standards and achieving top quartile reliability performance.

MISO evaluated Proposal 106's safety performance. Proposal 106 described its overall safety assurance program, including on-site safety observations conducted by internal and third-party independent safety consultants. RFP Respondent 106 stated that it is a top safety performer among companies in its peer group and in the best-performing 10% for lost workday and recordable incident rates.

4.6.5 Planning Participation for Proposal 106

MISO evaluated planning participation for Proposal 106, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4.7 Proposal 107

4.7.1 Overview of Proposal 107

The Executive Committee assigned Proposal 107 a total evaluation score of 80 and found it to be generally better, as compared to the other proposals (Figure 4-7).

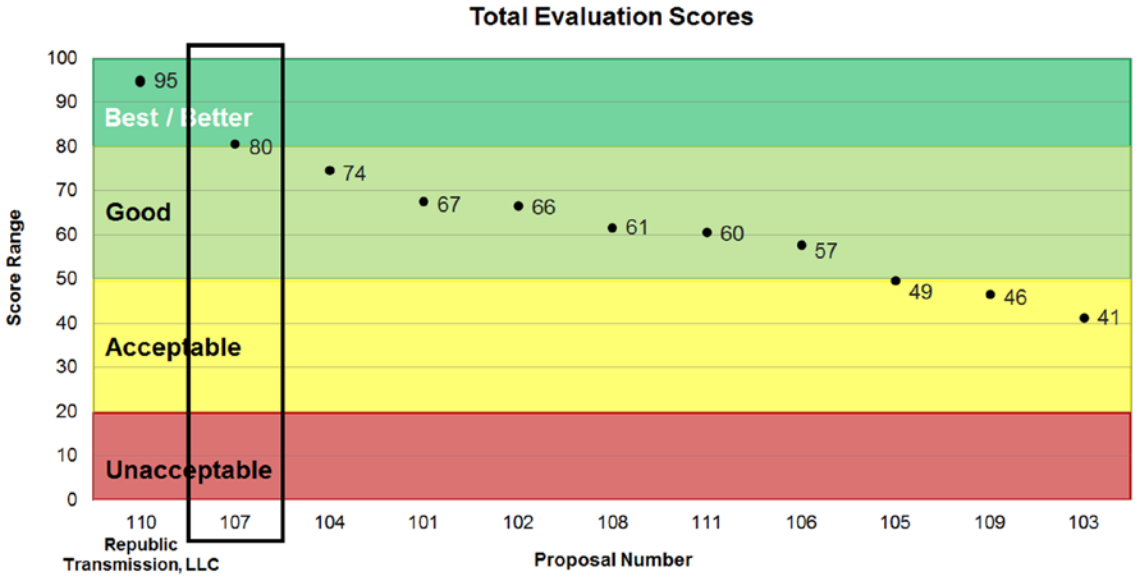

Figure 4-7: Proposal 107 Final Scoring Summary

Proposal 107 earned the second-highest total evaluation score of the 11 proposals MISO evaluated, based on its categorization in each of the four Tariff evaluation criteria. Proposal 107 is therefore the Alternate Selected Proposal. In evaluating Proposal 107, MISO categorized it as 'Good' in cost and design, 'Better' in project implementation, and 'Good' in operations and maintenance, as compared to the other proposals (Table 4-13).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	
107	Good	Better	Good	
104	Better	Good	Good	REDACTED
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-13: Proposal 107 Criteria-Level Categorization

4.7.2 Project Cost and Design for Proposal 107

In evaluating cost and design, MISO found Proposal 107 to be 'Good' compared to other proposals, as depicted in Table 4-13.

MISO evaluated Proposal 107's estimated project cost and rigor. Proposal 107 submitted an implementation cost estimate of $53.7 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. Proposal 107 submitted a construction cost cap equal to its cost estimate of $53.7 million, which includes AFUDC. This cap was at an implementation cost higher than that of most other proposals, including Republic Transmission's proposal. The cap had exclusions for any increase to the proposed route length, land acquisition cost above a certain threshold, and sub-surface contingencies. With these exclusions the cap offered less cost certainty than many other proposals, including Republic Transmission's proposal. Proposal 107 identified the vendors it planned to use and half of the estimated costs reflected firm quotes.

MISO evaluated Proposal 107's estimated ATRR and rigor. Proposal 107 submitted the highest ATRR estimate, at $83 million, which was higher than the median of $56 million. Republic Transmission submitted an ATRR estimate of $45 million, which was notably less than that submitted by Proposal 107. The submitted ATRR estimates for Proposal 107 were higher than other proposals due to its higher implementation costs and conservative tax estimates, which were more than double the median value. RFP Respondent 107 also proposed a higher equity percentage in its capital structure than most other proposals. In comparison, Republic Transmission's proposal capped its equity at 45% for the life of the project. In the analysis described in Section 2.6.6.1, Proposal 107 consistently finished among the higher-cost proposals for estimated ATRR. Proposal 107 offered to cap return on equity at 10.32%, including a 50 basis-point adder for RTO participation. Republic Transmission's proposal capped return on equity at 9.8%. Proposal 107 demonstrated relevant experience and capabilities in support of its ATRR estimates. In addition, RFP Respondent 107's estimated debt costs were lower than most other proposals (including Republic Transmission's proposal) and were accompanied by explanations of approach and assumptions.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ i			✓	✓ ii	✓ iii	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ iv	✓ v	✓	✓ iv		✓	✓	✓	✓ iv	✓	✓ iv
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-14: Proposal 107 Cost Cap Summary

MISO evaluated Proposal 107's facility design quality and rigor. Proposal 107 provided better specificity in most areas of design—beyond what most other proposals had done—and below-average risk. This proposal envisions a 33-mile line to connect the Coleman EHV and Duff substations, which was the same length planned in Republic Transmission's proposal. The project would use direct-embedded weathering steel H-frame tangent and small angle structures.

RFP Respondent 107 explained how it has selected the H-frame design, and discussed materials and provided drawings for each kind of structure proposed. Proposal 107 performed a desktop geotechnical study based on historical and publicly available information and provided a detailed report, including well-defined foundation design parameters.

Proposal 107 provided complete plan and profile and load and design drawings for the project. The structure outline drawings showed embedment for all structure types, accompanied by an explanation of how embedment depths would be determined. The proposal included a list of embedment depths for all structure types, based on the desktop geotechnical study. The right-of-way throughout the project route would be 150 feet wide, which was above average for the proposal submitted, and less than that planned in Republic Transmission's proposal.

The Ohio River crossing would use structure heights less than 200 feet tall, which would reduce the need for coordination with the Federal Aviation Administration. The design called for 93 feet of clearance between the conductor and the water surface, which was slightly less clearance than some other proposals, including Republic Transmission's proposal.

Proposal 107 did not explain how it determined river-crossing clearance values or mention consultation with relevant federal agencies.

With respect to other utility crossings, Proposal 107 provided aerial imagery. Narrative discussion recognized crossing challenges and laid out plans to address them. The plan and profile drawings showed crossing locations and clearances, including where the project would cross under an existing 765 kV transmission line. The proposal assumed the heights of the wires at the 765 kV crossing and did not discuss the transition of optical ground wire from overhead to underground. The design portion of Proposal 107 had limited detail on road and highway crossings.

Proposal 107 included a detailed conductor selection study that compared long-term costs for several conductors using variables such as line losses, upfront conductor and structure costs, and other considerations. The conductor selected was an ACSS Curlew in a two-bundle configuration. The maximum emergency summer rating for the line is proposed to be 3,152 amps at 392°F (200°C) maximum conductor temperature. The estimated line loss value was the second lowest among the 11 proposals. Republic Transmission's proposal had the lowest estimated line loss value. The design for Proposal 107 would provide a small vertical ground clearance buffer, just over NESC requirements.

RFP Respondent 107 furnished information on optical ground wire and proposed to incorporate a shield angle that was average among proposals, and smaller than that specified in Republic Transmission's proposal. Proposal 107 lacked specificity with regard to lightning performance criteria. The proposal indicated a mid-range ground resistance target value, but did not discuss methods to achieve these targets.

Proposal 107 discussed galloping and vibration protection in detail. RFP Respondent 107 said it would analyze vibration as part of the final design process. Narrative discussion of substation tie-in was limited and general, but plan and profile drawings showed how the project would interconnect with the substations at each end of the line.

4.7.3 Project Implementation for Proposal 107

MISO evaluated Proposal 107's project implementation plan and abilities, finding it to be 'Better' overall.

MISO evaluated Proposal 107's project schedule, which included details on regulatory permitting, land acquisition, materials procurement, construction, commissioning, energization and restoration. The project implementation schedule submitted with Proposal 107 was specific and well thought out. RFP Respondent 107 identified nine months of float time for unexpected delays, and broke out anticipated project lost weather days based on average weather conditions in the project area. Weather assumptions were discussed in depth and well sourced from historical records. Engineering tasks and timelines for Proposal 107 were ample and some of the most detailed among proposals. There was specific discussion of outages, LiDAR and land surveying, pertinent crossings, and possible areas of schedule risk. The permitting time

frames appeared appropriate. The proposed schedule compared favorably to the majority of proposals in rigor, certainty, specificity, and risk mitigation.

MISO evaluated Proposal 107's project management plan and experience. RFP Respondent 107 stated that its project team had recent, extensive experience with EHV transmission projects. The risk register was detailed, with qualitative and quantitative risk analysis and reasonable mitigation options specific to this project. The proposal discussed communications, public relations, and reporting efforts.

The proposed route for Proposal 107 was one of the strongest submitted, with substantial detail and explanation of the routing criteria applied. Although routes in a number of other proposals were shorter, RFP Respondent 107's approach sought to proactively addressing constraints and risks, which reduced the risk of implementing the route as proposed. RFP Respondent 107 considered 30 routing alternatives, and supplemented desktop route analysis with three site visits to validate results. Proposal 107 included a detailed comparative matrix, along with segment and routing maps, and laid out a plan for a full study of the project route. In contrast, Republic Transmission (Proposal 110) provided more routing selection details by providing a full routing study in its proposal.

Proposal 107 included a comprehensive description on regulatory permitting, including a thorough discussion of Section 10 permitting for the Ohio River crossing. RFP Respondent 107 had started early coordination with state regulators and implemented some resulting recommendations. RFP Respondent 107 provided a specific plan to obtain necessary regulatory permits in Indiana and Kentucky, and retained local legal counsel to support the process. Proposal 107 identified railroad and pipeline crossings in a risk table. RFP Respondent 107 would designate an environmental compliance officer for the project construction phase. Discussion in this area was more specific and certain than most proposals.

Proposal 107 identified landowners and parcels associated with new right-of-way, and would rely on an experienced team to support the land acquisition process. The proposal included a plan to address uncertainty related to eminent domain rights in Kentucky.

Proposal 107 listed out the materials needed to complete the project, together with manufacturer lead times for various components, showing good alignment with project scope and noting existing relationships with vendors. The specificity of contained in this discussion provided a higher level of certainty than in other proposals. Although the proposal referred to quality assurance and quality control procedures and documentation, there was less detail than some other proposals about how these procedures would be implemented for this project.

The construction plan for Proposal 107 was detailed and demonstrated due diligence during proposal development, which was much more specific and provided a lower risk plan for construction of the project than most other proposals. The construction plan featured detailed maps outlining all proposed wire pull sites and laydown yards, a day-by-day work schedule, clear explanation of proposed staffing levels, a well-defined access plan with good discussion of matting needs, outages, utility crossings, and road crossings needed to complete the project, and allocated time for restoration work. Proposal 107 identified key contractors and proposed to

designate one of its employees with extensive previous experience to serve as a full-time, on-site construction manager. Separate discussion of construction for the Ohio River crossing was less detailed than some other areas. With respect to commissioning, RFP Respondent 107 provided a good history of its prior experience, but did not provide significant detail on the process it would follow for this project.

RFP Respondent 107 submitted high-level information about its safety manual, and laid out a specific plan for safety practices for the project, including designation of a dedicated safety manager. The proposed safety plan was more specific than the majority of other proposals.

Proposal 107 also provided detailed history of RFP Respondent 107's work on 345 kV transmission and substation projects, and highlighted the experience of the team it would assign to this project. The proposal showed strong financing capability, supported by high investment-grade credit ratings, and included a strong financial plan for the project that was comparable to other proposals.

4.7.4 Operations and Maintenance for Proposal 107

MISO evaluated Proposal 107's operations and maintenance abilities, and found it to be 'Good' overall.

MISO evaluated Proposal 107's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. The proposal provided a thorough explanation of the process to integrate the project into MISO, including arrangements with the Coleman EHV and Duff substation owners necessary for real-time monitoring and coordinated operations, switching, and grounding. Proposal 107 described clearance procedures and a process to prepare and submit switching orders.

MISO evaluated Proposal 107's forced outage response and emergency repair and testing abilities. Proposal 107 described the proximity of resources for forced outage response and emergency repair and testing, along with experience, risk plans, and arrangements with other utilities and its primary maintenance contractor. RFP Respondent 107 also documented its rankings in transmission performance indices. RFP Respondent 107's forced outage response plan was not as specific as that provided by Republic Transmission (Proposal 110).

MISO evaluated Proposal 107's predictive/preventive maintenance and testing abilities as well as its access to spare parts, structures, and equipment. RFP Respondent 107 said it uses an asset management system to process data and make decisions about maintenance. Proposal 107 identified a contractor to provide preventive and predictive maintenance services, along with details on outage coordination, aerial and ground inspections (including foundations), and vegetation management (including use of LiDAR and meeting the NERC standard on transmission vegetation management).

MISO evaluated Proposal 107's major facility replacement capabilities and financial strategy for replacements and rebuilds. Proposal 107 described its storm response and major facility replacement capabilities to a level of detail that exceeded most other proposals, noting in-house civil engineering staff, contractor support, mutual aid arrangements, and industry

awards. Proposal 107 noted a history of limited damage to steel structures and the use of dead-end structures in the project to limit exposure to cascading. With this as background, the proposal identified storage locations and specific information on spares inventory (enough to replace a mile of line, including temporary wood poles of various heights, spare conductor, and H-frame assemblies), as well as sharing agreements with vendors and other utilities. RFP Respondent 107's spare parts plan was not as detailed as that provided by Republic Transmission (Proposal 110).

MISO evaluated Proposal 107's previous applicable experience. The proposal provided multiple examples of restoration activities in concert with key contractors, covering a range of events and facility types.

MISO evaluated Proposal 107's safety performance. RFP Respondent 107 outlined its safety program (for capital projects and operations) and supplied details on it transmission-related safety history, along with the company's overall safety history.

4.7.5 Planning Participation for Proposal 107

MISO evaluated planning participation for Proposal 107, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4.8 Proposal 108

4.8.1 Overview of Proposal 108

The Executive Committee assigned Proposal 108 a total evaluation score of 61 and found it to be generally good, as compared to the other proposals (Figure 4-8).

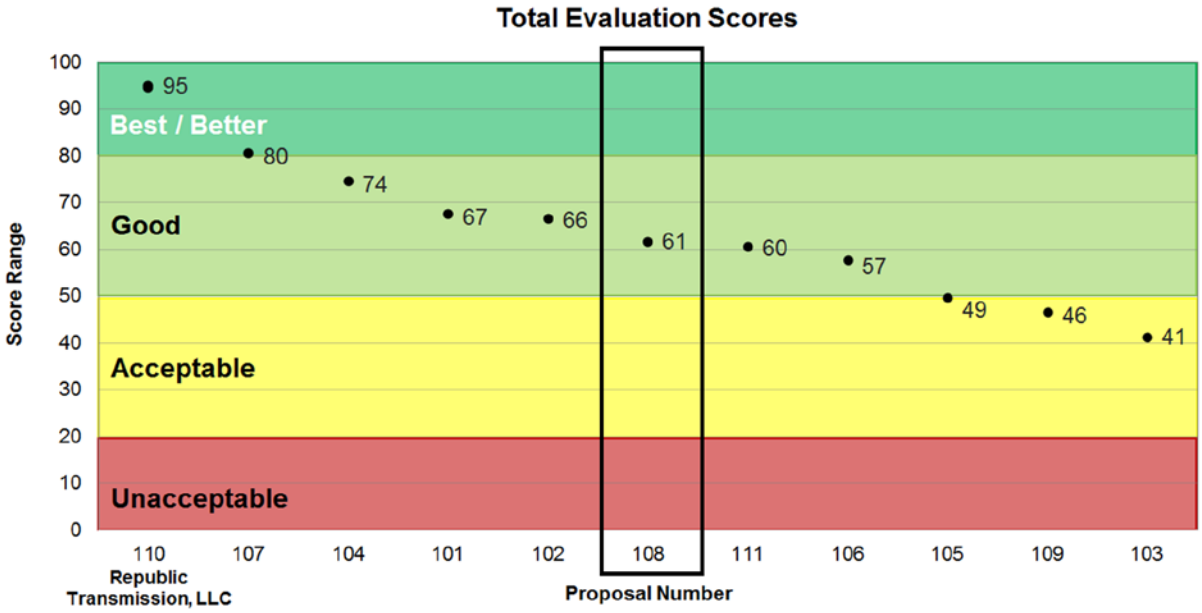

Figure 4-8: Proposal 108 Final Scoring Summary

In evaluating Proposal 108 against the four Tariff evaluation criteria, MISO categorized it as 'Good' in cost and design, 'Good' in project implementation, and 'Acceptable' in operations and maintenance, as compared to the other proposals (Table 4-15).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	REDACTED
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-15: Proposal 108 Criteria-Level Categorization

4.8.2 Project Cost and Design for Proposal 108

In evaluating cost and design, MISO found Proposal 108 to be 'Good' compared to other proposals, as depicted in Table 4-15.

MISO evaluated Proposal 108's estimated project cost and rigor. Proposal 108 submitted an implementation cost estimate of $43.3 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. Proposal 108 submitted a construction cost cap in nominal dollars (versus 2016 dollars) of $49.6 million, which is roughly $2 million above its cost estimate in nominal dollars. The cap included AFUDC and inflation. Proposal 108 proposed to limit construction costs through "per unit" caps, rather than fixed caps for specified elements. Proposal 108 had cap exclusions related to land acquisition and changes to the Ohio River crossing. Proposal 108 provided cost estimate details related to route selection.

MISO evaluated Proposal 108's estimated ATRR and rigor. Proposal 108 submitted an ATRR estimate of $56 million, which was the median value of estimate ATRR. The depreciation timeline was shorter than most other proposals and the estimated equity percentage of the capital structure was greater than 50%. Proposal 108 offered to impose a five-year cap on its weighted cost of capital for ATRR at 7.9%, which would operate as a constraint on the combined effects of return on equity, cost of debt, and the debt-to-equity ratio. In the analysis described in Section 2.6.6.1, Proposal 108 consistently finished among the average-cost proposals for estimated ATRR. Proposal 108 demonstrated relevant experience and capabilities in support of the ATRR estimates.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ i			✓	✓ ii	✓ iii	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ iv	✓ v	✓	✓ iv		✓	✓	✓	✓ iv	✓	✓ iv
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-16: Proposal 108 Cost Cap Summary

MISO evaluated Proposal 108's facility design quality and rigor. RFP Respondent 108 would construct an approximately 28-mile-long transmission line to connect the Coleman EHV and Duff substations, which was one of the shortest among proposals. The structure design would use direct-embedded, wood H-frame tangent structures.

RFP Respondent 108 provided considerable design specificity in its proposal, including preliminary foundation design, structure drawings, maps, and details on guying arrangements, guy anchoring, and insulator and hardware assemblies. Although not required, Proposal 108 was the only proposal to include a Google Earth "KMZ" file (an interactive graphical representation of project elements superimposed over satellite pictures of the relevant terrain), which enhanced certainty for its proposal evaluation.

The proposed right-of-way throughout the route for the project would be 132 feet wide, which was near the average among proposals. Proposal 108 provided a desktop geotechnical study based on historical and publicly available information.

The Ohio River crossing for the preferred route would use structure heights less than 200 feet tall, which would reduce the need for coordination with the Federal Aviation Administration. The minimum conductor clearance above the water surface would be 120 feet, which is one of the highest values among proposals. Proposal 108 was among several proposals to specify different conductor types at the river-crossing span than for the remainder of the project.

Proposal 108 discussed and showed on plan and profile drawings how the project would cross under an existing 765 kV transmission line, including the need to lower the optical ground wiring between the phases. Proposal 108 did not explain the method for lowering the optical ground wire and did not indicate whether there would be any unique structure types for this crossing. Other crossings (highways, roads, railroads, other utilities) were not specifically addressed, but Proposal 108 included them in a clearance table and showed some of them (unlabeled) in plan and profile drawings.

The conductor for the majority of the route would be ACSS Drake in a two-bundle configuration, one of the smallest conductor proposed. The conductor for the river crossing section would be ACSS Canvasback in a two-bundle configuration. The maximum conductor summer emergency rating for the ACSS Drake conductor is proposed to be 3,027 amps at 455°F (235°C). The estimated line losses for the proposed conductor were relatively high compared to other proposals.

Proposal 108 addressed galloping and vibration concerns in detail, and provided a galloping study with a list of weather cases. Vertical clearances would be designed for a minimal buffer over NESC minimum requirements. This was one of the smallest clearance buffer used by any of the proposals.

Treatment of grounding considerations was thorough, accompanied by detailed drawings. RFP Respondent 108 had performed a preliminary lightning study, and proposed an average ground resistance target value. The shield angle value for Proposal 108 would be one of the largest proposed.

Proposal 108 touched briefly on how the project would tie into the substations at either end of the line, and reflected this information in plan and profile drawings. RFP Respondent 108 stated that it expected to work with the substation owners to complete the interconnection process.

4.8.3 Project Implementation for Proposal 108

MISO evaluated Proposal 108's project implementation plan and abilities, finding it to be comparatively 'Good' overall.

MISO evaluated Proposal 108's project schedule, which included details and discussions on regulatory, siting, permitting, land acquisition and construction. The project schedule allowed float time for unexpected delays for each task on the project schedule, along with sufficient times for engineering and procurement, supplemented by supporting details, such as breakdown of interconnection agreements. Construction float and tree clearing durations appeared to be ambitious and may increase the project's risk profile.

RFP Respondent 108 included a project plan that was less detailed than those in several other proposals and at times contained contradictory information within the proposal. Proposal 108 indicated that RFP Respondent 108 is well known and experienced in the utility industry, but some proposed resources for the project did not have as much experience with 345 kV construction as was present in other proposals. The proposal also explained RFP Respondent 108's project management methodology and use of construction look-aheads, progress trackers, project monitoring, and other elements to mitigate risk including a robust public outreach program however lacked some of the specificity and certainty that were found in other proposals.

RFP Respondent 108 included a desktop routing study, which used suitability analysis to identify potential preferred and alternate routes. The proposal provided good discussion of the route selection process, but the preferred route in the attached study appeared to differ from the preferred route identified in narrative sections. The preferred and alternate routes identified in Proposal 108 were among the shortest routes submitted in any of the proposals, envisioning a nearly diagonal path between the Coleman EHV and Duff substations. The resulting acquisition of new right-of-way may increase the risk profile of the proposal higher than other proposals; however the submitted land acquisition plan contained more specificity than other proposals.

The discussion of the regulatory permitting process in Proposal 108 was mixed, providing helpful discussion in some areas while lacking specificity in others. RFP Respondent 108 had started early coordination with Indiana and Kentucky state regulators about obtaining necessary regulatory approvals. Accompanying maps were not as detailed or specific as those for some other proposals, however RFP Respondent 108's pre-engagement with regulatory authorities was good compared to other proposals.

Although Proposal 108 did not provide lists or maps showing parcels and landowners, the KMZ filed submitted with the proposal did identify affected parcels. Proposal 108 had a detailed land acquisition plan, providing for training, adequate staffing with relevant knowledge in each

state, and an agent to monitor construction and overall was better than many other proposals in the specificity of its land acquisition plan.

Proposal 108 provided a full discussion and documentation for quality assurance and quality control during the procurement process, accompanied by detailed cost assumptions. RFP Respondent 108 included information on potential contractors' capabilities to manage procurement and materials in the field, and had gathered some preliminary bids. The proposal outlined a registration and certification process for suppliers, but did not designate a specific materials vendor. The information supplied compared favorable to other proposals.

RFP Respondent 108's Google Earth KMZ file incorporated many details relevant to the construction process, though the information in the KMZ was not always accompanied by supporting narrative. The KMZ showed access routes, silt fencing, helicopter wire-pull sites, wire setups, guard structure location, and other relevant details throughout the route. The presence of the detailed KMZ file helped mitigate the lack of specificity in the narrative. Proposal 108 supplied detail construction plans, with staffing and production levels MISO considered appropriate for the amount of work and the schedule provided. RFP Respondent 108 had identified reputable firms to perform construction work and demonstrated good experience with 345 kV work and included project-specific details on the commissioning and energization processes, including full testing and cleanup.

Proposal 108 included a full safety plan for itself and its primary construction contractors. These plans highlighted common themes such as job hazard analysis and other safety practices. Proposal 108 referred to a dedicated safety officer, but did not address stop-work authority or name a specific person to act as safety lead on the project. The proposal included safety metrics for RFP Respondent 108 but not for primary construction contractors or subcontractors. Other proposals supplied this additional specificity.

RFP Respondent 108 showed good financing capability, with investment-grade credit ratings. The proposal laid out a good financial plan for the project, and described RFP Respondent 108's history with 345 kV projects, including complete résumés and background information on the project team. RFP Respondent 108 indicated that it and its proposed contractors have experience throughout the United States.

4.8.4 Operations and Maintenance for Proposal 108

MISO evaluated Proposal 108's operations and maintenance abilities, and found it to be 'Acceptable' overall as compared to the other proposals.

MISO evaluated Proposal 108's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. RFP Respondent 108 suggested that MISO should make the decision about the Local Balancing Authority operator for the project. RFP Respondent 108 would perform real-time monitoring for the project from an existing transmission control center, relying on data exchange with the Coleman EHV and Duff substation owners. Proposal 108 anticipated working with functional and jurisdictional authorities to accomplish switching,

however it provided less detail than most of the other Proposals. It was unclear where the post-energization base of operations for the project would be.

MISO evaluated Proposal 108's forced outage response and emergency repair and testing abilities. Proposal 108's discussion of forced outage response had few details, but included a letter of support from a maintenance contractor and reported good response times. RFP Respondent 108 said its control center would develop a protocol with the Coleman EHV and Duff substation owners for outage response. The repair plan included in Proposal 108 was less specific than the other proposals.

MISO evaluated Proposal 108's predictive/preventive maintenance and testing abilities as well as its access to spare parts, structures, and equipment. Proposal 108 provided significant detail on proposed inspection programs and staffing for vegetation management (with appropriate recognition of the applicable NERC reliability standard), as well as an overall line inspection program designed to provide early warning of potential problems. RFP Respondent 108 explained that it does aerial inspections two times per year for NERC-reportable circuits, along with visual inspections, and results are recorded in a database. However, there was limited information submitted in the proposal on its plans, procedures, and policies for predictive and preventive maintenance and testing. As noted above, RFP Respondent 108 was the only entity to propose wood poles for the project, which MISO anticipated would be more maintenance-intensive than for steel structures. Proposal 108's operations and maintenance costs were higher than most other proposals, but not the highest. Although RFP Respondent 108 reported good experience with spare parts programs and provided significant detail, MISO considered some spare parts levels (conductor and optical ground wire) to be less than other proposals, and not fully explained.

MISO evaluated Proposal 108's major facility replacement capabilities and financial strategy for replacements and rebuilds. RFP Respondent 108 described its approach to major facility replacement as condition-based assessment (rather than time-based replacement). RFP Respondent 108 said it had experience with responding to many kinds of natural disasters.

MISO evaluated Proposal 108's previous applicable experience. RFP Respondent 108 outlined its operations and maintenance philosophy, expecting the project would integrate easily into the MISO footprint. RFP Respondent 108 stated that it regularly dispatches crews to support other utilities, and saw itself as a leader in areas of new standards, best practices, and event reviews.

MISO evaluated Proposal 108's safety performance. RFP Respondent 108 provided an operational safety history with some detail, and included safety policies in such areas as work near energized systems and clearance procedures. Safety performance for Respondent 108 seemed typical for industry participants.

4.8.5 Planning Participation for Proposal 108

MISO evaluated planning participation for Proposal 108, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4.9 Proposal 109

4.9.1 Overview of Proposal 109

Executive Committee assigned Proposal 109 a total evaluation score of 46 and found it to be generally acceptable, as compared to the other proposals (Figure 4-9).

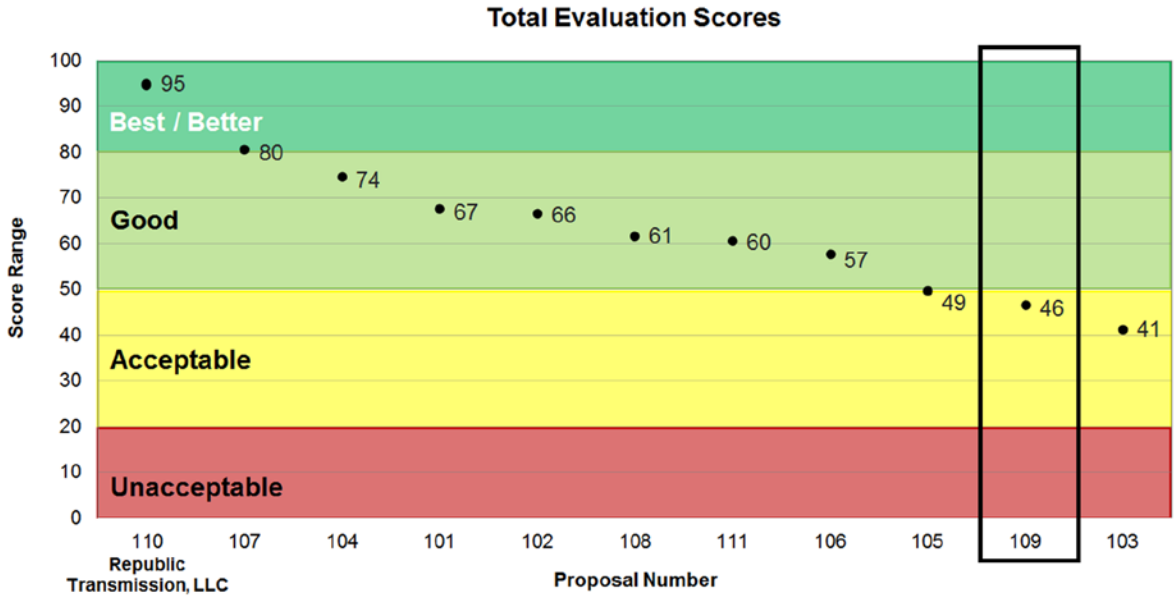

Figure 4-9: Proposal 109 Final Scoring Summary

In evaluating Proposal 109 against the four Tariff evaluation criteria, MISO categorized it as 'Acceptable' in cost and design, 'Acceptable' in project implementation, and 'Acceptable' in operations and maintenance, as compared to the other proposals (Table 4-17).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	REDACTED
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-17: Proposal 109 Criteria-Level Categorization

4.9.2 Project Cost and Design for Proposal 109

In evaluating cost and design, MISO found Proposal 109 to be 'Acceptable' compared to other proposals, as depicted in Table 4-17.

MISO evaluated Proposal 109's estimated project cost and rigor. Proposal 109 submitted the second-highest implementation cost estimate, at $53.8 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. Proposal 109 submitted a construction cost cap equal to its construction cost estimate of $50.0 million, which excluded AFUDC. Proposal 109's construction cost cap has a number of exclusions (some of which are seen in other proposals) for items outside its control. Proposal 109 submitted budgetary quotes from vendors in support of its implementation cost estimates but provided minimal cost-related detail around the chosen route and no discussion of alternate routes.

MISO evaluated Proposal 109's estimated ATRR and rigor. Proposal 109 submitted an ATRR estimate of $56 million, which was the median value of estimated ATRR. The submitted ATRR estimate for Proposal 109 included a relatively high estimated cost of debt. In the analysis described in Section 2.6.6.1, Proposal 109 consistently finished among the higher-cost proposals for estimated ATRR. Proposal 109 did not include any ATRR-related cost cap or containment to enhance certainty, and some of the narrative and supporting information provided was not as directly relevant to the project as seen in other proposals.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ [i]			✓	✓ [ii]	✓ [iii]	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ [iv]	✓ [v]	✓	✓ [iv]		✓	✓	✓	✓ [iv]	✓	✓ [iv]
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-18: Proposal 109 Cost Cap Summary

MISO evaluated Proposal 109's facility design quality and rigor. Proposal 109 has an average estimated project length of 31 miles, supported primarily by direct-embedded weathering steel monopole structures.

The proposed the right-of-way for the project is 130 feet wide, which was near average among proposals. Proposal 109 did not include geotechnical study information (even on a desktop basis) or discuss relevant publicly available data, but relied instead on assumed soil design parameters for foundation design.

The structure heights at the Ohio River crossing were more than 200 feet tall, increasing the need for coordination with the Federal Aviation Administration. Proposal 109 planned for clearance above the water surface of 123 feet, which was higher than most other proposals.

Proposal 109 addressed the 765 kV transmission line crossing, specifying structure type and other pertinent details. While Proposal 109 had good discussion of the 765 kV transmission line and river crossings and provided a clearance table, there was less specificity for other crossing issues, although there was a list and count of total crossing.

The proposed conductor—two-bundle ACSS Drake conductor—is one of the smaller conductors proposed and is proposed to have an emergency summer rating of 3,018 amps at 392°F (200°C) maximum conductor temperature. The estimated line losses for this conductor were comparatively higher than many other proposals.

Proposal 109 indicated a relatively smaller vertical clearance buffer over NESC minimum requirements, which was average among other proposals provided. Proposal 109 addressed line galloping and vibration mitigation with adequate specificity. Proposal 109 provided specific lightning performance criterion. Proposal 109 planned a resistance grounding target value that was among the highest of the submitted proposals. Proposed ground wire shielding angle value was mid-range relative to other proposals. Proposal 109 lacked details on plans for substation tie-in.

4.9.3 Project Implementation for Proposal 109

MISO evaluated Proposal 109's project implementation plan and abilities, finding it to be 'Acceptable' overall.

MISO evaluated Proposal 109's project schedule, which included information on routing, regulatory filings, permitting, land acquisition and construction. The proposal contained areas in which the proposed schedule and narrative were conflicting. The implementation schedule addressed float appropriately, but some elements of the schedule, including permitting, structure setting and framing, appeared to be potentially higher risk than other proposals.

Proposal 109 had fewer details on project management than many other proposals. At times information in narrative passages appeared inconsistent with information provided elsewhere in the proposal, such as in the exhibits. Proposal 109 included a fairly well-developed risk register, as well as examples of daily and monthly reporting documentation typically used for similar projects, and described the steps to be taken during the project close-out phase. The

breakdown of implementation process and supporting details were limited in areas such as: permitting, right-of-way acquisition, engineering and design, and materials procurement. Rather than providing a detailed project plan, Proposal 109 outlined how RFP Respondent 109 would approach development of a project plan, whereas other proposals supplied project specific processes and plans tailored to the project.

Proposal 109 submitted a set of preliminary route alternatives, which were shown on a small map without details. Proposal 109 had no routing study, but did discuss desktop analysis and field review used to develop preliminary routes and provided an example environmental and engineering features comparison table. This table included two potential routes, but labeling was not sufficient to determine whether these corresponded to any of the routes on the preliminary route map. Much of the discussion on routing and site evaluation described the process RFP Respondent 109 would use to determine a final route. Other proposals provided more certainty related to routing.

Proposal 109 listed the federal, state, and local permits needed to complete the project, as well as expected timeframes for regulatory review. Proposal 109 described relevant expertise needed to support the process, but did not identify specific staff for routing and permitting work. Proposal 109 discussed Section 10 permitting required to cross the Ohio River in general terms, but other proposal provided more specificity in this area, and with respect to permitting plans and risk mitigation in the regulatory process as a whole.

Unlike several of the other proposals, Proposal 109 did not identify any parcels or landowners associated with project right-of-way, did not discuss implications for eminent domain in Kentucky if the project relied on a Construction Certificate, and did not identify associated timeframes. RFP Respondent 109 would use internal staff to manage the right-of-way acquisition process, supplemented by outside experts as needed, and did not identify individuals in the proposal.

Proposal 109 relied on publicly available data for pre-design survey information, but performed LiDAR evaluation on portions of the route, including the site where the project would cross under an existing 765 kV transmission line. Proposal 109 listed consultants and different types of conventional surveys RFP Respondent 109 would typically perform, but there was less detail on cultural and right-of-way surveying, and LiDAR was mentioned only in connection with significant routing obstacles. The discussion of engineering and surveying provided more certainty than other proposals.

Discussion of materials and associated procurement was minimal, with only brief mention of protocols for quality control and quality assurance. Proposal 109 identified a reputable primary contractor for construction work and discussed construction methods, but did not address equipment utilization or maintenance, need for specialized drilling techniques, access routes, or laydown sites. There were no wire pull plans, but the proposal contemplates conventional conductor stringing techniques. The construction plan was very general, apart from discussion of crossings at the Ohio River crossing and existing 765 kV transmission line. Lack of a recommended route made it difficult for MISO to assess the reasonableness of its construction approach, as well as a number of other factors. The portion of Proposal 109 that

addressed project-specific testing and commissioning work (which included discussion of optical ground wire) stood out as particularly thorough and detailed and well supported by previous projects. Although 109 provided a more detailed project specific testing discussion than many other proposals, the construction plan lacked the specificity and certainty found in many other proposals.

Proposal 109's safety discussion was high-level, ranging across topics from nuclear safety to crane inspection to executive sponsorship. RFP Respondent 109 submitted complete work practices manuals (along with discussion of the primary construction contractor's internal safety programs) and proposed to assign one field safety representative for every 100 field personnel. The proposal described a basic crisis communications plan, which included use of job hazard analysis, daily on-site meetings, and reporting procedures. All were appropriate to the types of work needed, but not specific to the project. There were minimal details on safety metrics, and no statistics on safety reporting to regulatory authorities, but overall the safety discussion was good compared to other proposals.

Proposal 109 demonstrated good relevant history and the capability to complete 345 kV transmission projects. RFP Respondent 109 had strong financing capability, with high investment-grade credit ratings, and provided an acceptable financial plan for the project.

4.9.4 Operations and Maintenance for Proposal 109

MISO evaluated Proposal 109's operations and maintenance abilities, and found it to be 'Acceptable' overall compared to the other proposals.

MISO evaluated Proposal 109's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. RFP Respondent 109 indicated prior experience coordinating with facility owners in MISO. Like many other portions of Proposal 109, however, much of the operations and maintenance discussion was very high level. This made it more difficult for MISO to identify and evaluate distinguishing factors. RFP Respondent 109 would perform real-time monitoring from its existing transmission control center through data exchanges with the substation owners. Proposal 109 also recognized that switching for the project would be implemented by the owners of the substations at either end of the project and mentioned prior experience coordinating operations with other substation owners. Proposal 109 did not discuss the other substation owner. Proposal 109 appended a copy of RFP Respondent 109's tagging manual.

MISO evaluated Proposal 109's forced outage response and emergency repair and testing abilities. Proposal 109's submissions on operations and maintenance demonstrated strong local presence in the project region, enabling 45-minute response time for maintenance issues.

MISO evaluated Proposal 109's predictive/preventive maintenance and testing abilities as well as its access to spare parts, structures, and equipment. Proposal 109 outlined a predictive and preventative maintenance plan, with internal staff responsible for assessment, prioritization, funding, scheduling, and oversight. When problems arise, RFP Respondent 109's program will

review for underlying systemic issues that might be implicated, along with the particular problem at hand. Proposal 109 did not elaborate much beyond this basic framework.

There was minimal mention of vegetation management. Proposal 109 called for two aerial inspections per year and one from the ground, noting what these inspections look for, but with little supporting explanation. These high-level descriptions complied with the RFP requirements, but were less informative than more in-depth discussions provided in other proposals. Likewise, Proposal 109's treatment of spare parts, as well as forced outage response and emergency repair and testing, was brief, offering limited discussion of associated risk plans or experience.

MISO evaluated Proposal 109's major facility replacement capabilities and financial strategy for replacements and rebuilds. Proposal 109 lacked the specificity and risk analysis associated with major facility replacement capabilities when compared to the other proposals received. RFP Respondent specified that it would develop plans once the project is constructed.

MISO evaluated Proposal 109's previous applicable experience. Proposal 109 cited examples of major projects completed, but offered limited discussion of major facility replacement capabilities or associated risk plans (though it described experience with actual events).

MISO evaluated Proposal 109's safety performance. Discussion of RFP Respondent 109's safety assurance was more extensive, providing safety manuals and showing good experience, but with limited depth, other than in the area of grounding procedures. There was no mention of safety records associated with operations and maintenance activities or safety training or standards for contractors.

4.9.5 Planning Participation for Proposal 109

MISO evaluated planning participation for Proposal 109, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

4.10 Proposal 110 (Selected Proposal)

During the Competitive Developer Selection Process, the Selected Proposal submitted by Republic Transmission was designated as Proposal 110. Information about Proposal 110, and why the Executive Committee chose it as the Selected Proposal, is provided in Section 3 of this report.

4.11 Proposal 111

4.11.1 Overview of Proposal 111

The Executive Committee assigned Proposal 111 a total evaluation score of 60 and found it to be generally good, as compared to the other proposals (Figure 4-10).

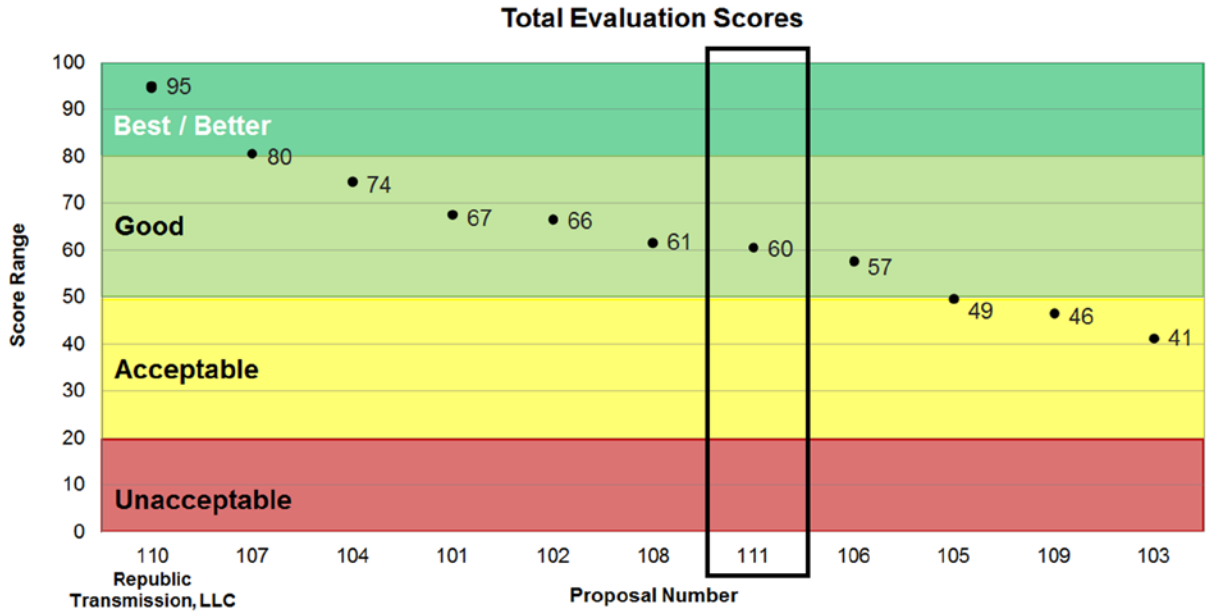

Figure 4-10: Proposal 111 Final Scoring Summary

In evaluating Proposal 111 against the four Tariff evaluation criteria, MISO categorized it as 'Good' in cost and design, 'Good' in project implementation, and 'Acceptable' in operations and maintenance, as compared to the other proposals (Table 4-19).

Proposal ID #	Cost and Design *(30%)*	Project Implementation *(35%)*	Operations and Maintenance *(30%)*	Planning Participation *(5%)*
110	Best	Best	Better	
107	Good	Better	Good	
104	Better	Good	Good	
101	Good	Acceptable	Good	
102	Acceptable	Good	Best	
108	Good	Good	Acceptable	REDACTED
111	Good	Good	Acceptable	
106	Good	Acceptable	Good	
105	Acceptable	Acceptable	Good	
109	Acceptable	Acceptable	Acceptable	
103	Acceptable	Acceptable	Acceptable	

Table 4-19: Proposal 111 Criteria-Level Categorization

4.11.2 Project Cost and Design for Proposal 111

In evaluating cost and design, MISO found Proposal 111 to be 'Good' compared to other proposals, as depicted in Table 4-19.

MISO evaluated Proposal 111's estimated project cost and rigor. Proposal 111 submitted an implementation cost estimate of $49.6 million (in 2016 dollars). The median implementation cost estimate for the 11 proposals was $48.8 million. Proposal 111 submitted a construction cost cap of $44.8 million. The cap excluded AFUDC and inflation. Proposal 111 submitted detailed staffing information and a detailed risk register, among other relevant project details, in support of its implementation cost estimate.

MISO evaluated Proposal 111's estimated ATRR and rigor. Proposal 111 submitted the second-highest ATRR estimate, at $72 million, which was higher than the median of $56 million. The submitted ATRR estimates for Proposal 111 were higher than other proposals due to the highest estimated operations and maintenance costs and the highest estimated return on equity and equity as a percentage of capital structure. These were offset somewhat by lower tax estimates, a longer depreciation timeframe, and a nominal $1.3 million per year rate concession for the first 10 years the project is in service. In the analysis described in Section 2.6.6.1, Proposal 111 consistently finished among the average-cost proposals for estimated ATRR. Proposal 111 had less specificity than average for some elements of its ATRR estimates.

Summary of Cost Caps, Concessions, and Commitments											
Uncertainty	**101**	**102**	**103**	**104**	**105**	**106**	**107**	**108**	**109**	**110**	**111**
ROE		✓		✓ i			✓	✓ ii	✓ iii	✓	
Capital Structure		✓		✓						✓	
Implementation Costs	✓ iv	✓ v	✓	✓ iv		✓	✓	✓	✓ iv	✓	✓ iv
Operations and Maintenance Costs				✓							
Inflation Rate			✓	✓		✓		✓		✓	
Rate Concessions						✓					✓

i Limited duration ROE cap

ii Cap on weighted average cost of capital (includes ROE), limited duration

iii No ROE cap, but will forego ROE incentive adders in initial FERC filing

iv AFUDC is not included in the cap

v Only a portion of construction costs are capped

Table 4-20: Proposal 111 Cost Cap Summary

MISO evaluated Proposal 111's facility design quality and rigor. The length of the project route for Proposal 111 would be approximately 36 miles long, which was the longest among the 11 proposals submitted to MISO. Proposal 111 specified direct-embedded galvanized steel H-Frame tangent structures. Proposal 111 included plan and profile drawings, which provided some specificity, but were less detailed than those found in other proposals.

The proposed right-of-way for the project would be 140 feet wide, which was mid-range relative to other submitted proposals. Proposal 111 provided a desktop geotechnical study based on historical data and publicly available information.

For the Ohio River crossing, Proposal 111 would use structure heights at or above 200 feet, which would increase the need for coordination with the Federal Aviation Administration. Proposal 111 planned a conductor clearance above water surface of 120 feet, which is among the highest clearance values proposed. The plan and profile drawings show where the project would cross under an existing 765 kV transmission line, but Proposal 111 lacked some specificity on optical ground wire transition at the crossing point.

The conductor for Proposal 111 would be an ACSS Cardinal in a two-bundle configuration and ACSS Cardinal high-strength conductor where the project crosses the Ohio River. The conductor's maximum emergency summer rating is proposed to be 3,436 amps at 482°F (250°C) maximum conductor temperature. Estimated line losses for this conductor were low compared to other proposals.

RFP Respondent 111 took the additional step of performing an electrical effect study (electric and magnetic field, audible noise) and included a report showing acceptable results in its proposal. No other proposal went into this level of detail on electrical effects. The plan and profile drawings for Proposal 111 show an average vertical ground clearance buffer above NESC minimum requirements.

Proposal 111 discusses galloping and vibration protection in detail, and provided a galloping study for the entire line with defined criteria and load cases. For lightning protection, Proposal 111 called for a maximum shield angle value in the mid-range, and specified lightning performance criterion. The ground resistance target proposed was among the lowest values planned. Proposal 111 showed substation tie-in on plan and profile drawings, but did not provide supporting narrative discussion.

4.11.3 Project Implementation for Proposal 111

MISO evaluated Proposal 111's project implementation plan and abilities, finding it to be 'Good' in comparison to other proposals.

MISO evaluated Proposal 111's project schedule, which included details and discussions on regulatory permitting, land acquisitions, material procurement, construction, commissioning and energization. Proposal 111 provided a project schedule that allocated sufficient time for the various tasks required to develop, construct, and commission the project. Proposal 111 allowed time for public outreach and identified parcels, railroad and other utility crossings, tree-clearing needs, and threatened and endangered species requirements. Engineering tasks for Proposal

111 were broken out well, with sufficient time and float for all development and construction activities. The schedule compared favorably to other proposals, but was not as specific as some of the stronger proposals.

RFP Respondent 111 submitted a standardized project implementation plan and a reasonably detailed risk register, which described probabilities, consequences, and possible mitigation efforts, but did not include a cost allocation breakdown that was found in other proposals. Proposal 111 addressed project staffing needs in detail, including designation of a project manager in the field. The discussion of project management capabilities was more robust than other proposals.

RFP Respondent 111 started early route coordination with 44 federal, state, and local agencies and included a routing study, which identified a preferred route and two alternative routes, along with maps and response letters from some of the agencies consulted. Proposal 111 included a regulatory permit table with estimated acquisition time frames and identified the need for Section 10 permit to cross the Ohio River, but the narrative surrounding this process was less robust than found in other proposals. RFP Respondent 111 identified parcels and landowners along the 140-foot-wide right-of-way for the project, approximately 89% of which is routed along roadways or transmission corridors. The land acquisition team was adequately qualified and staffed to obtain the necessary property rights. However, Proposal 111 did not explain how it would obtain eminent domain rights in Kentucky.

Proposal 111 provided publicly available data for the pre-design engineering and surveying work, with aerial survey information and good discussion of further survey needs to complete the project. The limited details on right-of-way and cultural survey needs were not as specific as that found in other proposals, and the proposal did not mention any as-built survey requirements.

Proposal 111 included some discussion of the material lead times and it overall procurement process, but lacked details found in other proposals. Although Proposal 111 discussed briefly the need to address discrepancies found upon delivery, as well as testing concrete and rebar, there was no information on vendors, and the discussion on quality control was not as thorough as other proposals and as such increased the risk profile of the proposal.

RFP Respondent 111 would retain a large, well-known engineering and procurement contactor, on a fixed-price basis, to oversee the project construction process and act as a regulatory liaison. Proposal 111 included a discussion on the crew sizes needed to complete the project, as well as maintenance and equipment needs, but did not address access roads, wire pull plans, construction techniques, or strategy for the Ohio River crossing. Overall this proposals construction plan was good, but lacked some of the specificity and certainty found in other proposals

Proposal 111 included a comprehensive safety document from its primary construction contractor and discussed applicable safety regulations. RFP Respondent 111 designated a project-specific safety manager and described a proactive safety culture, but did not address areas such as “stop work authority.” Much of the safety discussion was high level and not as

specific to the project as was found in other proposals. The proposal did not supply the level of detailed information on OSHA reports or other safety oversight agencies that were included in other proposals.

Proposal 111 presented a good financing plan and financing capabilities, supported by high investment-grade credit ratings, and a proven past experience with completing 345 kV transmission projects.

4.11.4 Operations and Maintenance for Proposal 111

MISO evaluated Proposal 111's operations and maintenance abilities, and found it to be 'Acceptable' overall compared to the other proposals. Proposal 111's operations and maintenance plan included a good asset management system for record keeping. The proposed maintenance contractor would be within 50 miles of the project. Estimated operations and maintenance costs were the highest among all proposals, without distinguishing features that would account for the higher costs.

MISO evaluated Proposal 111's Local Balancing Authority, real-time operations monitoring and control, and switching abilities. RFP Respondent 111 proposed to engage an existing MISO member to provide Local Balancing Authority services, and included a sample agreement, as well as templates of procedures and reference to applicable NERC standards. Proposal 111 provided a good summary of coordinated switching and data exchange for real-time monitoring with the owners of the Coleman EHV and Duff substations, and furnished an example operations manual.

MISO evaluated Proposal 111's forced outage response and emergency repair and testing abilities. Proposal 111 included a limited risk plan for forced outages and emergency repair and testing, with adequate proximity and significant detail. There would be an initial call within 30 minutes, with forced outage response or emergency repair and testing within two to 12 hours, depending on travel and crew availability.

MISO evaluated Proposal 111's predictive/preventive maintenance and testing abilities as well as its access to spare parts, structures, and equipment. RFP Respondent 111 explained that it would perform periodic maintenance inspections and record results (condition of inspected facilities) in a database. The information would then be used to predict component failures, and maintenance schedules are constructed using the intervals indicated by the predictive model. RFP Respondent 111 would also administer a NERC-compliant vegetation management program. RFP Respondent 111's spare parts program was comparable to those of several other proposals.

MISO evaluated Proposal 111's major facility replacement capabilities and financial strategy for replacements and rebuilds. Plans included tangent structures designed to minimize cascading and sufficient inventory to replace 1 mile of transmission line. Proposal 111 envisioned support from and a sharing agreement with the primary maintenance contractor, which also has comprehensive experience with restoring and rebuilding. RFP Respondent 111 did not submit a specific restoration policy or plan.

MISO evaluated Proposal 111's previous applicable experience and safety performance. RFP Respondent 111 has less prior experience than some other RFP Respondents, but its leadership team had many years of experience and Proposal 111 emphasized the goal of promoting a culture of safety.

4.11.5 Planning Participation for Proposal 111

MISO evaluated planning participation for Proposal 111, as described in Section 2.6.6.4 of this report; however, the results of this analysis are being redacted to maintain the confidentiality of all RFP Respondents.

Attachment 1

Glossary

Introductory notes:

(1) Any capitalized terms used in this document for which definitions are not provided in this glossary are as defined in the MISO Tariff or the applicable MISO Business Practices Manuals.

(2) For some terms defined in the MISO Tariff, definitions provided in this glossary have been adapted to make them easier to understand when separated from the Tariff, but the formal Tariff definitions are controlling for all purposes.

(3) For readability, many of the terms defined below are not capitalized when used in the body of this report.

Term	Meaning for Purposes of Selection Report
ACSR	Aluminum conductor, steel reinforced.
ACSS	Aluminum conductor, steel supported.
Annual Transmission Revenue Requirement (ATRR)	The sum total of the revenues required to pay all operating and return on rate base costs of providing transmission service. Generally, this term is used in the calculation of the Attachment O revenue requirement of a transmission owner within MISO. For purposes of the RFP, a proposal is to include an aggregate ATRR value determined by combining the annual transmission revenue requirements of each individual RFP Respondent and each individual Proposal Participant identified in a proposal, as provided in Attachment FF of the Tariff. All statements in this report describing Proposals' ATRR estimates are referring to the net present value, in 2016 dollar, of estimated ATRR over a 40-year period.
Business Practices Manual (BPM)	A MISO Business Practices Manual consists of instructions, rules, policies, procedures, and guidelines established by MISO for the operation, planning, accounting, and settlement requirements of the MISO region. For purposes of the RFP, BPM-027 provides further background information, business rules, processes, and guidelines for the Competitive Transmission Process (including the roles and responsibilities of MISO, Transmission Owners, Members, and any other non-MISO Members and other interested parties).

Term	Meaning for Purposes of Selection Report
CEII	Critical Energy Infrastructure Information, as described in 18 C.F.R. § 388.113(c)(1), as it may be amended from time to time.
Competitive Developer Selection Process	MISO's process to certify Qualified Transmission Developers, identify Competitive Transmission Projects, solicit proposals, evaluate proposals, and designate a Selected Proposal and Selected Developer in accordance with Attachment FF of the Tariff.
Competitive Transmission Executive Committee (Executive Committee)	The Competitive Transmission Executive Committee consists of three or more MISO executives, including at least one officer, who are charged with overseeing MISO staff and consultants involved in implementing the MISO Competitive Transmission Process. The MISO Tariff provides that the Executive Committee has exclusive and final authority to approve or reject Transmission Developer Applications and certify Transmission Developer Applicants as Qualified Transmission Developers.
Competitive Transmission Process	The process used to certify Qualified Transmission Developers, identify Competitive Transmission Projects, solicit proposals, evaluate proposals, and designate a Selected Developer and Selected Proposal, all in accordance with the MISO Tariff. The Competitive Transmission Process includes the Competitive Developer Qualification Process and the Competitive Developer Selection Process.
EHV	Extra-high voltage.
EPRI	Electric Power Research Institute.
Evaluation Criteria	The four FERC-approved criteria the Tariff requires MISO to use for the Competitive Developer Selection Process: (1) cost and design, (2) project implementation, (3) operations and maintenance, and (4) planning participation.
Evaluation Principles	The four evaluation principles specified in Section 8.1 of BPM-027, which MISO uses to guide and influence the collective application of the MISO evaluation criteria. The evaluation principles are: (1) certainty, (2) risk mitigation, (3) cost, and (4) specificity.
Evaluation Team	Designated members of MISO management and staff responsible, together with independent consultants retained by MISO to assist management and staff, responsible for administration of the MISO Competitive Developer Selection Process, subject to oversight by the Executive Committee.
FERC	The Federal Energy Regulatory Commission.
LiDAR	Shorthand for "light detection and ranging," analogous to radar, except using laser light rather than radio waves.

Term	Meaning for Purposes of Selection Report
Local Balancing Authority	An operational entity or a "Joint Registration Organization" (as defined by NERC) that is (a) responsible to NERC for compliance with the subset of NERC Balancing Authority Reliability Standards defined in the Balancing Authority Agreement for its local area within the MISO Balancing Authority Area, (b) a Party (other than MISO) to the MISO Balancing Authority Agreement, and (c) shown in Appendix A to the Balancing Authority Agreement.
MISO	Midcontinent Independent System Operator, Inc.
MISO Tariff (Tariff)	MISO's Open Access Transmission, Energy and Operating Reserve Markets Tariff (including all of its schedules or attachments), as amended from time to time.
MTEP	MISO's Transmission Expansion Plan, which is a long-range plan used to identify expansions or enhancements to the MISO transmission system to (a) support efficiency in bulk power markets, (b) facilitate compliance with documented federal and state energy laws, regulatory mandates, and regulatory obligations, and (c) maintain reliability. The MTEP is developed biennially or more frequently, and subject to review and approval by MISO's Board of Directors.
MTEP15	MISO's 2015 Transmission Expansion Plan, which was the transmission plan in which the project was approved for the Competitive Developer Selection Process.
NESC	National Electrical Safety Code, which sets the ground rules and guidelines for practical safeguarding of utility workers and the public during the installation, operation, and maintenance of electric supply and communication lines and associated equipment.
NDA	A Non-Disclosure Agreement established between MISO and affected parties governing the disclosure of confidential information.
OSHA	The U.S. Occupational Safety and Health Administration.
Project	The Duff-Coleman EHV 345 kV Competitive Transmission Project, consisting of a new single-circuit alternating current 345 kV transmission line, initially estimated for MTEP15 purposes at approximately 28 miles in length, to be constructed in southern Indiana and western Kentucky (used in lower-case form in this report).
Proposal Cure Period	The period of time (ten business days) allowed for an RFP Respondent to correct deficiencies MISO identified in its previously submitted proposal. This period begins when MISO notifies the RFP Respondent of deficiencies in its proposal.

Term	Meaning for Purposes of Selection Report
Proposal Participant	For purposes of this project, a Proposal Participant is an entity that is involved in a proposal and is not the RFP Respondent, but will co-own the project and rely on the RFP Respondent to be responsible for constructing and implementing the project. A proposal may designate a Proposal Participant as responsible for one or more aspects of operations, maintenance, repair, or restoration, on terms comparable to those that would apply if the RFP Respondent intended to rely on a third-party contractor. Every proposal must specify whether the RFP Respondent plans to convey any interests in the project to one or more Proposal Participants.
Proposal Submission Deadline	The date and time by which proposals responding to an RFP must be delivered to MISO—in the case of this project, 5:00 p.m. Eastern Time on July 6, 2016.
Proposal Template Workbook	An Excel spreadsheet template, included as part of the RFP materials, for each RFP Respondent to use in submitting financial information for its proposal.
Qualified Transmission Developer	A MISO Transmission Owner, independent transmission company, or non-owner Member of MISO that submits a Transmission Developer Application and is subsequently determined by MISO to meet the minimum requirements for a Qualified Transmission Developer as outlined in Attachment FF of the Tariff.
RFP	A request for proposals issued by MISO, which constitutes an invitation (including associated requirements) for Qualified Transmission Developers to submit proposals to construct, implement, own, operate, maintain, repair, and restore a Competitive Transmission Project. The RFP for this project, which was issued on January 8, 2016, is posted at https://www.misoenergy.org/_layouts/MISO/ECM/Redirect.aspx?ID=215833
RFP Respondent	Any one or more of the Qualified Transmission Developers that elected to submit proposals responding to the RFP.
SCADA	Supervisory Control and Data Acquisition.
Section 10 Permit	A permit issued by the U.S. Army Corps of Engineers under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 403). Section 10 requires prior authorization from the U.S. Army Corps of Engineers for structures or work in or affecting United States navigable waters.
Selected Developer	The RFP Respondent designated by the Executive Committee as having submitted the Selected Proposal, and therefore selected to implement the project according to the Selected Developer Agreement.

Term	Meaning for Purposes of Selection Report
Selected Developer Agreement	The form of agreement, as set forth in Appendix 1 to Attachment FF of the Tariff, to be executed between the Selected Developer and MISO. The Selected Developer Agreement establishes the terms and conditions under which the Selected Developer will construct and implement the project as specified in its Selected Proposal.
Selected Proposal	The proposal selected by the Executive Committee (in accordance with the Competitive Developer Selection Process) as the highest-scoring proposal submitted in response to the RFP.
Switching Order	A switching order is a written set of instructions, using three-way communications during implementation, to ensure that an electrical facility is de-energized and put into an electrically safe condition before maintenance is performed. It would typically include at least the following elements: • switching activities step by step, • estimated times, • responsibility assignments, • applicable safety measures, and • necessary personal protective equipment for each step.

Attachment 2

Design-Related Terminology

Term	Explanation
ACSR	Aluminum conductor, steel reinforced. With **ACSR** conductor, both the primary conducting material (aluminum) and steel strands contribute to overall conductor strength. Because the aluminum is important as a supporting material, system operators must be careful not to allow the conductor to become so hot that the aluminum starts to soften (referred to as annealing). Extended operation at higher temperatures could cause ACSR to start losing its strength, increasing risk of low clearance or conductor failure.
ACSS	Aluminum conductor, steel supported. **ACSS** conductors use fully annealed aluminum supported on high-strength steel. Because the steel is the primary source of conductor strength, ACSS conductor usually can be operated at higher temperatures than ACSR.
Canvasback	**Canvasback** is a trade name for a conductor variety of a specific gauge (as measured in kcmil), with a particular combination of steel and aluminum strands—in this case, 954 kcmil 30/19, denoting 30 aluminum strands surrounding 19 steel strands in each conductor bundle.
Cardinal	**Cardinal** is a trade name for a conductor variety of a specific gauge (as measured in kcmil), with a particular combination of steel and aluminum strands—in this case, 954 kcmil 54/7, denoting 54 aluminum strands surrounding seven steel strands in each conductor bundle.
Counterpoise	The term **counterpoise** describes measures, such as lengths of conductive line or other material, used to further dissipate electrical charge when primary methods used for grounding around transmission structures (such as driven ground rods) are not sufficient to achieve a desired target level of ground resistance.
Curlew	**Curlew** is a trade name for a conductor variety of a specific gauge (as measured in kcmil), with a particular combination of steel and aluminum strands—in this case, 1,033.5 kcmil 54/7, denoting 54 aluminum strands surrounding seven steel strands in each conductor bundle.

Term	Explanation
Dead-end structures (also failure containment, containment, or storm structures)	**Dead-end** or failure containment transmission structures are designed to withstand more mechanical stress than standard "tangent" or "running angle" structures (explained below). They are used at heavy-angle turns along transmission routes (where the forces created by the high degree of the angle in conjunction with the conductor weight and tension make it harder for support structures to remain upright). They are also placed at specified intervals along a transmission line so that, if something seriously damages or destroys some of the supporting structures, the structure failure will not cascade through many miles of transmission line. Instead, the dead-end structures on either side of the damaged area will arrest the structure failures.
Direct embed	Transmission structures that are **direct embedded** are generally anchored by extending the structure shaft below grade, relying on the surrounding earth and backfill material for support. To place direct-embedded structures, construction workers excavate a hole of sufficient depth, place the structure in it, and then refill the space around the structure. (The fill material may be gravel, engineered material or replacement of the excavated backfill. A bearing plate may be engineered into the design of the foundation as needed.)
Drake	**Drake** is a trade name for a conductor variety of a specific gauge (as measured in kcmil), and a particular combination of steel and aluminum strands—in this case, 795 kcmil 26/7, denoting 26 aluminum strands surrounding seven steel strands in each conductor bundle.
Drilled pier	A **drilled pier** is a concrete pier foundation with steel reinforcement and anchor bolts. Depending on soil conditions installation may be with or without casing. Either permanent or temporary casing may be used. Installation may require specialized techniques and drilling fluids.
Fraser	**Fraser** is a trade name for a conductor variety of a specific gauge (as measured in kcmil), with a particular combination of steel and aluminum strands—in this case, 946.7 kcmil 35/7, denoting 35 aluminum strands surrounding seven steel strands in each conductor bundle.

Term	Explanation
Galloping	**Galloping** is a term for how overhead power lines will oscillate (generally, but not exclusively, in a vertical direction) in a low-frequency, high-amplitude motion due to wind and the formation of a thin layer of ice on the wire. Sustained or severe galloping can damage or cause failure of transmission line components and supporting structures.
Galvanized steel	A **galvanized steel** transmission structure is one in which the steel has been coated in zinc to prevent corrosion. This gives it a shiny appearance, as distinguished from "weathering steel" (described below).
Guying	**Guying** is the practice of attaching tensioned cables (typically steel) to transmission structures to increase their stability.
Kcmil	**Kcmil** is an abbreviation for thousands of circular mils, a measurement of wire gauge (a mil is 1/1000 inch).
Lapwing	**Lapwing** is a trade name for a conductor variety of a specific gauge (as measured in kcmil), with a particular combination of steel and aluminum strands—in this case, 1,590 kcmil 45/7, denoting 45 aluminum strands surrounding seven steel strands in each conductor bundle. The designation of "HS" with the term Lapwing indicates a high-strength variant of this conductor type.
Monopole	A **monopole** is a single primary structure (typically, either wood or steel) that supports an overhead transmission line—as distinguished, for example, from H-frame, three-pole, or lattice tower structures. Tangent monopole structures typically have davit arms to position conductor assemblies a minimum distance away from the structure.
Optical ground wire	**Optical ground wire** is composed of optical fiber surrounded by conductive material (steel and aluminum). It is used in conjunction with overhead transmission lines to combine the functions of grounding (*see* the explanation of shield angle below) and communications.
Running angle (structure)	**Running angle** structures are structures used for portions of a transmission line route that have light- or medium-angle turns. Typically, the suspension assemblies for attaching the conductor to the structures will permit the insulators to swing away from the support structure.

Term	Explanation
Shield (or shielding) angle	The terms **shield angle** or **shielding angle** describe the position of optical ground wire secured on a transmission structure in relation to the position of the conductor below for which it provides shielding. (Because the optical ground wire is positioned above the conductor, it will attract lightning strikes that might otherwise strike the conductor, and safely conduct the resulting electrical charge along grounding material on the structure to grounding rods or other devices below.) Specifically, shield angle describes the angle between (a) an imaginary vertical line drawn from the attachment point of the optical ground wire and (b) an imaginary line drawn between the attachment point for the optical ground wire and the attachment point (on the same structure) for the shielded conductor. A smaller shield angle more effectively protects the conductor beneath.
Tangent (structure)	**Tangent** structures are structures used for portions of a transmission line route that are mostly straight or have very minor turns).
Weathering steel	A **weathering steel** transmission structure is one that, with prolonged exposure to weather, will develop a stable coating of oxidation over the steel. The coating, which is a rusty brown color, protects the steel from corrosion and eliminates the need for painting.

Attachment 3

Finance and Rate Terminology

Term	Explanation
AFUDC	**AFUDC** is an abbreviation for "allowance for funds used during construction." In the context of transmission rate regulation, it refers to a request by the owner of a transmission facility to be allowed to capitalize, and earn a permitted rate of return on, the net cost of borrowed funds used during construction, as well as equity funding. Recovery of AFUDC is not available until after the facility has been placed in service.
CWIP	**CWIP** is an abbreviation for "construction work in progress." In the context of transmission rate regulation, it refers to a request by the owner of a transmission facility to be allowed to include costs of facility construction in rate base before the corresponding transmission facility has been placed in service. Under FERC rules, CWIP funding is limited to amounts that would otherwise qualify for AFUDC.
Net plant	In the context of MISO transmission rates, the term **net plant** refers to remaining plant balance for transmission facilities (referred to as "plant") not yet depreciated.
Project-based financing	**Project-based financing** refers to financing that is to be repaid from cash flows specific to the project, and therefore does not involve third-party financial support or financial resources. Accordingly, security interests for project financing provide recourse only to project assets (not to any unrelated or general corporate assets of the borrower).
Project Implementation Cost	For purposes of this report, **project implementation cost** (or simply "**implementation cost**") refers to the cost estimate (in 2016 dollars) for fully implementing the proposal and placing the project into service. Project implementation cost is calculated in the Proposal Template Workbook based on required inputs for sixteen cost categories explained in Section C.4 of "Part 2: Proposal Instructions" in the RFP package.

Attachment 4

Correlation Tables

Factors from RFP: Cost and Design - 30%

TARIFF		PROPOSAL INFORMATION
CRITERIA	SUBCRITERIA	FACTOR
Cost and Design	Reasonably Descriptive Facility Design and Rigor	Proposed Conductor Selection
		Flexibility of Proposed Design
		Galloping and Vibration Consideration
		Geotechnical Investigation Consideration
		Proposal Grounding Consideration
		Lightning Protection and Reliability Considered
		Line Rating Information Considered
		Foundation Types Identified and Considered
		Estimated Positive Sequence Line Impedence & Pi-Equivalent Susceptance
		OPGW or Communication System Provided and Considered
		Project Line Length Considered
		Structure Materials Considered
		Structure Types Identified
		Substation Tie-in And Upgrades Considered
		Road Crossing and Potential Crossing Problems Considered
		Utility Crossing and Potential Crossings Considered
		Ohio River Crossing Identified
		Line Losses & Nomalized Loss Value

Factors from RFP: Cost and Design - 30% (continued)

TARIFF		PROPOSAL INFORMATION
CRITERIA	**SUBCRITERIA**	**FACTOR**
Cost and Design	Project Cost Estimate and Rigor	Engineering and Project Management Costs
		Route Evaluation ROW and Permitting Costs
		Material Costs
		Construction Costs
	Estimated Annual Transmission Revenue Requirement	Project Construction Cost (including ongoing Capex if any)
		Return on Equity
		Cost of Debt
		Taxes
		Operations and Maintenance Costs (including G&A)

Factors from RFP: Project Implementation - 35%

TARIFF		PROPOSAL INFORMATION
CRITERIA	**SUBCRITERIA**	**FACTOR**
Project Implementation	Project Implementation Schedule	Schedule Included (Route, Permitting, Engineering and Design, Materials, etc.
	Project Management	Project Management Experienced
	Route and Site Evaluation	Potential Route Identified and is Acceptable
		Reasonableness of Route Provided
	Regulatory Permitting	Summary of Regulatory Permitting and Staff Provided
		Ohio River Crossing and Regulatory Permitting
	Right of Way and Land Acquisitions	Right of Way Acquisitions Identified
	Engineering and Surveying	Survey Included
	Material Procurement	Material Quality Assurance / Control
	Construction	Constructability (Access, matting, hauling, etc.)
	Commissioning and Energiztion	Commissioning Experience
	Safety Assurances	Bidder has Safety Plan Outlined in Proposal
		Bidder has Proven Safety Reputation

Factors from RFP: Project Implementation - 35% (continued)

TARIFF		PROPOSAL INFORMATION
CRITERIA	SUBCRITERIA	FACTOR
Project Implementation	Capital Resources and Financing Plan	Plan of Finance - Breadth and Thoughfulness
		Capital Markets Access
		Management Experience
		Cost Containment- Equity
		Cost Containment - Debt
		Respondent Proposal Contingencies
		Formation Documents and Conveyance of Interest
		Corporate Finance: Credit Quality
		Corporate Finance: Capital Reserves
		3% Project Deposit Access
		Financial Statements
		Parental Support or Guarantee
		Project Pro-Forma
	Previous Applicable Experience and/or Demonstrated Ability	Previous Experience Provided and Evaluated

Factors from RFP: Operations and Maintenance - 30%

TARIFF		PROPOSAL INFORMATION
CRITERIA	**SUBCRITERIA**	**FACTOR**
Operations and Maintenance	Local Balancing Authority	Description of Proposed plan to incorporate Transmission into MISO Local Balancing Authority Area
	Switching - Coordinatnoi with Substation Owners	Description of current capabilities, resources, processes and switching operational plan
	Preventative and/or Predictive Maintenance and Testing	Current and/or futue capabilities and resources to perform overall maintenance program
		Proximity of internal and external maintenance staff relative to proposed line
		Vegetation management program - capabilities and policies
		Aerial inspection / patrol program - capabilities and policies
		Hot line maintenance - capabilities and policies
		Transmission Line access road maintenance program - capabilities and policies
		Policies, processes and procedures for overall maintenance programs
		Detailed maintenance staffing plan
	Spare Parts, Structures and/or Equipmet	Current and/or future capabilities and resources
		Spare materials operational plan and policies / procedures
		Description of sparing strategy and invesntory levels for spare parts, structures, and equipment.

Factors from RFP: Operations and Maintenance - 30% (continued)

TARIFF		PROPOSAL INFORMATION
CRITERIA	**SUBCRITERIA**	**FACTOR**
Operations and Maintenance	Forced Outage Response	Current and/or Future capabilities and resources
		Forced outage operational plan and policies / procedures
		Forced outage response time and proximity of resources
		Reliability metrics
	Emergency Repair and Testing	Current and/or future capabilities and resources
		Emergency Repair and Testing Operational Plan and proximity of resources
		Emergency Repair and Testing Response time and proximity of resources
	Major Facility Replacement Capabilities	Current and/or Future capabilities and resources
		Catastrophic restoration policies and operational plan description
	Financial Strategy for Facility Rebuilds and/or Replacement	Major facility replacement financial plan description
	Safety Assurance and Risk Management Plan	Safety Plan Outlined in Proposal
		Proven Safety Reputation
	Previous Applicable Experience and/or Demonstrated Ability	Previous Experience Provided and Evaluated

Factors from RFP: Planning Participation - 5%

TARIFF		VERIFICATION
Planning Participation	Proposals shall include documentation regarding relevant planning studies performed by the RFP Respondents or Proposal Participants and the results supplied to the Transmissino Provider during the planning process, as well as documentation of transmission project ideas submitted by the RFP Respondents or Proposal Participants to the Transmission Provider to address the samve Transmission Issues being addressed by the Competitive Transmission Project for which the Proposal(s) is/are being submitted.	Did the RFP Respondent or RFP Respondent participate in the 2015 North-Central Market Congestion Planning Study by demonstrating a timely submission of a Transmission Issue Solution Idea Submittal form?

About MISO

Midcontinent Independent System Operator, Inc. (commonly referred to as "MISO") is an independent, non-profit 501(c)(4) membership-based organization responsible for ensuring the reliable operation of, and equal access to, the electric high-voltage power system in 15 U.S. states and the Canadian province of Manitoba. As a federally approved Regional Transmission Organization ("RTO"), MISO manages one of the world's largest electric energy markets, which in 2015 cleared $24.7 billion dollars in gross market charges, covered approximately 965,000 square miles, and delivered approximately 646 terawatt-hours of electric energy to millions of consumer homes. Membership in MISO is voluntary and is supported by MISO's vision to be the most reliable, value-creating RTO. Further information about MISO can be found on the MISO website at: www.misoenergy.org

MISO's current scope of operations includes:

- 65,800 miles of transmission
- 42 million end-use consumers
- Historic Peak Load (July 20, 2011)
  - 127,125 MW (market)
  - 130,917 MW (reliability)
- Generation Capacity
  - 176,559 MW (market)
  - 191,985 MW (reliability)
- Historic Wind Peak
  - 13,700 MW (December 8, 2016)