

# SELECTION REPORT

## Hartburg-Sabine Junction 500 kV Competitive Transmission Project



November 27, 2018





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# **Selection Report**

## **Hartburg-Sabine Junction 500 kV Competitive Transmission Project**

## 1. Executive Summary

On February 6, 2018, MISO issued a request for proposals for a market efficiency project known as the Hartburg-Sabine Junction 500 kV Competitive Transmission Project. MISO has completed its in-depth comparative analysis of the 12 comprehensive proposals submitted in response to the request for proposals, applying the four evaluation criteria specified in MISO's tariff: cost and design, project implementation, operations and maintenance, and planning participation.

MISO designated **NextEra Energy Transmission Midwest, LLC ("NextEra")** as the Selected Developer for the Hartburg-Sabine Junction 500 kV Competitive Transmission Project. NextEra's proposal offers an outstanding combination of low cost and high value, with best-in-class cost and design, best-in-class project implementation plans, and top-tier plans for operations and maintenance. NextEra's Selected Proposal has an estimated benefit-to-cost ratio of 2.20.<sup>1</sup>

NextEra is a subsidiary of NextEra Energy Transmission, LLC and an indirect, wholly owned subsidiary of NextEra Energy, Inc., which is headquartered in Juno Beach, Florida. NextEra Energy, Inc. is the largest investor-owned electric utility in the United States. NextEra Energy, Inc.'s principal subsidiaries are Florida Power & Light Company, which serves nearly five million customer accounts in Florida and is one of the largest rate-regulated electric utilities in the United States, and NextEra Energy Resources, LLC, which, together with affiliated entities, is the largest generator of energy from the wind and sun in North America.

The Hartburg-Sabine Junction 500 kV Competitive Transmission Project consists of five new high-voltage transmission lines and one new substation. The new 500 kV transmission line will run generally southwest from the existing Hartburg Substation to a new project substation—the Stonewood 500 kV Substation. Four new 230 kV transmission lines originating from the Stonewood 500 kV Substation will interconnect to existing 230 kV transmission lines nearby.

MISO received responses to the request for proposals from the following RFP Respondents<sup>2</sup>, which are listed alphabetically:

- Avangrid Networks, Inc.
- EasTex TransCo, LLC
- GridLiance Heartland, LLC
- ITC Midcontinent Development, LLC / Hunt Transmission Services, L.L.C.
- Midwest Power Transmission Arkansas, LLC

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<sup>1</sup> MISO's estimated benefit-to-cost ratio for the project was 1.35. The minimum threshold required to recommend a market efficiency project to MISO's Board of Directors is 1.25.

<sup>2</sup> All RFP Respondents must be MISO Qualified Transmission Developers. MISO received more than one proposal from one or more RFP Respondents.



- NextEra Energy Transmission Midwest, LLC
- Transource Energy, LLC
- Verdant Plains Electric, LLC
- Xcel Energy Transmission Development Company, LLC

The proposals submitted for the Hartburg-Sabine Junction 500 kV Competitive Transmission Project built upon the quality and depth of the Duff-Coleman EHV 345 kV Competitive Transmission Project selection process in 2016. It was clear RFP Respondents that participated in the Duff-Coleman solicitation brought forward meaningful insights and experience they gained in that process. MISO was encouraged by the level of interest and that the Hartburg-Sabine Junction 500 kV Competitive Transmission Project attracted new entrants as well, and thanks the RFP Respondents for their submissions.

The figure below depicts the final scoring results (as called for in the MISO Tariff and further detailed in the business practices manual) for each proposal. All RFP Respondents (other than NextEra) are identified only by numerical designations to protect confidentiality.

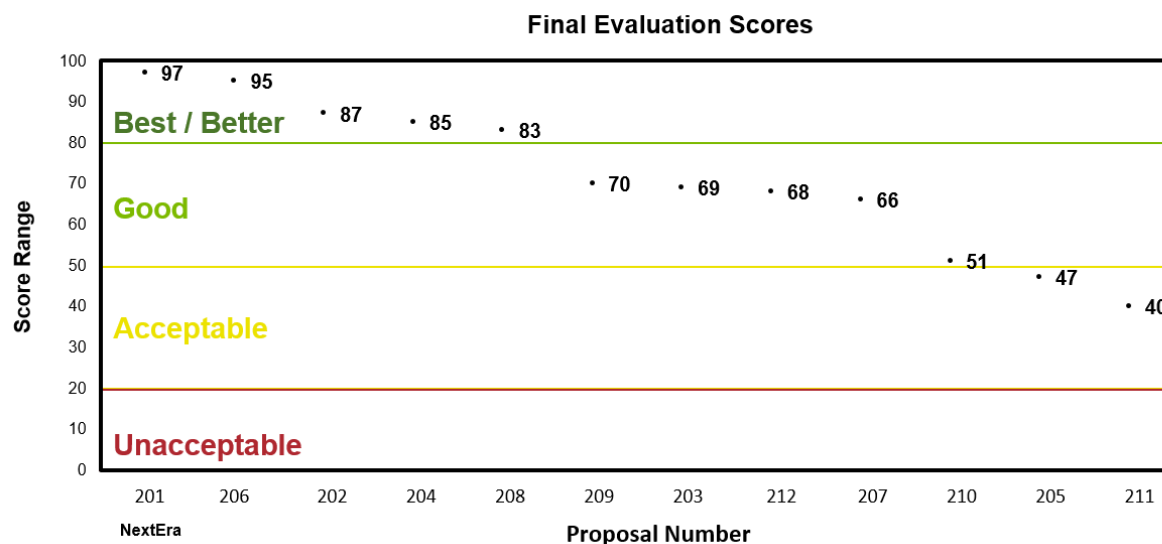


Figure 1-1: Final Scoring Summary

The scores shown in Figure 1-1 illustrate that each RFP Respondent has the necessary capabilities to design, finance, construct, operate, and maintain the project. There were nevertheless meaningful distinctions among the proposals with respect to specificity, certainty, risk mitigation, cost, quality of design and overall value. The scores reflect these distinctions and show how some RFP Respondents are comparatively better positioned based on the facts submitted in their proposals.

MISO's Tariff requires MISO to evaluate and score proposals for mixed projects (transmission lines and substations) according to four evaluation criteria: cost and design,



weighted at 35%; project implementation, weighted at 30%; operations and maintenance, weighted at 30%; and transmission planning participation, weighted at 5%.<sup>3</sup>

MISO evaluated each proposal according to 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 reflect the specific documentation provided by the RFP Respondents, without relying on any information outside the four corners of their proposals.

Any proposal considered the best in a given evaluation criterion was categorized as 'Best' for that criterion. The remaining proposals in that same criterion were then categorized into one of the remaining four categories ('Better,' 'Good,' 'Acceptable,' or 'Unacceptable')<sup>4</sup> based upon the merits of the proposal and the application of the evaluation principles. A numerical score was then awarded to each proposal, commensurate with its categorization and comparative ranking for each evaluation criterion.

The table below shows MISO's comparative categorizations of all proposals within each of MISO's four evaluation criteria, arranged numerically based on their randomly assigned proposal identification number.

Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	Redacted
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 1-1: Comparative Categorization Summary Table

With its strength across all four of MISO's evaluation criteria, NextEra's Selected Proposal earned a total score of 97 out of a possible 100 points, as illustrated in Figure 1-1. All other proposals scored between 95 and 40 points.

<sup>3</sup> MISO Tariff, Attachment FF, Section VIII.E.1.

<sup>4</sup> Business Practices Manual No. 027 – Competitive Transmission Process (BPM-027), Section 8.2.1.

### Noteworthy: Cost and Design

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

- RFP Respondents submitted total project implementation cost estimates<sup>5</sup> that ranged from \$95.4 million to \$133.9 million (in 2018 dollars). This compares to MISO's scoping-level cost estimate of \$122.4 million (in 2018 dollars) for the facilities within the scope of the request for proposals.
- MISO's calculations of benefit-to-cost ratios for the proposals ranged from a low of 1.37 to a high of 2.34, with higher ratios reflecting RFP Respondents' ability to deliver lower up-front costs, lower costs over time, or both. This compares to MISO's transmission expansion plan estimate for the project of 1.35.
- MISO's calculations of cost-per-mile for the proposals' 500 kV transmission lines showed a range of \$3.0 million to \$4.3 million per mile.
- The net present value of estimated annual transmission revenue requirements (reflecting caps where applicable) ranged from \$88.2 million to \$166.3 million (in 2018 dollars).
- RFP Respondents offered a variety of cost caps, concessions, and commitments, as well as schedule guarantees, which enhanced competition on project cost, annual transmission revenue requirement, and certainty of the project in-service date.
- Proposals with 10- or 40-year caps on their annual transmission revenue requirements generally performed well in scenarios testing how changes to particular cost drivers affected project costs over time.
- There were diverse proposals for structure and conductor types for the 500 kV and 230 kV transmission lines, reflecting common industry practices.
- 230 kV bus arrangements included ring bus, breaker-and-a-half, and double-breaker, double-bus configurations, reflecting common industry practices.
- Most proposals designed the new substation as an open air-insulated substation. Two proposals designed the substation as a gas-insulated substation.

The Selected Proposal earned the categorization of 'Best' in cost and design, providing high value through robust transmission line and substation designs at comparatively low cost. NextEra's project implementation cost of \$114.8 million<sup>6</sup> is \$6.5 million below the median cost

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<sup>5</sup> Unless otherwise stated, cost estimates are presented in nominal dollars and all annual transmission revenue requirements are presented in net present value 2018 dollars.

<sup>6</sup> This equates to \$103.9 million in 2018 dollars, which is below the MISO scoping-level estimate, noted above, of \$122.4 million in 2018 dollars.

estimate. NextEra submitted a comparatively low estimated annual transmission revenue requirement of \$95.0 million, which is \$11 million below the median estimate.

NextEra provided greater cost certainty than most other proposals through its proposed cost caps and cost containment features. NextEra committed to forego both allowance for funds used during construction and construction work in progress. NextEra's cost recovery caps include:

- project implementation cost, at \$114.8 million,
- a limit on annual transmission revenue requirement, as well as operations and maintenance costs, for the first 10 years,
- return on equity, at 9.8%, and
- equity in its capital structure, at 45%.

NextEra's multiple categories of cost caps and cost containment measures enhance cost certainty and convey substantial benefits to ratepayers over time.

NextEra's Selected Proposal excelled in its transmission line and substation design. The Selected Proposal offers:

- robust and thoroughly supported 500 kV and 230 kV transmission line and substation designs,
- 500 kV and 230 kV transmission line ratings above minimums required in the request for proposals,
- a double-breaker, double-bus arrangement for the 230 kV bus in the new Stonewood 500 kV Substation,
- the highest-capacity transformer bank,
- thoughtful features to enhance operational and planning flexibility, and
- balanced environmental risks and mitigation in transmission line and substation design.

### **Noteworthy: Project implementation**

MISO observed the following noteworthy points from its review and analysis of the project implementation information submitted by each RFP Respondent:

- Every RFP Respondent demonstrated previous experience with transmission project development.
- Every RFP Respondent had general strategies for project management, permitting, environmental assessment, land acquisition, construction and materials procurement,

commissioning, and safety throughout the construction process. The highest-scoring proposals were most robust and tailored specifically for this project.

- Many RFP Respondents supplied well-developed project schedules and plans, supported by critical path recognition and thorough risk analysis that included potential impacts and mitigation steps.
- Proposed route lengths (in geographical miles) ranged from roughly 19.9 to 24.5 miles for the 500 kV transmission line and from approximately one-quarter mile to 2.4 miles for each circuit of the 230 kV transmission lines.
- All locations for the new Stonewood 500 kV Substation were within two and a half miles of each other.
- Many RFP Respondents had undertaken early consultations with regulatory authorities, as well as other governmental agencies in the project area, and had taken soil samples and conducted preliminary fieldwork to increase the certainty and reduce risk for their project implementation proposals.
- Every RFP Respondent submitted financing and capital resource plans that explained and demonstrated its ability to fund the construction of this project.

MISO determined that NextEra's project implementation is the 'Best' among all the proposals. NextEra managed the potential impacts of route and design changes ordered by the Public Utility Commission of Texas by completing substantial project-specific planning, site analysis, and field investigation. NextEra also conducted extensive outreach to federal, state, and local authorities.

### **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 that they, their affiliates, or their anticipated maintenance contractors had previous experience maintaining Extra-High Voltage (EHV) transmission facilities.
- Many RFP Respondents proposed to rely on affiliated companies to perform maintenance and forced outage responder duties, although in some cases third-party contractors would supplement internal capabilities or be entirely responsible for project maintenance activities.
- RFP Respondents' forced outage and emergency response times ranged from less than one hour to several hours.
- The proposals varied considerably in the degree to which RFP Respondents explicitly considered and addressed unique challenges (and the need for specialized equipment

and capabilities) to maintain and potentially restore facilities located near coastal waterways and wetland areas in a hurricane-prone area.

- The divergence among proposals of estimated operations and maintenance costs over the projected 40-year life was remarkable, ranging from roughly \$6.4 million to \$178.4 million.

MISO determined that NextEra's overall operations and maintenance plan was 'Better,' ranked second only to the 'Best' operations and maintenance proposal submitted by RFP Respondent 203. NextEra's Selected Proposal featured:

- comprehensive procedures for repairing various types of equipment for the project and for testing equipment before re-energizing,
- extensive 500 kV experience in hurricane-prone areas to support integration of the project into its control center,
- the ability to leverage experienced affiliates,
- local field crews with extra-high voltage experience,
- access to specialized equipment for the project-area terrain,
- hurricane preparedness and response plans developed and tested over time,
- personnel with live-line insulator replacement capability (combined with project transmission structure designs and configurations designed to accommodate live-line work),
- well-supported testing, switching, and predictive maintenance programs, and
- access to ample spare parts, with a spare 500/230 kV transformer, a spare 500 kV breaker, and a spare 230 kV breaker located at the Stonewood 500 kV Substation site.

### **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 points) if at least one RFP Respondent or Proposal Participant or an affiliated entity participated in the MISO annual transmission expansion planning process that included the project. 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, except with respect to the Selected Proposal, MISO has redacted proposal-specific information about planning participation in this report.



## Looking Ahead

The remainder of this report provides background information on the Hartburg-Sabine Junction 500 kV Competitive Transmission Project and describes, in summary form, how MISO performed its comparative analysis for the 12 proposals. Sections 3 and 4 summarize in greater depth the Selected Proposal submitted by NextEra, together with the proposals submitted by the other RFP Respondents.

The project implementation process will begin immediately with execution of the Selected Developer Agreement. MISO looks forward to collaborating with NextEra to support successful, on-time completion of project implementation and enable ratepayers to realize the value offered by NextEra's Selected Proposal.

## 2. Introduction and Overview

### 2.1 Introduction to Selection Report

This report explains the basis for MISO's determination of the Selected Developer for the Hartburg-Sabine Junction 500 kV Competitive Transmission Project, and provides an overview of the selection process MISO used to make its determinations. Apart from the introduction in this Section 2.1, this document consists of the following elements:

- an executive summary (Section 1),
- an overview of the project and the selection process, including issuance of the request for proposals ("RFP"), submission of proposals, and a brief summary of the comparative analysis process MISO used to evaluate all submitted proposals (Sections 2.2 through 2.6),
- summary descriptions of the 12 proposals received by MISO in response to the RFP, together with the results of the comparative analysis (with the Selected Proposal discussed in Section 3 and remaining proposals discussed in Section 4),<sup>7</sup>
- a glossary of defined terms used in this report (Attachment 1),
- explanations of specialized terminology used in connection with the RFP (Attachment 2),
- an overview of MISO's comparative analysis process to evaluate proposals (Attachment 3), and
- summary tables correlating information requested in the RFP to Tariff-prescribed evaluation criteria and sub-criteria (Attachment 4).

Please note that much of the detailed information provided in the RFP Respondents' proposals must be kept confidential. 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 randomly assigned numerical designations (201 through 212), to mask their identities as required by the Tariff. Section 2.5 of this report summarizes the Tariff confidentiality provisions governing the MISO Competitive Developer Selection Process.

This report may disclose the following types of information:

- the high-level design for the project,
- the estimated cost of the project,

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<sup>7</sup> 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.



- the estimated 40-year annual transmission revenue requirement for the project, and
- information relating to any cost-containment measures, cost-caps, and rate-incentives.

Consistent with the MISO Tariff and business practices, MISO provides more detailed information about the Selected Proposal than remaining proposals and identifies the Selected Developer by name.

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.

Cost information summarized in this report is in the form submitted by RFP Respondents, except where specifically stated otherwise (such as in calculations of cost-per-mile of 500 kV transmission lines). These submittals are in most cases stated nominal dollars. Net present value calculations for ATRR use an 8% discount rate back to 2018, applied over a 40-year period for costs beginning with the project in-service date of June 1, 2023.

## 2.2 Overview of the Hartburg-Sabine Junction 500 kV Project

MISO's Board of Directors approved MISO's transmission expansion plan for 2017 ("MTEP17"), which included one project eligible for the competitive developer selection process—the Hartburg-Sabine Junction 500 kV Competitive Transmission Project (referred to in this report as the "Hartburg-Sabine Project," or simply the "project"). MTEP17 showed the Hartburg-Sabine Project had an estimated benefit-to-cost ratio 1.35, which exceeds the 1.25 benefit-to-cost ratio required for designation of a MISO market efficiency project.<sup>8</sup>

This project, which has a planned in-service date of June 1, 2023, consists of five new high-voltage transmission lines and one new substation, as follows:

1. Hartburg-Stonewood 500 kV Transmission Line
2. Stonewood 500 kV Substation
3. Sabine-Stonewood 230 kV Transmission Line #1
4. Sabine-Stonewood 230 kV Transmission Line #2
5. Nederland-Stonewood 230 kV Transmission Line
6. McFadden Bend-Stonewood 230 kV Transmission Line

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<sup>8</sup> MTEP17: Book 1 – Transmission Studies, p. 90, available at <https://cdn.misoenergy.org/MTEP17%20Full%20Report106032.pdf>

The illustrative map below shows the general location of the project:<sup>9</sup>

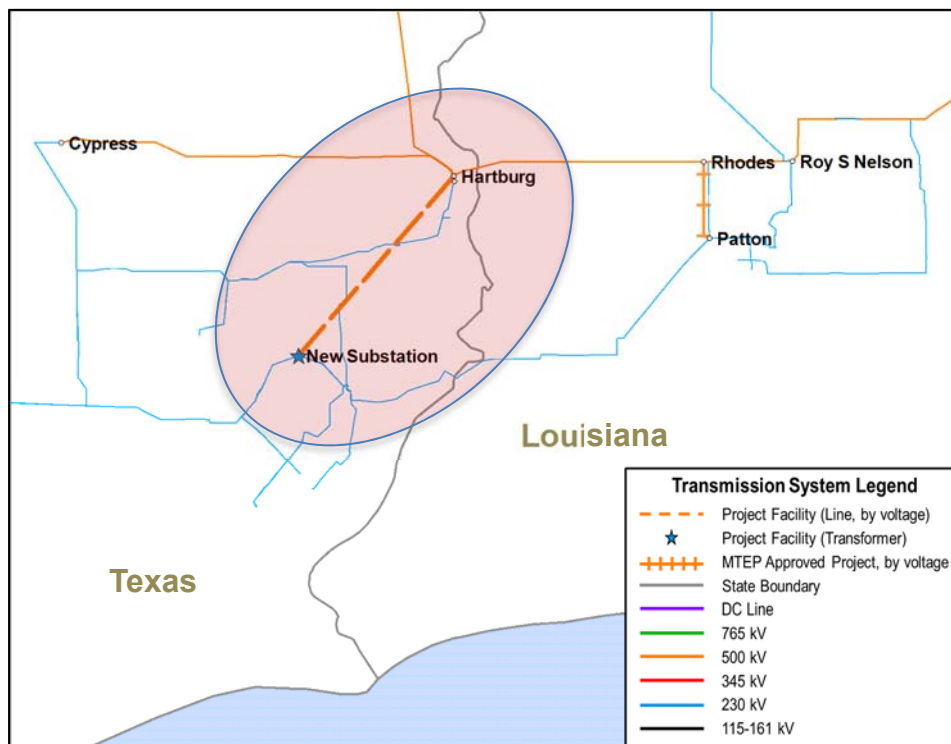


Figure 2-1: Simplified Project Map

<sup>9</sup> This image is for illustrative purposes only and does not represent line routing. Final line routing will be determined by the Selected Developer and the applicable siting authorities.

As shown in the simplified diagram at Figure 2-2,<sup>10</sup> the project's new single-circuit 500 kV transmission line will interconnect the existing Hartburg 500 kV substation (owned by Entergy Texas, Inc. ("Entergy")) to a new substation, which will interconnect with two of Entergy's existing 230 kV transmission lines. The new substation will include one 500 kV transmission position, one 500/230 kV transformer, and four 230 kV transmission positions.

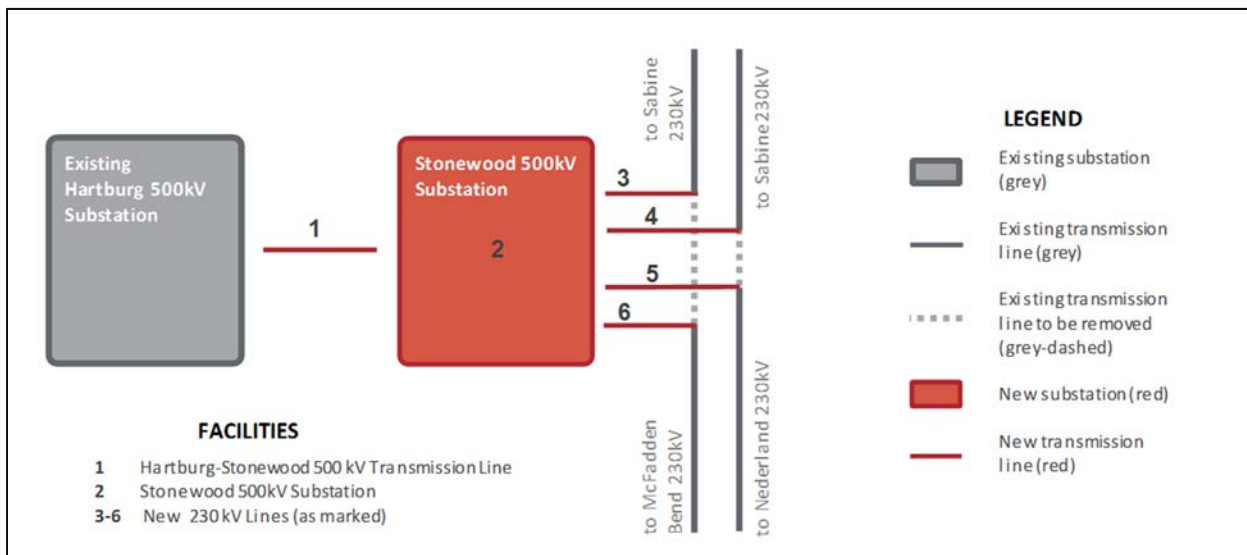


Figure 2-2: Simplified Depiction of Project Facilities

More information about the Hartburg-Sabine Project is available through MISO's Competitive Transmission Administration webpage<sup>11</sup> and in the MTEP17 Report.<sup>12</sup>

## 2.3 The Request for Proposals

### 2.3.1 Issuance

MISO issued the RFP for the Hartburg-Sabine Project on February 6, 2018, with proposals due by July 20, 2018. Full details about the RFP are available through MISO's Competitive Transmission Administration webpage.<sup>13</sup>

### 2.3.2 Post-Issuance Informational Meetings

MISO held public meetings to provide information and answer questions about the Hartburg-Sabine Project and the RFP on February 27, April 9, and June 7, 2018. MISO

<sup>10</sup> This image is for illustrative purposes only. Not intended to communicate configuration, scale, or location.

<sup>11</sup> <https://www.misoenergy.org/planning/competitive-transmission-administration/#nt=%2Fctadotype%3ACurrent%20Projects&t=10&p=0&s=FileName&sd=desc>

<sup>12</sup> <https://cdn.misoenergy.org/MTEP17%20Full%20Report106032.pdf>

<sup>13</sup> <https://www.misoenergy.org/planning/competitive-transmission-administration/#nt=%2Fctadotype%3ACurrent%20Projects&t=10&p=0&s=FileName&sd=desc>



maintains a publicly available register of questions asked, along with the answers provided by MISO, on its Competitive Transmission Administration webpage.<sup>14</sup>

## 2.4 Receipt of Proposals and Completeness Check

By the Proposal Submission Deadline of July 20, 2018, MISO received 12 proposals responding to the RFP. 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. MISO gave every RFP Respondent the opportunity to clarify or cure unclear or incomplete submissions. All RFP Respondents responded to MISO requests for clarification or cure and no proposals were subsequently withdrawn.

On August 31, 2018, after completing the validation, MISO publicly announced that it had received 12 valid and complete proposals from the following RFP Respondents and Proposal Participants:<sup>15</sup>

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<sup>14</sup> [https://cdn.misoenergy.org/Hartburg-Sabine\\_QA\\_PUBLIC144105.zip](https://cdn.misoenergy.org/Hartburg-Sabine_QA_PUBLIC144105.zip)

<sup>15</sup> <https://cdn.misoenergy.org/20180831%20Hartburg-Sabine%20Project%20-%20completed%20proposals271474.pdf>

List of Respondents Providing Complete Proposals	
RFP Respondent(s) <i>(Sorted Alphabetically)</i>	Proposal Participant(s)
Avangrid Networks, Inc.	N/A
EasTex TransCo, LLC	N/A
GridLiance Heartland, LLC	Cleco Energy, LLC
ITC Midcontinent Development, LLC / Hunt Transmission Services, L.L.C.	Texas Infrastructure Holdings, LLC
Midwest Power Transmission Arkansas, LLC	N/A
NextEra Energy Transmission Midwest, LLC	N/A
Transource Energy, LLC	Transource Texas, LLC
Verdant Plains Electric, LLC	N/A
Xcel Energy Transmission Development Company, LLC	N/A

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

## 2.5 Confidentiality, Communication Protocols, and Document Control

### 2.5.1 Confidentiality

MISO recognizes the importance of transparency in every step of the Competitive Transmission Process (as defined in the Tariff). At the same time, MISO is obligated to treat proposal materials submitted by RFP Respondents as confidential, except with respect to certain content of the Selected Proposal and other proposals.<sup>16</sup>

Proposal information that must be kept confidential (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

<sup>16</sup> Attachment FF, Section VIII.D.9.

- 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 publicly available).<sup>17</sup>

Proposal information the Tariff categorizes as not confidential includes:

- the identity of RFP Respondents and Proposal Participants,
- 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 (with the names of the RFP Respondents and Proposal Participants redacted or masked),
- all timetables and milestones agreed to between the Selected Developer and MISO in the Selected Developer Agreement,
- information that is publicly available,
- any information an RFP Respondent or Proposal Participant has consented to release, and
- any information the Tariff requires MISO to make publicly available.<sup>18</sup>

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.

### 2.5.2 Communication Protocols

MISO adheres to the following self-imposed communication protocols throughout the competitive developer selection process:

- **Project Information Kept Confidential:** Information deemed confidential under the Tariff related to competitive projects will be treated as commercially / competitively sensitive.
- **Communications to Be Coordinated:** MISO aims to coordinate all communications with interested stakeholders regarding RFPs, the evaluation process, selection report, and variance analysis. Please refer all questions to MISO Client Relations at [TDQS@misoenergy.org](mailto:TDQS@misoenergy.org) and not to individual MISO personnel.

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<sup>17</sup> Attachment FF, Section VIII.D.9.a.

<sup>18</sup> Attachment FF, Section VIII.D.9.b.

- **Questions Will Be Answered Transparently:** MISO will publicly post questions it receives and vetted answers at the Competitive Transmission Administration webpage.
- **Project-Specific Questions to Be Directed to MISO:** Once an RFP is issued for a Competitive Project and until the Selection Report is issued, all questions regarding that project / RFP must be directed to MISO and not to interconnecting incumbent transmission owners. MISO will process these questions in accordance with MISO's Business Practices Manual 027 ("BPM-027").

These communication protocols are posted on MISO's public website,<sup>19</sup> were incorporated in part within the RFP and BPM-027, and made part of presentations delivered by MISO's evaluation team during public stakeholder meetings.

MISO conducted internal training for employees with responsibilities in the competitive developer selection process, and communicated the protocols to all MISO employees and consultants. MISO emphasized the need for confidentiality and announced the communication protocols at every meeting of MISO staff or the Competitive Transmission Executive Committee ("Executive Committee") 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.

### 2.5.3 Document Control Procedures and Sequencing of Proposal Designation and Review

To facilitate secure proposal access and evaluation, MISO restricted access to all electronic versions of proposal-related documents. Only members of the MISO evaluation team were allowed access to proposal materials.

In addition, before MISO evaluated the proposals, MISO assigned a numerical designation to each proposal (randomly selected from the range of 201 to 212) to enable evaluation team members to review and discuss proposals without referring to any RFP Respondent by name.

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<sup>19</sup> [https://cdn.misoenergy.org/Hartburg-Sabine\\_CommunicationProtocols\\_20180205122801.pdf](https://cdn.misoenergy.org/Hartburg-Sabine_CommunicationProtocols_20180205122801.pdf)



To avoid bias due to order of evaluation during comparative analysis, each of the work stream teams (composed of MISO staff and consultants with expertise in cost, design, project implementation, and operations and maintenance) reviewed proposals in a randomly ordered sequence, and each work stream's review sequence differed from that of the other work streams.

## 2.6 Comparative Analysis Process to Evaluate Proposals

### 2.6.1 Basis for Proposal Evaluation, Proposal Summaries, and Scope of Proposals

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

Section 8 of BPM-027<sup>20</sup> describes key components of the process MISO uses to evaluate proposals, including MISO's overarching evaluation principles and evaluation criteria. Attachment 3 provides a general overview of MISO's competitive developer selection process.

MISO personnel and consultants with expertise in each subject area addressed by the proposals carefully reviewed all information submitted for every proposal, including supporting attachments. To comply with Tariff confidentiality requirements, this report must condense and describe in general terms the results of MISO's comparative analysis, focusing on the meaningful differences among proposals. The proposal summaries in Section 3 and Section 4 do not attempt to convey the full scope and content of any proposal, but rather highlight the most salient information.

Managing and evaluating 12 proposals is a major undertaking, requiring sustained efforts by the Executive Committee and evaluation team to analyze proposals that averaged over 5,700 pages of narrative text, design discussion, cost and financial data, and supporting attachments. The average number of files accompanying a single proposal was 150. Each proposal included a proposal template workbook, each of which encompassed at least 11 worksheets.

### 2.6.2 Aspects and Elements

In the RFP for the Hartburg-Sabine Project, MISO encouraged RFP Respondents to think creatively about how their proposals could deliver the highest overall value to the project. MISO identified a set of aspects and elements MISO anticipated could be particularly important for the

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<sup>20</sup> A link to BPM-027 is posted on MISO's Competitive Transmission Administration page at <https://www.misoenergy.org/planning/competitive-transmission-administration/#t=10&p=0&s=FileName&sd=asc>

success of the project, carefully noting that the list was neither prescriptive nor exhaustive. Section 4.B of the RFP described these aspects and elements as follows:

1. **Cost Certainty.** The project's estimated benefit-to-cost ratio is 1.35. Therefore, an important element of the project will be the mitigation of risks that may result in cost increases, ensuring the current benefit-to-cost ratio will be preserved or increased.
2. **230 kV Line Length.** An important aspect of the project will be balancing the minimization of line length for each 230 kV transmission line (and thereby maximizing the benefits calculated in MTEP17 for this project), with other design considerations such as landowner, environmental, and pipeline impacts.
3. **Operational and Planning Flexibility.** Of particular importance to project success will be how the designs for the 500 kV and 230 kV transmission lines and substation for this project translate into flexibility in both operation and maintenance of facilities and over the planning horizon.
4. **Regulatory Certainty.** Of particular importance to project success in planning, financing, constructing, owning and operating this project are the regulatory requirements, necessary permits, certifications, and authorizations needed from all regulators.

### 2.6.3 Unique Considerations for Mixed Competitive Transmission Projects

For Mixed Competitive Transmission Facility Projects ("mixed projects"), such as the Hartburg-Sabine Project, the evaluation process entails more design elements and additional project implementation tasks, as compared to projects consisting of only competitive transmission lines or only competitive substations. Within the cost and design and the project implementation criteria for mixed projects, some sub-criteria include factors that apply solely to transmission line facilities, or factors that apply solely to substation facilities, or factors relevant to the project as a whole. The correlation tables from the RFP, which are included with this report at Attachment 4, provide a helpful overview of the relationship among these dimensions of the evaluation process, with color coding to distinguish between factors common to all facilities, factors specific to transmission lines, and factors specific to substations.

### 2.6.4 Overview of Proposal Cost Caps, Commitments, and Concessions

RFP Respondents proposed a wide range of cost caps, concessions, and other cost-containment commitments in their proposals. Attachment 3 provides an overview of MISO's process and analytical framework for evaluating the proposals, including RFP Respondents' cost and design information. 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.

OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and

caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

Table 2-2: Cost Cap Summary

The table above uses several acronyms for brevity. These include “AFUDC” (allowance for funds used during construction), “CWIP” (construction work in progress), “PUCT” (Public Utility Commission of Texas), “ROE” (return on equity), and “ATRR” (annual transmission revenue requirement). The glossary in Attachment 1 provides more detailed definitions.

### 2.6.5 Planning Participation

On February 6, 2018, MISO publicly identified the Qualified Transmission Developers that earned planning participation credit. MISO has redacted information on credit for planning participation from the proposal summaries (to avoid indirectly disclosing the identity of RFP Respondents that did not receive credit for planning participation).

The entities that received credit for planning participation in MTEP17 are as follows:

Entity Name (Sorted Alphabetically)
Ameren Transmission Company of Illinois
Duke – American Transmission Company, LLC
East Texas Electric Cooperative
Entergy Services, Inc.
Grid America LLC
ITC Holdings Corp., a Fortis Company
Midcontinent MCN, LLC
Midwest Power Transmission Arkansas LLC
NextEra Energy Transmission LLC (NEET) & NextEra Energy Transmission Midwest LLC
Transource Energy, LLC
Xcel Energy, NSP, XETD

Table 2-3: Entities Receiving Planning Participation Credit

## 3. The Selected Proposal

### 3.1 Summary Description of the Selected Proposal

#### 3.1.1 Overview of Selected Proposal

MISO has designated NextEra Energy Transmission Midwest, LLC (“NextEra”) as the Selected Developer, and the proposal identified as Proposal 201 as the Selected Proposal.

The Selected Proposal provides the greatest overall value by offering an outstanding combination of low cost, robust transmission and substation design, and strength across all evaluation criteria. MISO determined that the Selected Proposal was ‘Best’ in cost and design, ‘Best’ in project implementation, and ‘Better’ in operations and maintenance (ranked second in operations and maintenance only to one other proposal). The project-specific, extensive analysis and narrative in NextEra’s proposal reflected thorough knowledge and substantial effort in proposal development.

NextEra’s project cost cap for the Selected Proposal is equal to its project implementation cost of \$114.8 million. NextEra also capped several other inputs to its ATRR, including return on equity (at 9.8%) for the life of the project, equity in capital structure (at 45%) for the life of the project, and the first 10 years of operations and maintenance costs. NextEra offered a 10-year cap on its ATRR and committed to forego both AFUDC and CWIP.

NextEra’s multiple categories of cost caps and cost containment measures increase cost certainty, and convey substantial benefits to ratepayers over time. For example, by foregoing AFUDC and CWIP, NextEra makes available to ratepayers, without interest charges, the benefit of the capital it expends while the project is under construction. NextEra’s Selected Proposal has an estimated benefit-to-cost ratio of 2.20, which is well above the MISO estimated ratio of 1.35.

NextEra’s Selected Proposal excelled in operational and planning flexibility. The Selected Proposal offers the most robust bus arrangement for the 230 kV bus in the new Stonewood 500 kV Substation (double-breaker, double-bus), the highest capacity transformer bank, and thoughtful discussion of flexibility into the planning horizon for the Stonewood 500 kV Substation. Both the 500 kV and 230 kV transmission line conductors chosen by NextEra had ratings that exceeded the RFP-required minimums.

NextEra completed substantial project-specific planning, extensive outreach to federal, state, and local agencies, fieldwork and well-supported contingency analysis. This helped mitigate the potential impact of changes to its route or design for the 500 kV transmission line ordered by the PUCT.

For operations and maintenance, in addition to its top-tier plans in the proposal, NextEra also noted its ability to leverage an affiliate with extensive 500 kV experience in hurricane-prone areas to support integration of the project into its local control center. NextEra has field crews local to the project area with extra-high voltage (“EHV”) experience, access to specialized

equipment for the terrain, and hurricane preparedness and response plans developed and tested over time. NextEra designed the project facilities to enable field crews to perform live-line work. The Selected Proposal includes a well-supported predictive maintenance program and documented access to a large inventory of spare parts.

The Executive Committee assigned the Selected Proposal a total evaluation score of 97 and found it to be the best of all proposals (Figure 3-1).

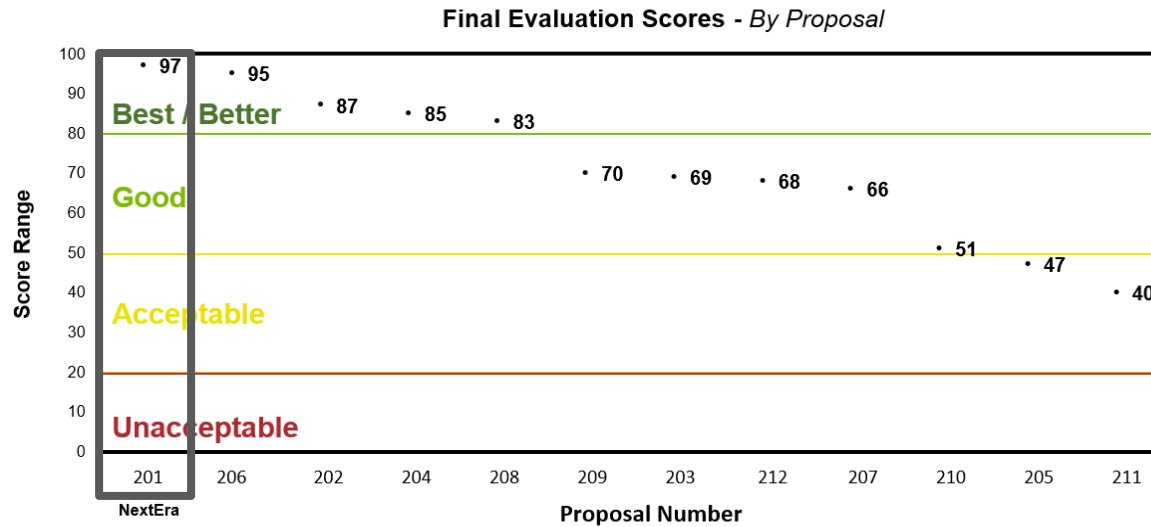


Figure 3-1: Selected Proposal Final Scoring Summary

Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 3-1: Selected Proposal Criteria-Level Categorization

Table 3-2 below (and similar tables provided for all other proposals) shows how the proposals were ranked, from best to 12<sup>th</sup>, in each of the evaluation criteria of cost and design, project implementation, and operations and maintenance.

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

**Table 3-2: Selected Proposal Ranking**

### 3.1.2 Project Cost and Design for the Selected Proposal

When MISO evaluated the Selected Proposal, it found NextEra’s cost and design for the Selected Proposal were the ‘Best’ among all proposals, as depicted in Table 3-1.

#### *Cost Highlights*

NextEra submitted a low project implementation cost of \$114.8 million for the Selected Proposal, and offered a ‘rate base cap’ equal to its project implementation cost. NextEra’s project implementation cost was \$6.5 million below the median project implementation cost of \$121.3 million. Based on MISO’s calculations, the Selected Proposal has the third-lowest cost per mile of 500 kV line at \$3.2 million<sup>21</sup> (\$0.3 million lower than the average). NextEra will forego both AFUDC and recovery of funds for CWIP, which reduces long-term project costs to ratepayers.

NextEra provided robust supporting information and explanations for its cost estimates. For example, NextEra determined its contingency level for the Selected Proposal by quantifying the magnitude and likelihood of numerous risks, which it linked to its project implementation risk register. This resulted in a well-supported level of contingency for the Selected Proposal. NextEra also offered a schedule guarantee.

<sup>21</sup> For purposes of comparison, MISO’s calculation of costs per mile for the 500 kV transmission line included the project cost associated with that facility as well as a pro rated share of estimated Total Allowance for Contingencies, Administrative and General Overhead, and Miscellaneous and Other Expenses.

OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table 3-3: Selected Proposal Cost Cap Summary<sup>22</sup>**

NextEra's submitted ATRR estimate of \$95.0 million is one of the lowest among the proposals, and has greater certainty than most other proposals because it is subject to a 10-year cap (structured as individual one-year caps on annual revenue recovery across the first 10 years of project operations). The median ATRR estimate was \$106 million. Among the drivers for the Selected Proposal's low ATRR estimate are NextEra's comparatively low project costs, as well as its low percentage of equity in its capital structure (at 45%) and low return on equity (at 9.8%, including adders), both of which are capped for the life of the project.

NextEra also committed to cap its operations and maintenance costs, which were in the moderate range among the submitted proposals, for the first 10 years of project operation. This cap, like the cap on ATRR, was structured as individual one-year caps across the first 10 years of project operations. NextEra provides for a moderate amount of capital expenditures in future years of the project, which also increased certainty, as compared to those proposals that did not provide for future capital expenditures.

### Design Features

The Selected Proposal's 500 kV and 230 kV transmission line designs are very robust in performance and rigor, supported by engineering studies and drawings, as well as fieldwork in the project area, including multiple soil borings.

The estimated length of the Selected Proposal's 500 kV transmission line is roughly 23 geographical miles, with a right-of-way width of 200 feet. NextEra selected primarily guyed-V steel lattice structures for the 500 kV transmission line, which are compatible with the terrain in the project area and offer significant cost savings. The structures would be supported by helical pile, helical anchor, and concrete drilled pier foundations. NextEra specified its transmission line design criteria and provided all structure load and design drawings, showing 125 mph and 140 mph wind load cases.

<sup>22</sup> The table above uses several acronyms for brevity. These include "AFUDC" (allowance for funds used during construction), "CWIP" (construction work in progress), "PUCT" (Public Utility Commission of Texas), "ROE" (return on equity), and "ATRR" (annual transmission revenue requirement). The glossary in Attachment 1 provides more detailed definitions.



The proposed 500 kV bundled conductor—2,156 kcmil ACSR Bluebird—has a maximum summer emergency line rating of 4,152 Amps at 239°F maximum conductor temperature (with wind speed of two feet per second). This line rating is approximately 39% higher than the minimum required in the RFP. NextEra provided all rating parameters and discussed loss of conductor strength. NextEra defined its galloping and vibration criteria for the 500 kV transmission line and discussed relevant tension limits.

For the 230 kV transmission lines, NextEra selected steel monopole structures with drilled pier foundations, located in a right-of-way roughly 250 feet wide. The Selected Proposal has relatively short 230 kV transmission lines (approximately 1,100 feet for each circuit, with aggregate circuit length of less than a mile). NextEra included a design criteria document that discussed meeting Entergy interconnection requirements.

The 230 kV bundled conductor—1,272 kcmil ACSR Pheasant—has a maximum summer emergency line rating of 2,964 Amps at 239°F maximum conductor temperature (with wind speed of two feet per second). The 230 kV transmission line rating is approximately 72% higher than the MISO-required minimum. NextEra provided all rating parameters and discussed loss of conductor strength.

For both its 500 kV and 230 kV transmission lines, NextEra specified its ground resistance targets and provided detail drawings. The Selected Proposal includes a lightning study report and discusses shield angle and related lightning performance targets.

NextEra had a well-supported substation design with numerous redundant features, as well as a 500/230 kV transformer with a higher capacity than the minimum required by the RFP. NextEra thoroughly identified, considered, and discussed environmental risks and mitigation and was among the most thorough in completion of supporting design studies for the project.

NextEra designed a substation site of approximately six acres. The 230 kV bus arrangement is double-breaker, double-bus, which is the most robust among all bus arrangements proposed. NextEra's substation design adds further value by including two fully redundant line relaying protection schemes for the 500 kV transmission line and three sources for station service power. NextEra provided thorough supporting narrative for its protection and control schemes and addressed visual and sound impacts for its proposed site.

NextEra further supported its substation design with side-view elevation drawings of its physical layout, a lightning protection study, and attachments showing alternating current station service power sizing calculations, direct current battery sizing calculations, and bus and electrical jumper ampacity calculations.

NextEra took proactive steps in its design to mitigate flood risk, taking into account the high water mark experienced during Hurricane Harvey, as well as ensuring the substation site is not within the 100-year or 500-year floodplain. NextEra included supporting design study information showing how it determined the relevant flood mitigation level. To support the certainty of its grading design and reduce risk, NextEra took soil borings at locations surrounding its substation parcel.

NextEra addressed cost-effective flexibility in the planning horizon by laying out the substation to allow for ready expansion of the 500 kV bus and discussed the potential to add one more 500 kV transmission line. NextEra also discussed how further 230 kV lines could be added to either side of substation, supported by a general arrangement drawing showing where this could be done.

By providing a transformer with capacity 25% higher than the RFP-required minimum, NextEra increased the value of its proposal because the 500/230 kV transformer becomes a less limiting system element for 500 kV to 230 kV power flows. The 230 kV breakers dedicated to the transformer in the substation also have a higher capacity than the RFP-required minimum, which enables NextEra to take advantage of the higher capacity transformer included in its design. NextEra's Selected Proposal is comparable to several other proposals in providing for one spare single-phase transformer unit installed at the substation.

### **3.1.3 Project Implementation for the Selected Proposal**

When MISO evaluated the Selected Proposal, it found NextEra's project implementation for the Selected Proposal was categorized as 'Best' among proposals, as depicted in Table 3-1. NextEra's highly organized proposal for project implementation increased certainty and specificity and highlighted NextEra's understanding of the RFP. The facts and findings supporting MISO's determination are summarized below.

NextEra provided a project-specific schedule that included a thorough breakdown at the task and activity level. NextEra demonstrated comprehensive treatment of project risks, with a risk register that included probability of occurrence, cost and schedule impacts, mitigation steps, and risk responsibilities. NextEra identified experienced project management staff, along with a construction plan that would rely on a reputable, experienced construction contractor.

NextEra submitted routing studies and environmental assessments, showing it evaluated many different routes for the 500 kV transmission line and identified one preferred route. Consistent with PUCT procedures, NextEra used an array of segments to develop its routing alternatives. NextEra obtained a number of geotechnical core samples, identified existing infrastructure crossings (noting the need for alternating current mitigation at pipeline crossings), and included supporting aerial video of its proposed routes.

NextEra conducted initial coordination with federal, state, and local agencies to discuss potential routes and identify constraints, and sent letters to other agencies requesting routing input. NextEra also met with the Sabine River Authority to evaluate canal crossings and associated requirements. The level of regulatory outreach reflected in the Selected Proposal was outstanding.

The Selected Proposal had a well-supported inventory of parcels including landowners, utility crossings, identification of infrastructure co-location, and other constraints. NextEra identified high-risk parcels and secured options on two easements adjacent to the existing Hartburg Substation. NextEra identified and provided experience for routing and siting staff, as

well as third-party contractors engaged to provide permitting support. NextEra also furnished a clear summary and timeline for the Certificate of Convenience and Necessity (“CCN”) process.

NextEra’s project risk register included substation-related risks. In evaluating potential substation sites, NextEra conducted a fatal flaw analysis, included floodplains and wetlands on maps, and provided cultural resource maps for the three parcels it considered. There was a high-level study for each potential substation site, as well as a table of permits needed for the substation. NextEra developed a risk exposure matrix for the sites it considered and included a full wetland delineation study for those parcels.

In addition to the easement options for the Hartburg Substation, NextEra secured an option for its selected substation site. NextEra explained its land acquisition plan, listed the personnel involved in land acquisition (and their experience) and provided maps for landowners and all rights-of-way.

NextEra submitted a comprehensive construction plan, including map books, task sequencing, outages needed on existing transmission equipment, a commissioning plan, and quality assurance and quality control measures. NextEra identified its primary construction contractor along with a list of subcontractors. The construction plan identified the scope of work for each contract and was accompanied by an organizational chart, which enhanced specificity. NextEra analyzed cost and commodity risk and potential effects on key equipment pricing and specified an independent testing contractor for materials testing.

The Selected Proposal identified transmission line engineering and substation design contractors, as well as supporting personnel and their locations and a scope of work for both the new Stonewood 500 kV Substation and the transmission lines. NextEra described plans for future coordination with Entergy as the interconnecting utility and addressed engineering team support for the CCN filing process. NextEra summarized its commissioning process, including a list of personnel and support positions, an equipment testing plan, and a well-supported outage overview.

NextEra included a workplace safety plan for the construction process (although it was not project-specific) and identified a project safety manager, but had more limited discussion of stop-work authority than some other proposals.

#### **3.1.4 Operations and Maintenance for the Selected Proposal**

When MISO evaluated the Selected Proposal, it found NextEra’s operations and maintenance plans were ‘Better’ than most other proposals, as depicted in Table 3-1, second only to the highest-scoring proposal, as shown in Table 3-2.

NextEra stated that an affiliated company has an existing Local Balancing Authority agreement with Entergy and that it intends to add the project to that agreement. One of NextEra’s affiliates has a control center that operates EHV facilities in the ERCOT portion of Texas. NextEra documented its affiliates’ extensive 500 kV experience operating in the Eastern Interconnection in hurricane-prone areas and their commitment to support the project. NextEra

provided evidence that its affiliated companies have had successful operations audits in several regions.

The Selected Proposal described NextEra's plan to model the project area for state estimator and real-time contingency analysis. The NextEra family of companies have extensive resources available for engineering, technical support, asset management, and maintenance planning. NextEra included a document describing Reliability Coordinator outage procedures and timing.

NextEra's proposal did not score the highest in operations and maintenance because it had a less robust outage coordination process and less project area experience with switching coordination. NextEra did not detail as thoroughly its processes for control center outage engineering or creating operating guides, compared to the proposal categorized as 'Best' for operations and maintenance.

For switching coordination, the Selected Proposal described comprehensive field crew and control center training programs and qualification, and provided a safety rulebook and a safety operating plan. NextEra will retain a local contractor crew to facilitate all planned switching. For forced outage response and emergency repairs, NextEra will use a two-person internal local crew located less than an hour from the project, with support from NextEra's local control room.

NextEra's internal crews will be supported by a contractor with numerous personnel less than one hour from the project. The contractor owns tracked carriers for wetlands and has 500 kV experience in the area. NextEra has tracked vehicles and high water access vehicles available, and will also contract for cranes, helicopters, environmental, and EHV testing equipment from original equipment manufacturers.

NextEra submitted comprehensive procedures for repairing various types of equipment for the project and for testing equipment before re-energizing. NextEra support personnel will have live-line insulator replacement capability, and NextEra explained how its project transmission structure designs and configurations will accommodate live-line work. The Selected Proposal included detailed testing and switching procedures.

NextEra documented its ability to leverage an affiliated company's emergency preparedness plans and procedures for multiple threats, reflecting extensive experience with hurricane response and preparedness, procedures, and in-house storm weather tracking. There is spare equipment located within 3.5 hours of the project (to protect from weather events). NextEra provided evidence that its family of companies has financed and performed extensive crisis repair work, and has robust financial capability, although the Selected Proposal did not detail a specific plan to finance project work.

As noted in the discussion of substation design, NextEra will have a spare single-phase transformer installed at the new substation, and has committed to replace it if it is used, as well as to maintain one spare 230 kV breaker and one spare 500 kV breaker at the substation site.

Beyond that, NextEra has access to a large inventory of spares held by affiliated companies, supplemented by pre-arranged support from various suppliers.

For maintenance, NextEra has an asset management program that can trigger changes to scheduling, adjust task frequency, and generate new work orders to address identified non-normal conditions. The asset management program also has computerized capability to manage spares stock and restocking, oversee spares holding location, and dispatch needed spare parts within hours. NextEra will leverage existing real-time monitoring tools to enable field operations teams to detect impending problems immediately.

NextEra detailed costs associated with individual maintenance tasks and on-going capital expenditures. As noted in the cost and design discussion above, NextEra has committed to cap its operations and maintenance costs for the first 10 years of project operations.

NextEra submitted a comprehensive safety program for operations and maintenance, together with relevant documentation and supporting narrative. NextEra's description of mitigating induced current hazard when grounding was not as thorough as some other proposals.

The Selected Proposal detailed NextEra's safety requirements for contractors and included a safety manual from its main operations and maintenance contractor. NextEra has a dedicated safety manager and numerous safety professionals in its organization.

### **3.1.5 Planning Participation for the Selected Proposal**

MISO evaluated planning participation for NextEra's Selected Proposal, as described in Section 2.6.5 of this report. NextEra received planning participation credit.



## **4. Proposal Summaries**

This section summarizes MISO's comparative analysis results for all proposals other than the Selected Proposal. 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 210" refers to the entity that submitted Proposal 210. As noted in Section 2, proposal identification numbers were randomly assigned.

### **4.1 Proposal 201 (Selected Proposal)**

The proposal designated as Proposal 201, which was submitted by NextEra, is the Selected Proposal. Information about Proposal 201, and why the Executive Committee chose it as the Selected Proposal, is provided in Section 3 of this report.

## 4.2 Proposal 202

### 4.2.1 Overview of Proposal 202

Proposal 202 stood out for its low cost, solid transmission line design, well-thought-out substation design, and comprehensive approach to project implementation. Proposal 202 had a project implementation cost of \$114.3 million, with a project cost cap (which included AFUDC) of \$127.5 million. Proposal 202 offered to cap its return on equity at 9.8%.

Proposal 202 was one of four proposals to expressly assume the risk that project costs could increase if the PUCT were to require routing or design changes to the project's 500 kV transmission line. MISO recognized the benefit to ratepayers of this type of project cost cap, but noted that Proposal 202 had an offsetting effect from its contingency funding and the buffer from its higher-than-estimate project cost cap. As a result, overall project costs (including any due to PUCT-mandated changes) would have to increase substantially before Proposal 202 would reach its cost cap.

RFP Respondent 202 conducted outreach with local and state authorities and had a comprehensive project implementation plan. Proposal 202 was notably less strong than other well-performing proposals in operations and maintenance, but reasonably addressed several aspects of operations and maintenance (such as testing, specialized equipment, and maintenance management software).

The Executive Committee assigned Proposal 202 a total evaluation score of 87 and found it to be generally better than all proposals other than the top two proposals (Figure 4-1).

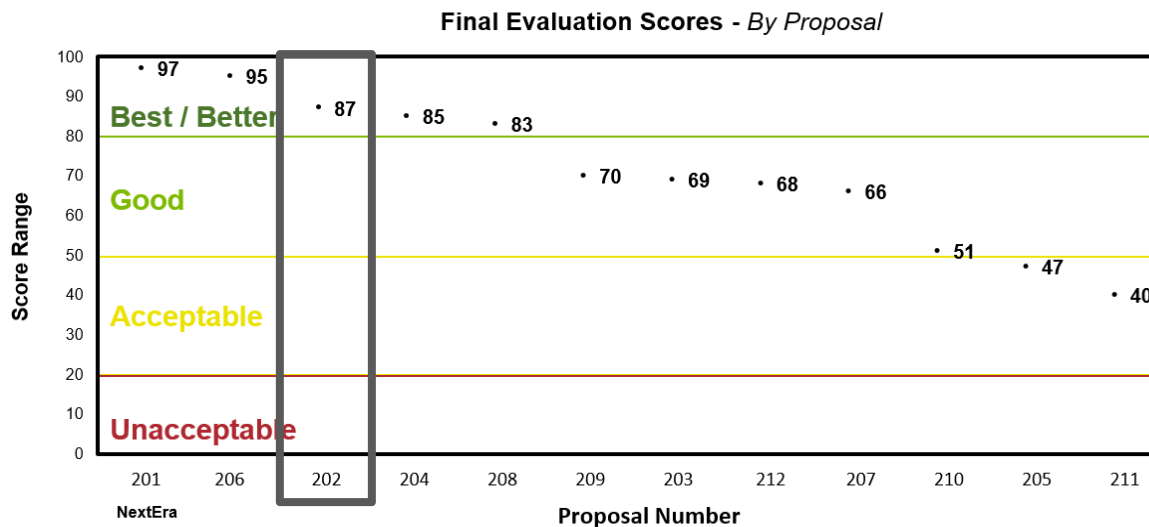


Figure 4-1: Proposal 202 Final Scoring Summary





In evaluating Proposal 202 against the four Tariff evaluation criteria, MISO categorized it as 'Better' in cost and design, 'Better' in project implementation, and 'Good' in operations and maintenance, as compared to the other proposals (Table 4-1).

Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	
202	Better	Better	Good	
203	Acceptable	Good	Best	Redacted
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 4-1: Proposal 202 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-2: Proposal 202 Ranking

## 4.2.2 Project Cost and Design for Proposal 202

When MISO evaluated Proposal 202, it found Proposal 202's cost and design were 'Better' compared to other proposals, as depicted in Table 4-1, and that Proposal 202's cost estimate information included robust supporting information and explanations.

### Cost Highlights

Proposal 202 submitted a low project implementation cost of \$114.3 million (compared to the median project implementation cost of \$121.3 million). Proposal 202 offered a 'rate base cap' of \$127.5 million, which was \$13.2 million higher than its cost estimate. The cost cap included AFUDC and RFP Respondent 202 agreed not to seek recovery for CWIP.

Proposal 202 was one of four proposals that expressly offered to assume part or all of the costs of PUCT-mandated route or design changes for its 500 kV transmission line. MISO noted that Proposal 202's project implementation cost included a moderate amount of stated contingency, which RFP Respondent 202 determined by quantifying the impact of key risks. With stated contingency funding and an additional "cushion" provided by the difference between Proposal 202's project implementation cost and its project cost cap, RFP Respondent would be



able to recover substantial project cost increases (including any resulting from PUCT-mandated route or design changes) before reaching the cost cap. Proposal 202 was one of eight proposals to offer a schedule guarantee.

OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table 4-3: Proposal 202 Cost Cap Summary**

Proposal 202 submitted an ATRR estimate of \$101.6 million (compared to the median ATRR estimate of \$106 million). Proposal 202's ATRR estimate was lower than most other proposal due primarily to its low project cost, although it was offset, to some degree, by high operations and maintenance costs. Proposal 202 also provided for ongoing capital expenditures in future years of the project, whereas some proposals did not.

Proposal 202 was one of seven proposals to cap return on equity at 9.8% (including adders) and cap equity percentage in its capital structure at 45%. Proposal 202 did not offer to cap its operations and maintenance costs or its ATRR (whereas the Selected Proposal offered to cap both for the first 10 years of the project).

### Design Features

For its project transmission lines, Proposal 202 offered designs that were robust in performance and rigor, supported by engineering studies and drawings. RFP Respondent 202 also thoroughly considered and planned to mitigate environmental risks related to the transmission lines and the new Stonewood 500 kV Substation.

For the 500 kV transmission line, Proposal 202 provided a detailed conductor selection study report including electrical effects, operating temperature, and environmental conditions. RFP Respondent 202 also performed an economic analysis to support its conductor selection. The proposed 500 kV bundled conductor—954 kcmil ACSS (MA3) Cardinal—had a maximum normal and summer emergency line rating of 3,948 Amps at 257°F maximum conductor temperature with a wind speed of two feet per second.

The estimated length of Proposal 202's 500 kV transmission line was roughly 23.5 geographical miles, with a right-of-way width of 225 feet. Proposal 202 featured primarily H-frame and three-pole tubular steel structures for the 500 kV transmission line, which RFP Respondent 202 determined to be most efficient and cost effective. Proposal 202 discussed foundation types and suitability in detail, and selected drilled pier foundations for stable soils



and vibratory caisson foundations for unstable soils. Proposal 202 included a robust discussion of load cases and addressed lightning performance targets and shield wire angles for all structure types, and thoroughly demonstrated how its proposal conformed to Entergy interconnection and line tension requirements.

For the 230 kV transmission line conductor, Proposal 202 selected 954 kcmil ACSS (MA3) Cardinal based on its detailed conductor study report. The 230 kV conductor had maximum summer emergency line rating of 2,632 Amps at 257°F maximum conductor temperature with a wind speed of two feet per second.

Proposal 202's 230 kV transmission line would have a right-of-way width of 125 feet for each double circuit, with a length of roughly 2,500 feet for each circuit (collectively totaling approximately 10,000 feet). Proposal 202 explored the suitability of steel, wood, and concrete structures for its 230 kV transmission line, and chose steel monopoles for cost savings. Proposal 202 included modeling results and foundation details, and supported its 230 kV transmission line design with the same rigor as it did for its 500 kV transmission line.

RFP Respondent 202 provided comprehensive narrative and attachments to support its substation design. The proposed substation site for Proposal 202 was approximately eight acres. The 230 kV bus arrangement would be a ring bus configuration, which was less robust than the proposals that offered either breaker-and-a-half or double-breaker, double-bus arrangements for the 230 kV bus.

RFP Respondent 202 took proactive steps in its design to mitigate flood risk by taking into account the high water mark experienced during Hurricane Harvey, as well as placing all equipment and facilities for the new substation outside of the 100-year or 500-year floodplains. To support the certainty of its grading design and reduce risk, RFP Respondent 202 took soil borings at locations surrounding its substation parcel. Proposal 202's substation design was more robust than many other proposals because RFP Respondent 202 designed all elements to withstand 140 mph winds. Proposal 202 included a detailed discussion of substation protection and control design, which increased certainty. RFP Respondent 202 supported its substation design with side-view elevation drawings of its physical layout, provided bus and electrical jumper ampacity calculations, and included a lightning protection study for its site.

Proposal 202 demonstrated thoughtful consideration of flexibility in the planning horizon (one the RFP's aspects and elements) by laying out the substation to allow for ready expansion of the 500 kV bus and discussing the potential to expand the 500 kV bus to a ring or a breaker-and-a-half, supported by drawings. Proposal 202 also provided drawings and discussed the potential to add a second 500/230 kV transformer and to convert the 230 kV ring bus arrangement to a breaker-and-a-half.

By providing a 500 kV circuit breaker with a rating higher than the RFP-required minimum, RFP Respondent 202 increased the value of its proposal because the 500 kV breaker becomes a less limiting system element. Proposal 202 was comparable to several other proposals in providing for one spare single-phase transformer unit installed at the substation. Proposal 202

distinguished itself from other proposals by including a detailed discussion of transformer vendor evaluation and selection, which increased the certainty of its substation proposal.

#### **4.2.3 Project Implementation for Proposal 202**

When MISO evaluated Proposal 202, it found Proposal 202's project implementation was 'Better' compared to other proposals, as depicted in Table 4-1. MISO based its finding on the results of its comparative analysis as summarized below.

Proposal 202 submitted a well-supported project management plan, including project-specific content and a responsibility matrix. The overall project schedule for Proposal 202 had a comprehensive, project-specific schedule for transmission line construction. Proposal 202 identified the project critical path and included a thorough risk register that addressed the likelihood of occurrence, consequences, risk level to MISO, and mitigation measures. Proposal 202's project management plan was also project specific that tied together all elements of the proposal.

The routing study provided with Proposal 202 included a discussion of co-location with infrastructure, KMZ files, a map of route crossings, and preliminary access plans. RFP Respondent 202 had completed design for several 500 kV transmission line routes and identified hundreds of route alternatives.

RFP Respondent 202 evaluated more than a dozen potential substation sites, performed geotechnical studies, and secured an option on the site it selected (which was close to the existing 230 kV transmission lines and therefore consistent with the aspect and element calling for minimizing the length of the project's new 230 kV transmission lines). The project risk register identified substation-related risks, with mitigation steps for each risk. RFP Respondent 202 conducted a wetland delineation survey of the substation site using field-collected data, noting that site-specific data differed from publicly available data.

Proposal 202 included a comprehensive permitting plan that identified necessary permits, described the process and associated schedule of activities to obtain them, and was complemented by a flow chart describing the PUCT permitting process. Proposal 202's right-of-way acquisition plan identified the specific parcels needed for its recommended route and addressed major crossings and the need for mitigation. Although proposal 202 solicited feedback from government agencies, the level of outreach and feedback incorporated into the proposal was not as comprehensive as the proposals categorized as 'Best' in project implementation.

Proposal 202 had a well-developed construction plan including map books, task sequencing, commissioning plan, and quality assurance and quality control (QA/QC). It also included an identified QA/QC manager. The schedule allowed reasonable buffer for the longest lead-time requirement, and the QA/QC plan for materials had contractual remedies for delays in material delivery.



The construction plan for Proposal 202 included access maps showing where to access equipment during construction, wetlands, and where equipment would be assembled. The commissioning plan was thorough, featuring project-specific testing plans for transmission lines and the new Stonewood 500 kV Substation. Construction risks were included in the project risk register and well supported.

With respect to safety during project construction, Proposal 202 identified a power safety coordinator and indicated that all employees would have stop work authority. The transmission line foreman would also have stop work authority for storms. Proposal 202 included multiple safety plans covering all project contractors.

#### **4.2.4 Operations and Maintenance for Proposal 202**

When MISO evaluated Proposal 202, it found Proposal 202's operations and maintenance were 'Good' compared to other proposals, as depicted in Table 4-1.

MISO found, among other things, that RFP Respondent 202 had a control center certified as a "high impact" for purposes of NERC critical infrastructure protection standards and demonstrated understanding of Reliability Coordinator operations processes and tools. RFP Respondent 202 indicated that it intended to integrate the project into the existing Local Balancing Authority Agreement with the interconnecting utility. Proposal 202 did not demonstrate a level of experience operating in the Eastern Interconnection (or with 500 kV transmission facilities) comparable to what MISO found in the 'Best/Better' proposals.

Proposal 202 did not document current communications infrastructure to the project Reliability Coordinator and Balancing Authority. Detail on modeling in the project area was limited compared to other proposals, which reduced certainty.

Proposal 202 provided less thorough explanations than some other proposals of the EHV experience and training plans for field crews to be involved in project maintenance activities. This reduced MISO's certainty that these crews would be capable of working on the project. Proposal 202 explained how RFP Respondent 202's switch order management software was embedded in its SCADA system.

For forced outage response, RFP Respondent 202 would have one dedicated first responder located less than an hour from the project. Affiliated companies (at least one of which had EHV experience but had personnel four hours away from the project) would provide additional outage support. The substation would have 24 hours of battery backup and a generator hookup available. Proposal 202 documented access to wetland equipment and provided detailed testing and re-energization procedures.

If emergency repairs were needed for the project, RFP Respondent 202 would have a first responder to assess damage. RFP Respondent 202 would use a contractor with EHV experience for significant repairs or rebuilds. RFP Respondent 202 could rely on its internal engineering staff to plan repairs and had some emergency replacement structures to use if permanent structures were unavailable. Proposal 202 provided less specificity on substation



and relay work from internal crews and contractors than most other proposal and did not provide the level of evidence showing successful prior catastrophic response comparable to the 'Best/Better' proposals.

Proposal 202 included a detailed three-year maintenance plan. RFP Respondent 202 would use a computerized system to manage a project maintenance plan, which included on-line monitoring for transformer dissolved gas conditions and temperature. Maintenance contractors would be able to perform live-line maintenance. Proposal 202 provided less specificity concerning vegetation management contractors and staffing for maintenance-related equipment than many other proposals. Materials on hand would be sufficient to replace one mile of 500 kV and 230 kV line, and RFP Respondent would have available materials for breakers parts (but no full spare 500 kV or 230 kV breakers). RFP Respondent 202 committed to assess spare inventory annually for needed parts, structures, and equipment but did not specify triggers for minimum quantities.

Proposal 202 featured comprehensive safety plans from affiliated companies and a main contractor and described RFP Respondent 202's online safety training tools, which would follow International Electric Testing Association standards for certification. RFP Respondent 202 had a single contact safety director. Proposal 202 was stronger than some other proposals in supplying a location-specific hazard assessment and emergency action plan and a well-detailed induced current risk assessment and danger mitigation plan.

Proposal 202's safety information about participating companies' experience with EHV equipment was limited compared to proposals categorized as 'Best/Better.'

#### **4.2.5 Planning Participation for Proposal 202**

MISO evaluated planning participation for Proposal 202, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.



## 4.3 Proposal 203

### 4.3.1 Overview of Proposal 203

Proposal 203 was notable for the variability in its performance across different evaluation criteria—more so than most other proposals. Proposal 203 was one of the least well-performing proposals in cost and design, roughly average in project implementation, and the best in operations and maintenance.

Proposal 203 had high project costs (\$141.9 million) and offered a ‘rate base cap’ of \$152.3 million, which was \$10.4 million higher than its project implementation cost. Proposal 203’s cost cap included AFUDC. Proposal 203 offered to cap its return on equity at 9.8% and equity in its capital structure at 45%.

Proposal 203 showed comprehensive understanding of agency requirements and processes related to routing, siting, and permitting for the project. Discussions of project risks and mitigation strategies were thorough, but the delineation of responsibilities between RFP Respondent and its project contractors was less specific than many other proposals.

Proposal 203 performed the best of all proposals in operations and maintenance based on many factors, including robust maintenance crews available in the project area, dedicated personnel for different facility types, substantial resources for maintenance and repairs, and top-tier safety metrics.

The Executive Committee assigned Proposal 203 a total evaluation score of 69 and found it to be generally good, as compared to the other proposals (Figure 4-2).

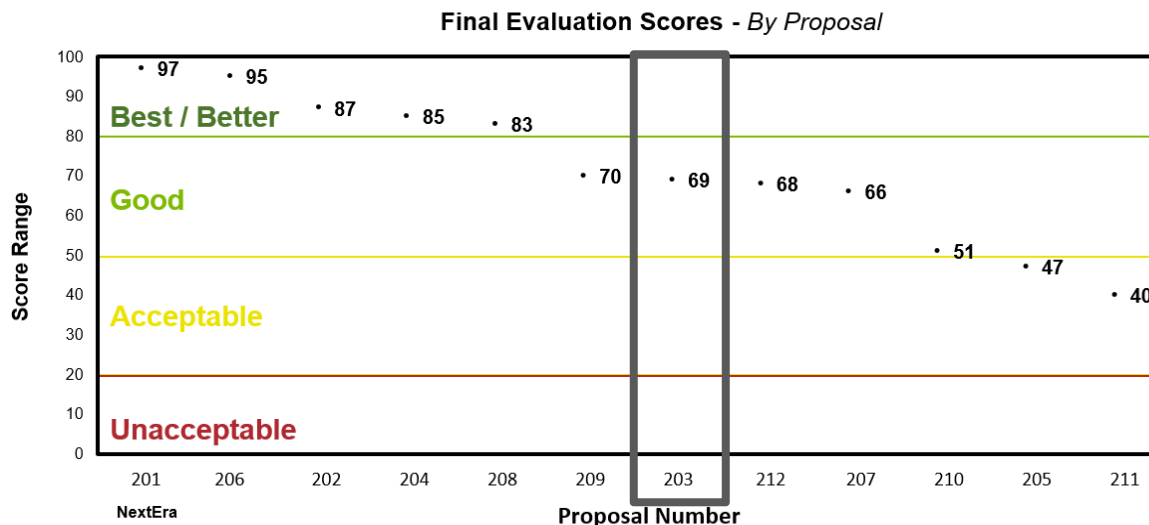


Figure 4-2: Proposal 203 Final Scoring Summary

In evaluating Proposal 203 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 4-4).





Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	Redacted
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 4-4: Proposal 203 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-5: Proposal 203 Ranking

### 4.3.2 Project Cost and Design for Proposal 203

When MISO evaluated Proposal 203, it found Proposal 203's cost and design were 'Acceptable' compared to other proposals, as depicted in Table 4-4.

#### Cost Highlights

In evaluating Proposal 203's estimated project cost, MISO found that Proposal 203 submitted a high project implementation cost of \$141.9 million (compared to the median project implementation cost of \$121.3 million). Proposal 203 had high administrative and general costs and high AFUDC. Proposal 203 also offered a high 'rate base cap' of \$152.3 million, which was \$10.4 million above its project implementation cost. Proposal 203 included AFUDC in its rate base cap and offered to cap the AFUDC rate as well. Proposal 203 discussed how project risks might affect project costs but did not include stated contingency costs to cover identified risks.

Proposal 203 is one of eight proposals with a schedule guarantee. Proposal 203 was the only proposal to offer a reliability guarantee (under which failure to meet a minimum percentage of in-service availability for the 500 kV line would result in a reduction to rate of return), but MISO did not anticipate the reliability guarantee would significantly increase operational requirements beyond applicable NERC standards. Proposal 203's cost estimate information was generally well supported.



## Hartburg-Sabine Junction 500 kV Selection Report

### Section 4: Proposal Summaries

OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table 4-6: Proposal 203 Cost Cap Summary**

Proposal 203 submitted an ATRR estimate of \$127.7 million (compared to the median ATRR estimate of \$106 million). Proposal 203's ATRR estimate was higher than most other proposals. The high project and administrative and general costs noted above were partially offset by low operations and maintenance costs. RFP Respondent 203 offered to cap the rate on AFUDC and had caps on return on equity (9.8%, including adders) and equity percentage in capital structure (45%) that were comparable to a number of other proposals.

A notable feature in Proposal 203 was an offer to cap the cost of debt through 2025, but this interest rate cap was higher than the figure used in Proposal 203's ATRR estimates. Proposal 203 had very low estimated costs for operations and maintenance, but with no caps on operations and maintenance costs and no funding for on-going capital expenditures.

#### *Design Features*

Proposal 203 discussed evaluating several structure types and considered aesthetics, conductor configuration, foundations, terrain, weather, right-of-way width, operations and maintenance, and cost. Proposal 203 provided engineering studies and drawings to support its transmission line design.

For the 500 kV transmission line, RFP Respondent 203 selected guyed-delta steel lattice structures on vibratory pipe pile foundations as the most economical and most environmentally compatible structure configuration. RFP Respondent 203 committed to test the structures to full design loading to ensure they would be adequate. The estimated length of the 500 kV transmission line would be roughly 23 geographical miles, with a right-of-way width of 180 feet.

For the 230 kV transmission lines, Proposal 203 selected steel monopole structures with vibratory pipe pile foundations, located in a right-of-way roughly 175 feet wide. Proposal 203 had relatively short 230 kV transmission lines (approximately half a mile for each circuit, for aggregate circulate length of two miles), which better conformed than some other proposals to the RFP's aspect and element emphasizing shorter 230 kV transmission lines.

The proposed 500 kV bundled conductor—954 kcmil ACSR Rail—had a maximum summer emergency line rating of 3,024 Amps at 248°F maximum conductor temperature (with



no wind). In MISO's opinion, this was higher than typical industry standard for this type of conductor and Proposal 203 did not discuss potential loss of conductor strength.

The 230 kV conductor—1,272 kcmil ACSS Bittern—had maximum summer emergency line rating of 2,139 Amps at 392°F maximum conductor temperature with wind speed of two feet per second. RFP Respondent 203 had performed studies for electric field, magnetic field, and audible noise limits, and provided a geotechnical report and plan and profile drawings for both the 230 kV and 500 kV transmission lines.

Proposal 203 did not have as thorough a narrative explaining its proposed substation design, and provided fewer supporting design drawings and studies than higher-scoring proposals. Proposal 203 designed a substation site of approximately 8.5 acres. Proposal 203 was one of several proposals with a ring bus design for the 230 kV bus in the new Stonewood 500 kV Substation, and, in general, met the requirements in the RFP whereas other proposals exceeded the requirements.

RFP Respondent 203 took proactive steps in its design to mitigate flood risk to the substation by taking into account the site's experience during Hurricane Harvey, as well as ensuring the substation site was not within the 100-year or 500-year floodplain. To support its grading design, RFP Respondent 203 took soil borings at its proposed substation site, which increases certainty and reduced risk. The substation structures and bus work in the Stonewood 500 kV substation were more robust than other proposals because they were designed to withstand up to 150 mph winds. Proposal 203 provided redundant line relaying on the 500 kV transmission line protection scheme.

Proposal 203 showed thoughtful consideration of flexibility in the planning horizon (another of the RFP's aspects and elements) by laying out the substation to allow for ready expansion of the 500 kV bus. Proposal 203 also discussed converting its 230 kV bus arrangement to breaker-and-a-half to add positions and provided relevant drawings. While several other proposals provided for one spare single-phase transformer unit installed on site, Proposal 203 did not.

#### **4.3.3 Project Implementation for Proposal 203**

When MISO evaluated Proposal 203, it found Proposal 203's project implementation was 'Good' compared to other proposals, as depicted in Table 4-4.

Proposal 203 contained a thorough risk register, which included probability of occurrence, cost and schedule impacts, mitigation steps, contingency analysis, and narrative to support risk assessments. Weather days were built into the schedule, which also included a critical path and identified the potential for additional float if the project schedule were to change from a five-day to a six-day schedule.

The project management plan for Proposal 203 was project specific. It included a comprehensive project management policy, along with an outline of the project management process. The allocation of responsibility between RFP Respondent 203 and its contractors was not as well delineated as in some other proposals. This was true in many areas of project



implementation, which made it more difficult for MISO to assess capabilities and qualifications, and reduced certainty with respect to Proposal 203's project implementation plan.

RFP Respondent 203 did demonstrate knowledge of federal, state, and local permitting processes and provided a well-supported permitting strategy. This was notable in view of the importance of regulatory certainty as one of the RFP's aspects and elements.

The routing process for Proposal 203 was thorough, with identified line segments and a table showing interference types for each segment. The proposal explained RFP Respondent 203's criteria for ranking and prioritizing routes, referring to PUCT guidelines. In discussing the preferred route, Proposal 203 described each segment in the preferred route and addressed pipeline crossings and other relevant constraints.

RFP Respondent 203 had secured an option on its preferred substation site, had taken soil borings, and spoke with local landowners to confirm the site did not flood during Hurricane Harvey. RFP Respondent 203 described the criteria it used for ranking sites, based on PUCT requirements, and conducted fatal flaw analysis on the substation site based on an array of selection criteria but provided less dialogue to support its analysis than other proposals.

In discussing permitting, Proposal 203 listed best practices for work with the PUCT and its CCN process and provided a flow chart of the CCN application process. RFP Respondent 203 had also evaluated local species of wildlife that could affect project sites and provided supporting discussion that demonstrated knowledge of federal, state, and local permitting processes.

MISO found that RFP Respondent 203 had identified the parcels in its recommended route, but the information provided in support of the parcels was less robust than higher-scoring proposals. Proposal 203's construction plan narrative was not as descriptive as several other proposals. RFP Respondent 203's construction contractors had recent relevant experience in the project area.

MISO found that Proposal 203's safety plan offered limited information, but proposal narrative explained how the RFP Respondent would require all personnel assigned to the project to be trained to company-specific safety requirements. The proposal did address stop-work authority.

#### **4.3.4 Operations and Maintenance for Proposal 203**

When MISO evaluated Proposal 203, it found Proposal 203's operations and maintenance were 'Best' among all proposals, as depicted in Table 4-4.

MISO found that RFP Respondent 203 had a control center with qualified resources that were experienced in monitoring, operating, and coordinating EHV facilities in the project area. The backup control center would operate as a "hot" backup with diversely routed communications. RFP Respondent 203 demonstrated experience with the project Reliability Coordinator's processes.



RFP Respondent 203 had an integrated, organization-wide outage management system that interfaced with the project Reliability Coordinator's coordinated outage tool. There were personnel in the project area, experienced with 500 kV equipment, available for outage coordination. Switching coordination would be supported by trained employees, on call at all times, with response times under 45 minutes. Proposal 203 described the required training for switching and clearance certification and included a relay training plan.

RFP Respondent 203 had access to local, task-specific field crews (substation, relay, substation operations, and transmission line) with EHV experience and access to specialized equipment for local terrain, as well as predictive tools. Proposal 203 included restoration plans for the project area, a comprehensive emergency response plan, and thorough pre-restoration testing procedures. Proposal 203 discussed the potential to engage additional crews, as well as helicopters and heavy cranes.

Proposal 203 did not include a plan for temporary construction following a catastrophic loss because RFP Respondent 203 intended to maintain sufficient material and resources, as well as funding, to replace the entire project as designed. Proposal 203 provided a well-supported catastrophic restoration plan that took into account local storm considerations.

RFP Respondent 203 had a comprehensive maintenance plan supported by robust staff and centralized systems that predict, schedule, and monitor maintenance effectiveness and track spare parts for all equipment. Proposal 203 had much lower estimated operations and maintenance costs than all other proposals. Proposal 203 did not include a plan to fund on-going capital expenditures in future years of the project.

RFP Respondent 203 had available 230 kV and 500 kV spare breakers, and had access to more than five miles of 500 kV spare transmission material and a remote spare transformer phase through affiliated organizations. Maintenance would be funded through cash on hand and revenue from the project's ATRR.

RFP Respondent 203 had a robust safety program with training (based on a multi-year training curriculum, including human performance) and a dedicated onsite safety specialist. Contractors would be vetted and held to the same standard as employees. RFP Respondent 203 had top-tier safety metrics and facilities that had been recognized for outstanding safety efforts.

#### **4.3.5 Planning Participation for Proposal 203**

MISO evaluated planning participation for Proposal 203, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.

## 4.4 Proposal 204

### 4.4.1 Overview of Proposal 204

Proposal 204 showed particular strength in areas of project implementation and transmission line design. Proposal 204 had a moderate project implementation cost estimate (\$127.9 million) and a project cost cap equal to that estimate. Proposal 204 capped several other inputs to its ATRR, including return on equity (at 9.8%), equity in capital structure (at 45%), and the first 10 years of operations and maintenance costs. Proposal 204 offered a 10-year ATRR cap and included no AFUDC. The multiple cost-capping components of Proposal 204 were responsive to the aspect and element from the RFP emphasizing cost certainty to maintain or increase the benefit-to-cost ratio of the project.

Proposal 204 included guyed-V lattice transmission towers as the primary structures for the 500 kV transmission line and a gas-insulated substation with a breaker-and-a-half bus arrangement for the 230 kV bus. Project implementation for Proposal 204 reflected extensive field investigation and outreach to federal, state, and local authorities. The project-specific, extensive analysis and narrative in Proposal 204 show thorough knowledge and substantial effort in proposal development.

The Executive Committee assigned Proposal 204 a total evaluation score of 85 and found it to be generally better than most other proposals (Figure 4-3).

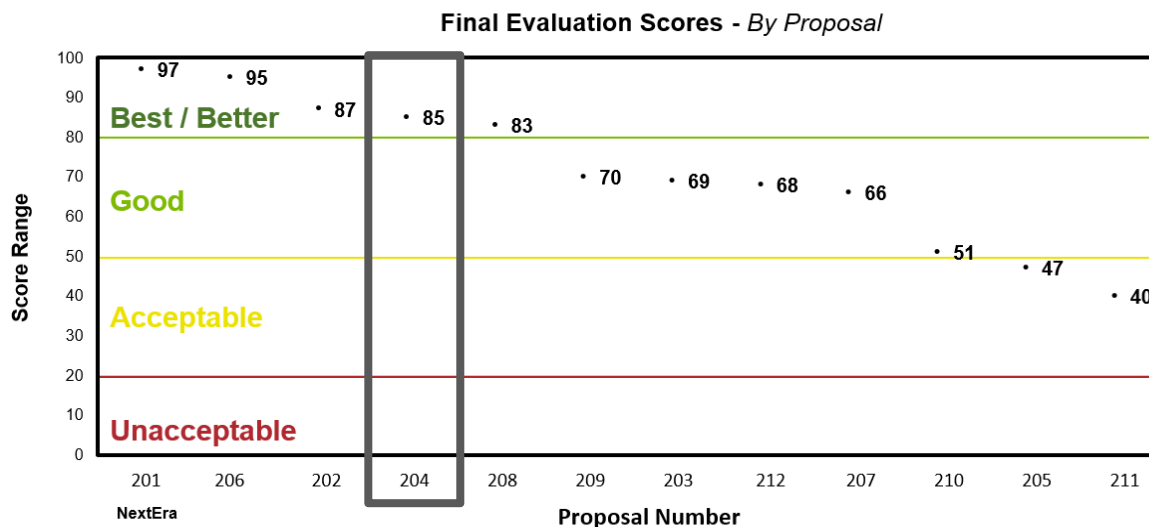


Figure 4-3: Proposal 204 Final Scoring Summary

In evaluating Proposal 204 against the four Tariff evaluation criteria, MISO categorized it as 'Good' in cost and design, 'Best' in project implementation (tied with the other three proposals), and 'Better' in operations and maintenance, as compared to the other proposals (Table 4-7).



Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	Redacted
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 4-7: Proposal 204 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-8: Proposal 204 Ranking

#### 4.4.2 Project Cost and Design for Proposal 204

When MISO evaluated Proposal 204, it found Proposal 204's cost and design were 'Good' compared to other proposals, as depicted in Table 4-7.

##### *Cost Highlights*

In evaluating Proposal 204's estimated project cost, MISO found that Proposal 204 submitted a moderate project implementation cost of \$127.9 million (compared to the median project implementation cost of \$121.3 million). Proposal 204's 'rate base cap' was equal to its project implementation cost. RFP Respondent 204 committed not to seek AFUDC or CWIP.

Proposal 204's project implementation cost included a high amount of contingency. Proposal 204 determined its contingency level by quantifying the magnitude and likelihood of numerous risks. Proposal 204 was one of eight proposals with a schedule guarantee.





OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table 4-9: Proposal 204 Cost Cap Summary**

Proposal 204 submitted an ATRR estimate of \$105.5 million, which was very close to the median ATRR estimate of \$106 million. Proposal 204 would cap ATRR for the first 10 years of project operation (structured as individual one-year caps on annual revenue recovery across the first 10 years of project operations). Proposal 204 would also cap its return on equity (at 9.8% for the life of the project) and equity percentage in capital structure (at 45% for the life of the project). Proposal 204 would cap operations and maintenance costs for the first 10 years of project operation (also structured as individual one-year caps). Proposal 204 provided for a moderate amount of capital expenditures in future years of the project.

### Design Features

Proposal 204's 500 kV and 230 kV transmission line designs were very robust in performance and rigor, supported by engineering studies and drawings, as well as fieldwork in the project area, including multiple soil borings.

The estimated length of the Proposal 204's 500 kV transmission line was roughly 23 geographical miles, with a right-of-way width of 200 feet. RFP Respondent 204 selected primarily guyed-V steel lattice structures for the 500 kV transmission line, which were compatible with the terrain in the project area and offered significant cost savings. The structures would be supported by helical anchor and concrete drilled pier foundations. RFP Respondent 204 specified its transmission line design criteria and provided all structure load and design drawings, showing 125 mph and 140 mph wind load cases.

The proposed 500 kV bundled conductor—2,156 kcmil ACSR Bluebird—had a maximum summer emergency line rating of 4,152 Amps at 239°F maximum conductor temperature (with wind speed of two feet per second). This line rating was approximately 39% higher than the minimum required in the RFP. Proposal 204 provided all rating parameters and discussed loss of conductor strength. RFP Respondent 204 defined its galloping and vibration criteria for the 500 kV transmission line and discussed relevant tension limits.

For the 230 kV transmission lines, Proposal 204 featured steel monopole structures with drilled pier foundations, located in a right-of-way roughly 250 feet wide. Proposal 204 had a relatively short 230 kV transmission lines (approximately 1,100 feet for each circuit, with aggregate circuit length of less than a mile), which conformed to the RFP's aspect and element

emphasizing shorter 230 kV transmission lines. Proposal 204 included a design criteria document that discussed meeting Entergy interconnection requirements.

The 230 kV bundled conductor—1,272 kcmil ACSR Pheasant—had a maximum summer emergency line rating of 2,964 Amps at 239°F maximum conductor temperature (with wind speed of two feet per second). The 230 kV transmission line rating was approximately 72% higher than the MISO-required minimum. Proposal 204 specified all rating parameters and discussed loss of conductor strength.

For both its 500 kV and 230 kV transmission lines, RFP Respondent 204 specified its ground resistance targets and provided detail drawings. Proposal 204 included a lightning study report and discussed shield angle and related lightning performance targets.

Proposal 204 had a well-supported substation design with numerous redundant features, as well as a 500/230 kV transformer capacity larger than the minimum required by the RFP. RFP Respondent 204 thoroughly identified, considered, and discussed environmental risks and mitigation and was among the most thorough in completion of supporting design studies for the project.

Proposal 204 was one of only two proposals with a gas-insulated substation design. (The other was Proposal 208, which was submitted by the same RFP Respondent and had an identical substation design but a different 500 kV transmission line design.)

Proposal 204 called for a substation site of approximately three acres. The arrangement for Proposal 204's 230 kV bus—a breaker-and-a-half—was more flexible and robust than a ring bus arrangement. Three other proposals (Proposals 208, 209, and 211) offered a breaker-and-a-half arrangement. Proposal 204 incorporated two fully redundant line relaying protection schemes for the 500 kV transmission line. Proposal 204 provided a grounding study (as did several other proposals). Equipment ratings for the circuit breakers and the transformers were all higher than the requirements in the RFP. Proposal 204 provided three sources of station service power.

Proposal 204's substation design and location offered some flexibility in the planning horizon (although not as much as the Selected Proposal). Proposal 204 discussed the potential to add one more 500 kV transmission line and provided a drawing depicting it. Proposal 204 was comparable to several other proposals in providing for one spare single-phase transformer unit installed on site.

#### **4.4.3 Project Implementation for Proposal 204**

When MISO evaluated Proposal 204, it found Proposal 204's project implementation was 'Best' compared to other proposals, as depicted in Table 4-7.

RFP Respondent 204's highly organized proposal for project implementation increased certainty and specificity and highlighted its understanding of the RFP. The facts and findings supporting MISO's determination are summarized below.



Proposal 204 provided a project-specific schedule that included a thorough breakdown at the task and activity level. Proposal 204 demonstrated comprehensive treatment of project risks, with a risk register that included probability of occurrence, cost and schedule impacts, mitigation steps, and risk responsibilities. Proposal 204 identified experienced project management staff, along with a construction plan that would rely on a reputable, experienced construction contractor.

RFP Respondent 204 submitted routing studies and environmental assessments, showing it evaluated many different routes for the 500 kV transmission line and identified one preferred route. Consistent with PUCT procedures, RFP Respondent 204 used an array of segments to develop its routing alternatives. RFP Respondent 204 obtained a number of geotechnical core samples, identified existing infrastructure crossings (noting the need for alternating current mitigation at pipeline crossings), and included supporting aerial video of its proposed routes.

RFP Respondent 204 conducted initial coordination with federal, state, and local agencies to discuss potential routes and identify constraints, and sent letters to other agencies requesting routing input. RFP Respondent 204 also met with the Sabine River Authority to evaluate canal crossings and associated requirements. The level of regulatory outreach reflected in Proposal 204 was outstanding among proposals.

Proposal 204 had a well-supported inventory of parcels including landowners, utility crossings, and other constraints. Proposal 204 identified high-risk parcels and had secured options on two easements adjacent to the existing Hartburg Substation. RFP Respondent 204 identified and provided experience for routing and siting staff, as well as third-party contractors engaged to provide permitting support. RFP Respondent 204 also furnished a clear summary and timeline for the CCN process.

Proposal 204's project risk register included substation-related risks. In evaluating potential substation sites, RFP Respondent 204 conducted a fatal flaw analysis, included floodplains and wetlands on maps, and provided cultural resource maps for the parcels it considered. There was a high-level study for each potential substation site, as well as a table of permits needed for the substation. RFP Respondent 204 developed a risk exposure matrix for the sites it considered and included a full wetland delineation study for those parcels.

In addition to the easement options for the Hartburg Substation, RFP Respondent 204 secured an option for its selected substation site. RFP Respondent 204 explained its land acquisition plan, listed the personnel involved in land acquisition (and their experience) and provided maps for landowners and all rights-of-way.

RFP Respondent 204 submitted a comprehensive construction plan, including map books, task sequencing, outages needed on existing transmission equipment, a commissioning plan, and quality assurance and quality control measures. Proposal 204 identified the primary construction contractor along with a list of subcontractors. The construction plan identified the scope of work for each contract and was accompanied by an organizational chart, which enhanced specificity. RFP Respondent 204 analyzed cost and commodity risk and potential



effects on key equipment pricing and specified an independent testing contractor for materials testing.

Proposal 204 identified transmission line engineering and substation design contractors, as well as supporting personnel and their locations and a scope of work for both the new Stonewood 500 kV Substation and the transmission lines. Proposal 204 described plans for future coordination with Entergy as the interconnecting utility and addressed engineering team support for the CCN filing process. RFP Respondent 204 summarized its commissioning process, including a list of personnel and support positions, an equipment testing plan, and a well-supported outage overview.

Proposal 204 included a workplace safety plan for the construction process (although it was not project-specific) and identified a project safety manager, but did not specifically address who had stop-work authority.

#### **4.4.4 Operations and Maintenance for Proposal 204**

When MISO evaluated Proposal 204, it found Proposal 204's operations and maintenance were 'Better' compared to other proposals, as depicted in Table 4-7.

RFP Respondent 204 stated that it would leverage existing relationships to integrate the project. One of RFP Respondent 204's affiliates had a control center that operates EHV facilities in the ERCOT portion of Texas. RFP Respondent 204 documented its affiliates' extensive 500 kV experience operating in the Eastern Interconnection in hurricane-prone areas and their commitment to support the project. Proposal 204 included evidence that RFP Respondent 204's affiliated companies have had successful operations audits in several regions.

Proposal 204 described plans to model the project area for state estimator and real-time contingency analysis. RFP Respondent 204's affiliated companies had extensive resources available for engineering, technical support, asset management, and maintenance planning. Proposal 204 included a document describing Reliability Coordinator outage procedures and timing.

Proposal 204 was less strong than the proposals that scored higher in operations and maintenance in its approach to communications, had a less robust outage coordination process, and less local experience with switching coordination. RFP Respondent 204 did not detail as thoroughly its processes for control center outage engineering or creating operating guides, compared to the proposal categorized as 'Best' for operations and maintenance. In addition, although Proposal 204 called for a gas-insulated substation, the implications of having a gas-insulated substation, from an operations and maintenance standpoint, were not thoroughly discussed.

For switching coordination, the Proposal 204 described comprehensive field crew and control center training programs and qualification, and provided a safety rulebook and a safety operating plan. RFP Respondent 204 would retain a local contractor crew to facilitate all planned switching. For forced outage response and emergency repairs, RFP Respondent 204



would use a two-person internal local crew located less than an hour from the project, with support from RFP Respondent 204's control room for the project.

RFP Respondent 204's internal crews would be supported by a contractor with numerous personnel less than one hour from the project. The contractor would have tracked carriers for wetlands and had 500 kV experience in the area, including interconnecting 500 kV facilities. RFP Respondent 204 would have tracked vehicles and high water access vehicles available, and would also contract for cranes, helicopters, environmental, and EHV testing equipment from original equipment manufacturers.

Proposal 204 included comprehensive procedures for repairing various types of equipment for the project and for testing equipment before re-energizing. RFP Respondent 204's support personnel would have live-line insulator replacement capability, and Proposal 204 explained how its project transmission structure designs and configurations would accommodate live-line work. Proposal 204 included detailed testing and switching procedures.

RFP Respondent 204 documented its ability to leverage an affiliated company's emergency preparedness plans and procedures for multiple threats, reflecting extensive experience with hurricane response and preparedness, procedures, and in-house storm weather tracking. There would be spare equipment located within 3.5 hours from the project (to protect from weather events). RFP Respondent 204 provided evidence that its family of companies had financed and performed extensive crisis repair work and had robust financial capability, although Proposal 204 did not detail a specific plan to finance project work.

As noted in the discussion of substation design, RFP Respondent 204 would have a spare single-phase transformer installed at substation, and committed to replace it if it were used, as well as to maintain one spare 230 kV and one spare 500 kV breaker at the substation site. Beyond that, RFP Respondent 204 would have access to a large inventory of spares held by affiliated companies, supplemented by pre-arranged support from various suppliers.

For maintenance, RFP Respondent 204 had an asset management program that could trigger changes to scheduling, adjust task frequency, and generate new work orders to address identified non-normal conditions. The asset management program also had computerized capability to manage spares stock and restocking, oversee spares holding location, and dispatch needed spare parts within hours. RFP Respondent 204 would leverage existing real-time monitoring tools to enable field operations teams to detect impending problems immediately. While RFP Respondent 204's affiliated companies would have an internal vegetation management program and software tools, most maintenance work would be bid out or assigned to capable vendors.

Proposal 204 detailed costs associated with individual maintenance tasks and on-going capital expenditures. As noted in the cost and design discussion above, RFP Respondent 204 committed to cap its operations and maintenance costs for the first 10 years of project operations.



RFP Respondent 204 submitted a comprehensive safety program for operations and maintenance, together with relevant documentation and supporting narrative. Proposal 204 detailed safety requirements for contractors and included a safety manual from its main operations and maintenance contractor. RFP Respondent 204 had a dedicated safety manager and dozens of safety professionals in its organization. Proposal 204's description of mitigating induced current hazard when grounding was not as thorough as some other proposals.

#### **4.4.5 Planning Participation for Proposal 204**

MISO evaluated planning participation for Proposal 204, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.



## 4.5 Proposal 205

### 4.5.1 Overview of Proposal 205

Proposal 205 was a relatively high-cost proposal without any distinguishing features in design or other areas commensurate with its high costs. Proposal 205 had high project costs (\$142.2 million), but offered a 'rate base cap' (\$135 million) that was \$7.2 million lower than its project implementation cost. Proposal 205's cost cap included AFUDC, but allowed the cap to increase based on commodity cost increases. Proposal 205 has offered to cap its return on equity at 10.7% (which was higher than most other proposals) and proposed the highest percentage of equity in its capital structure, at 60%. Proposal 205 was one of four proposals to expressly assume some risk related to route changes order by the PUCT. Specifically, Proposal 205, which had an estimated 500 kV transmission line length of 24.5 miles, would assume cost risk for increases up to 26 miles, and would cap costs for mileage beyond that at a specific per-mile limit.

The substation site for Proposal 205 was closer to coastal waterways than other proposals, which potentially increased flooding risks. Proposal 205 had a more preliminary project implementation plan than many other proposals, had inconsistent information on routing, and provided less detail on risks and project schedule than other proposals. Operations and maintenance information was sparse in many areas. MISO noted a single asset manager charged with many critical tasks and an acknowledgement that during catastrophic events, response resources were likely to be strained.

The Executive Committee assigned Proposal 205 a total evaluation score of 47 and found it to be generally acceptable, as compared to the other proposals (Figure 4-4).

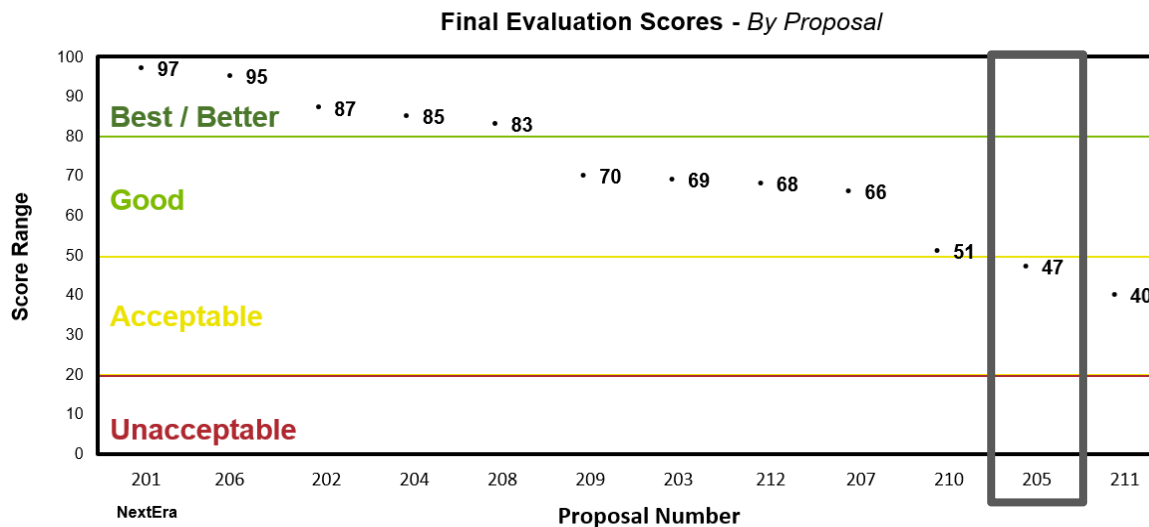


Figure 4-4: Proposal 205 Final Scoring Summary





In evaluating Proposal 205 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 4-10).

Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	Redacted
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 4-10: Proposal 205 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-11: Proposal 205 Ranking

#### 4.5.2 Project Cost and Design for Proposal 205

When MISO evaluated Proposal 205, it found Proposal 205’s cost and design were ‘Acceptable’ compared to other proposals, as depicted in Table 4-10.

##### *Cost Highlights*

In evaluating Proposal 205’s estimated project cost, MISO found Proposal 205 submitted a high project implementation cost of \$142.2 million (compared to the median project implementation cost of \$121.3 million), although Proposal 205 offered to cap project costs at \$135 million (including AFUDC). This was \$7.2 million lower than its cost estimate. Proposal 205 reserved the option to exceed its cost cap due to increases in commodity costs, and was the only proposal to specify this cost cap exemption.

Proposal 205 included the largest contingency of all proposals, which was offset in part the \$7.2 million reduction in estimated costs from the cost cap. Proposal 205 offered to absorb up to a 1.5-mile increase in the length of its 500 kV transmission line based on PUCT-mandated changes to the route. Based on the estimated 500 kV line length of 24.5 miles (the longest of all



proposals), this would mean that additional costs for length up to 26 miles would not increase Proposal 205's cost cap. The costs for any necessary mileage beyond that would be capped at a specific per-mile limit. Proposal 205 was one of eight proposals with a schedule guarantee.

OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and

caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table 4-12: Proposal 205 Cost Cap Summary**

Proposal 205 submitted an ATRR estimate of \$136 million (compared to the median ATRR estimate of \$106 million). Proposal 205's submitted estimate was higher than others, due to high project costs, and Proposal 205 did not offer to cap ATRR.

Proposal 205 also had a high cap on return on equity (at 10.7%, including adders). Only one proposal had higher return on equity. Proposal 205's cap on equity percentage in capital structure was 60%. This was the highest equity percentage (along with one proposal that also called for 60% equity).

The estimated operations and maintenance costs for Proposal 205 was in the high range, but Proposal 205 offered to cap operations and maintenance costs for the first five years of project operations. Proposal 205 did not provide for capital expenditures in future years of the project. The information supporting Proposal 205's cost and ATRR estimates was generally high level.

### Design Features

Proposal 205 would use a combination of guyed steel lattice V and self-supporting lattice towers on helical pier foundations with a horizontal phase configuration for the 500 kV transmission line. The route length of the 500 kV transmission line for Proposal 205 (roughly 24.5 geographical miles) was the longest of all proposals. The proposed right-of-way width for the 500 kV transmission line was 200 feet.

All four of the 230 kV transmission lines for Proposal 205 would extend less than one-quarter of a mile in geographical distance. This was comparable to several other proposals, and was responsive to the aspect and element of the RFP that encouraged minimizing 230 kV line length. Proposal 205 was unique in proposing to locate all 230 kV transmission lines within its Stonewood 500 kV Substation land parcel.



For its proposed 500 kV bundled conductor—954 kcmil ACSR Cardinal—Proposal 205 indicated a maximum conductor temperature of 248°F with wind speed of two feet per second. In MISO's opinion, this was higher than typical industry standard for this type of conductor and Proposal 205 did not discuss potential loss of conductor strength. For its proposed 230 kV conductor—1,272 kcmil ACSS Bittern—Proposal 205 indicated a maximum conductor temperature of 428°F, with wind speed of two feet per second. The 500 kV line's summer and winter emergency rating was 3,485 Amps; the 230 kV line's summer and winter emergency rating was 1,948 Amps.

Proposal 205 provided transmission line design criteria and design modeling information for both 230 kV and 500 kV transmission lines that addressed existing transmission line crossing requirements but did not fully demonstrate that its proposal conformed to Entergy interconnection tension requirements. Proposal 205 included industry guideline design tension and discussed catenary constant.

RFP Respondent 205 completed a preliminary geotechnical survey and did numerous soil borings in the project area. Proposal 205's substation site (approximately five acres) would be located very close to coastal waterways. The substation grade would be above the nearest 100-year floodplain, which was comparatively less robust than other proposals that committed to design their substations outside of the 100-year floodplain, the 500-year floodplain, and take into account the water elevation experienced during Hurricane Harvey.

Proposal 205 was one of several proposals with a ring bus design for the 230 kV bus in the new Stonewood 500 kV Substation. Proposal 205 included a grounding study, which increased certainty in its substation design. Equipment ratings for the circuit breakers and transformers all met all requirements in the RFP.

With respect to planning flexibility, which was noted in the RFP as another aspect and element, the substation location for Proposal 205 would present challenges, and would provide less planning flexibility than other proposals. Proposal 205 did discuss converting the 230 kV ring bus arrangement to breaker-and-a-half, and provided a corresponding drawing. Proposal 205 was comparable to several other proposals in providing for one spare single-phase transformer unit installed on site.

#### **4.5.3 Project Implementation for Proposal 205**

When MISO evaluated Proposal 205, it found Proposal 205's project implementation was 'Acceptable' compared to other proposals, as depicted in Table 4-10.

Proposal 205's information on project schedule and management laid out a general schedule with a critical path and a high-level risk register, but had limited supporting discussion in many areas, such as weather delays. Proposal 205 also had a high-level project management plan that lacked supporting discussion, was not project specific, and did not tie individual elements of the plan together as well as other proposals.



Proposal 205's information on regulatory permitting, route, and site evaluation indicated that RFP Respondent 205 evaluated numerous routes. A preferred route was shown on Proposal 205's KMZ file, but not provided in the routing study. Although Proposal 205 identified route crossings, there was minimal supporting discussion of risk analysis associated with the crossings. RFP Respondent 205 performed some geotechnical work, but there was but no indication which route was studied. Proposal 205's routing study and environmental assessment for transmission routing were more preliminary than other proposals. Likewise, Proposal 205's narrative explaining its choice among potential routes and tying its selection criteria to the routes evaluated was more limited than other proposals. Proposal 205 did not document outreach to relevant agencies comparable to higher-scoring proposals.

RFP Respondent 205 secured an option for its chosen substation site, as well as an option for a laydown yard, but provided ambiguous information on the number of substation sites it evaluated. Proposal 205 identified pipelines close to its substation site but did not discuss mitigation and offered limited description of its siting process. Proposal 205 reflected minimal evaluation of additional site concerns and there was little evidence of wetland delineation or discussion of storm surge and flooding. For land and right-of-way acquisition, Proposal 205 included a list of landowners with parcel cost estimations.

Proposal 205's information on its construction process generally consisted of limited, high-level discussion and most supporting information was not project specific. Neither quality control and quality assurance nor materials transportation were as thoroughly discussed as other proposals. Proposal 205's construction plan had limited process information and addressed constructability and project controls only at a high level.

Proposal 205 included a comprehensive safety plan that specifically addressed stop-work authority (granted to all employees) and identified a safety manager.

#### **4.5.4 Operations and Maintenance for Proposal 205**

When MISO evaluated Proposal 205, it found Proposal 205's operations and maintenance were 'Acceptable' compared to other proposals, as depicted in Table 4-10, based on the facts and determinations summarized below.

RFP Respondent 205 indicated it would create a new Local Balancing Authority for the project, but did not thoroughly explain its plan for doing so. An entity with experience in the immediate project area would perform the associated operational duties. RFP Respondent 205 described its "high-impact" compliant primary control center in the project area, and mentioned a backup control center, but did not provide supporting information. Although Proposal 205 demonstrated experience with the project Reliability Coordinator's outage coordination process, it lacked specificity on outage coordination software, processes, operating guides, and outage request timing.

RFP Respondent 205 had internal staff with 500 kV line and substation experience in the project area, as well as a dedicated project asset manager and several staff operations engineers. Discussion of field personnel qualifications and training for switching coordination



lacked specificity. RFP Respondent 205 would have available at all times an asset manager with broad, critical responsibilities for the project, with more than two dozen field staff (experienced with 500 kV facilities in local area) less than three hours from project. Proposal 205 lacked description of monitoring and control capabilities during outages and wetland-appropriate vehicles.

RFP Respondent 205 acknowledged that its asset manager could be overwhelmed after an event strong enough to damage project facilities and that other priorities could strain resources during a catastrophic event. Proposal 205 did not provide a well-supported mitigation plan.

Although RFP Respondent 205 would have a spare transformer installed at the substation, as well as materials on hand sufficient to replace one mile of 500 kV transmission line, Proposal 205's material procurement plan was less comprehensive than other proposals. Unspecified temporary structures could be used if correct replacements were unavailable.

Proposal 205 had minimal information on transformer maintenance tasks and limited information on maintaining 500 kV facilities. Although Proposal 205 mentioned a maintenance database, it did not explain how data would drive and trigger maintenance decisions. Available spare parts for the project were limited. One of the entities responsible for maintenance would be capable of performing live-line maintenance on the project.

Proposal 205's discussion of its safety plan for operations and maintenance activities was less thorough than some other proposals, which reduced certainty. There was minimal information on location-specific safety practices or a safety manager, safety training and certification, different hazard types, or induced current hazard mitigation. Proposal 205 stated that RFP Respondent 205 would ensure contractors comply with state standards. The entity performing fieldwork showed top-tier safety metrics, but there were no safety records for operations and maintenance contractors and minimal supporting information for maintenance tasks and project-specific safety considerations.

#### **4.5.5 Planning Participation for Proposal 205**

MISO evaluated planning participation for Proposal 205, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.

## 4.6 Proposal 206

### 4.6.1 Overview of Proposal 206

Proposal 206 was submitted by the RFP Respondent that submitted Proposal 204. Proposal 206 shared some strengths of Proposal 204 including solid transmission line design, robust substation design, and strength across all evaluation criteria.

Proposal 206 had a moderate project implementation cost estimate (\$119.7 million) and a project cost cap equal to that estimate. Like Proposal 204, Proposal 206 capped several other inputs to its ATRR, including return on equity (at 9.8%), equity in capital structure (at 45%), and the first 10 years of operations and maintenance costs. Proposal 206 offered a 10-year ATRR cap and included no AFUDC. The multiple cost-capping components of Proposal 206 were responsive to the aspect and element from the RFP emphasizing cost certainty to maintain or increase the benefit-to-cost ratio of the project.

Proposal 206 differed from Proposal 204 by offering H-frame transmission towers as the primary structures for the 500 kV transmission line (rather than the guyed-V lattice towers for the Proposal 204), which increased 500 kV transmission line cost for Proposal 206, as compared to Proposal 204. Proposal 206 also had an air-insulated substation design, rather than a gas-insulated substation like Proposal 204. Proposal 206 was analogous to Proposal 204 in project implementation and similar in most respects for operations and maintenance.

The Executive Committee assigned Proposal 206 a total evaluation score of 95 and found it to be generally better than most other proposals (Figure 4-5).

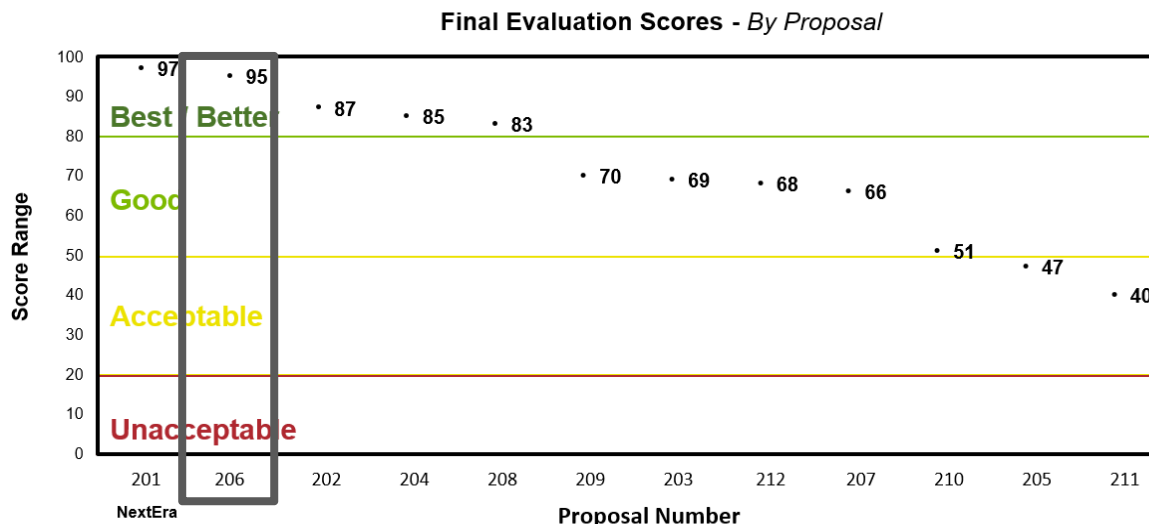


Figure 4-5: Proposal 206 Final Scoring Summary

In evaluating Proposal 206 against the four Tariff evaluation criteria, MISO categorized it as 'Better' in cost and design, 'Best' in project implementation (tied with three other proposals), and 'Better' in operations and maintenance, as compared to the other proposals (Table 4-13).



Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	Redacted
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 4-13: Proposal 206 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-14: Proposal 206 Ranking

#### 4.6.2 Project Cost and Design for Proposal 206

When MISO evaluated Proposal 206, it found Proposal 206's cost and design were 'Better' compared to other proposals, as depicted in Table 4-13.

##### *Cost Highlights*

In evaluating Proposal 206's estimated project cost, MISO found that Proposal 206 submitted a moderate project implementation cost of \$119.7 million (compared to the median project implementation cost of \$121.3 million). Proposal 206's 'rate base cap' is equal to its project implementation cost. Like Proposal 204, Proposal 206 would not seek AFUDC or CWIP.

Proposal 206's project implementation cost included a relatively high amount of contingency, which was determined in the same manner as Proposal 204. Proposal 206 was one of eight proposals with a schedule guarantee.





OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table 4-15: Proposal 206 Cost Cap Summary**

Proposal 206 submitted an ATRR estimate of \$98.8 million (compared to the median ATRR estimate of \$106 million). The other elements of Proposal 206's ATRR estimate (for example, the types of cost caps, return on equity, equity percentage, foregoing CWIP and AFUDC) were analogous to Proposal 204.

### Design Features

Proposal 206 would rely on steel H-frames as the primary structure for the 500 kV transmission line (as compared to Proposal 204's use primarily of guyed-V lattice structures). Proposal 206's 500 kV and 230 kV transmission line designs were, in most other respects, the same as Proposal 204.

Proposal 206 had a well-supported substation design with numerous redundant features, as well as a 500/230 kV transformer capacity larger than the minimum required by the RFP. RFP Respondent 206 thoroughly identified, considered, and discussed environmental risks and mitigation and was among the most thorough in completion of supporting design studies for the project.

RFP Respondent 206 designed a substation site of approximately six acres. The 230 kV bus arrangement is double-breaker, double-bus, which is the most robust among all bus arrangements proposed. Proposal 206 substation design adds further value by including two fully redundant line relaying protection schemes for the 500 kV transmission line and three sources for station service power. RFP Respondent 206 provided thorough supporting narrative for its protection and control schemes and addressed visual and sound impacts for its proposed site.

RFP Respondent 206 further supported its substation design with side-view elevation drawings of its physical layout, a lightning protection study, and attachments showing alternating current station service power sizing calculations, direct current battery sizing calculations, and bus and electrical jumper ampacity calculations.

RFP Respondent 206 took proactive steps in its design to mitigate flood risk by taking into account the high water mark experienced during Hurricane Harvey, as well as ensuring the substation site would not be within the 100-year or 500-year floodplain. RFP Respondent 206



included supporting design study information showing how it determined the relevant flood mitigation level. To support the certainty of its grading design and reduce risk, RFP Respondent 206 took soil borings at locations surrounding its substation parcel.

Proposal 206 addressed cost-effective flexibility in the planning horizon (another of the RFP's aspects and elements) with a substation layout that allowed for ready expansion of the 500 kV bus and discussed the potential to add one more 500 kV transmission line. Proposal 206 also discussed how further 230 kV lines could be added to either side of substation, supported by a general arrangement drawing showing where this could occur.

By providing a transformer with higher capacity than the RFP-required minimum, RFP Respondent 206 increased the value of its proposal because the 500/230 kV transformer becomes a less limiting system element for 500 kV to 230 kV power flows. The 230 kV breaker for the transformer position in the substation also has higher capacity than what most other RFP Respondents proposed, which enabled RFP Respondent 206 to take advantage of the higher capacity transformer included in its design. Proposal 206 is comparable to several other proposals in providing for one spare single-phase transformer unit installed at the substation.

#### **4.6.3 Project Implementation for Proposal 206**

When MISO evaluated Proposal 206, it found Proposal 206's project implementation was the 'Best' (tied with three other proposals), as depicted in Table 4-13. Project implementation for Proposal 206 was analogous to Proposal 204.

#### **4.6.4 Operations and Maintenance for Proposal 206**

When MISO evaluated Proposal 206, it found Proposal 206's operations and maintenance were 'Better' compared to other proposals, as depicted in Table 4-13.

Operations and maintenance for Proposal 206 were analogous to Proposal 204 in all respects but one. Whereas Proposal 204 related to operations and maintenance for project facilities that included a gas-insulated substation, Proposal 206's substation was air insulated (as described above). Proposal 206 thoroughly addressed operations and maintenance for all its proposed facilities.

#### **4.6.5 Planning Participation for Proposal 206**

MISO evaluated planning participation for Proposal 206, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.

## 4.7 Proposal 207

### 4.7.1 Overview of Proposal 207

Proposal 207 was a generally solid proposal. Proposal 207 had moderate project costs (\$118.8 million) and offered a 'rate base cap' equal to its project implementation cost. Proposal 207's cost cap included AFUDC. Proposal 207 offered a low cap on return on equity (at 9.75%), but equity in its capital structure was higher than many other proposals (at 52.5%). Proposal 207 stood out for the uncertainty of some cost assumptions, including a plan to use bonus depreciation and low assumed taxes. Proposal 207 did not offer to cap its ATRR, and was one of four proposals that did not offer a schedule guarantee.

Proposal 207 featured well-supported transmission line and substation designs. Although Proposal 207 had a less thorough project management plan, most other areas of project implementation, such as treatment of risk and discussion of routing requirements, were strong. Proposal 207 was the only proposal to omit discussion of a spare transformer and was generally uneven in addressing operations and maintenance.

The Executive Committee assigned Proposal 207 a total evaluation score of 66 and found it to be generally good, as compared to the other proposals (Figure 4-6).

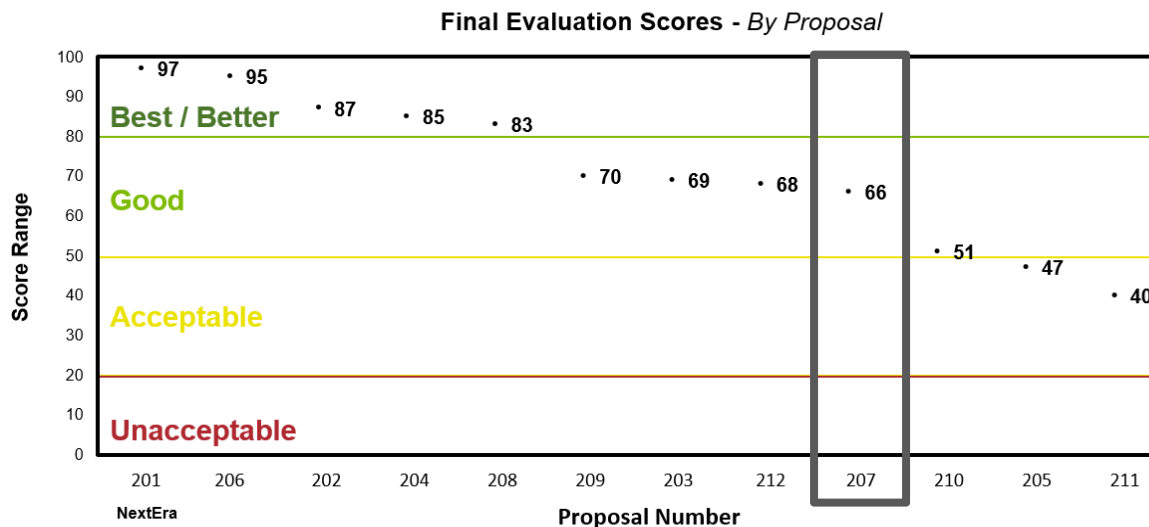


Figure 4-6: Proposal 207 Final Scoring Summary

In evaluating Proposal 207 against the four Tariff evaluation criteria, MISO categorized it as 'Good' in cost and design, 'Good' in project implementation, and 'Good' in operations and maintenance, as compared to the other proposals (Table 4-16).



Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	Redacted
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 4-16: Proposal 207 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-17: Proposal 207 Ranking

### 4.7.2 Project Cost and Design for Proposal 207

When MISO evaluated Proposal 207, it found Proposal 207's cost and design were 'Good' compared to other proposals, as depicted in Table 4-16.

#### Cost Highlights

In evaluating Proposal 207's estimated project cost, MISO found that Proposal 207 submitted a moderate project implementation cost of \$118.8 million (compared to the median project implementation cost of \$121.3 million). Proposal 207's 'rate base cap' was equal to its project implementation cost and included AFUDC.

Proposal 207 determined its contingency level (which was relatively low) by quantifying the magnitude and likelihood of numerous risks. This aspect of Proposal 207's cost estimate was well supported. Others elements, such as right-of-way costs, were less so. Proposal 207 was one of only four proposals that did not offer some form of schedule guarantee, and was one of only three proposals that did not offer to forego recovery of funds for CWIP.



OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

Table 4-18: Proposal 207 Cost Cap Summary

Proposal 207 submitted an ATRR estimate of \$90.2 million (compared to the median ATRR estimate of \$106 million). This ATRR estimate was lower than all but one other proposal, which was due to the lowest property taxes and use of bonus depreciation. Proposal 207 did not offer to cap its ATRR and was the only proposal to use cost estimates that relied on bonus depreciation.

Proposal 207's cap on return on equity, at 9.75% (including adders), was the lowest of all proposals. At the same time, Proposal 207 had one of the higher caps on equity in its capital structure, at 52.5%. Only three proposals had higher equity percentages. Proposal 207's operations and maintenance costs were in the low range, and were not subject to a cap. Proposal 207 did not provide for capital expenditures in future years of the project.

### Design Features

Proposal 207's 500 kV transmission line design featured primarily H-frame structures on vibratory caisson foundations (a foundation type common to the project area and selected to minimize soil excavation). The geographical length of the 500 kV transmission line would be approximately 19.9 miles (which was the shortest of all proposals), with a right-of-way width of 200 feet. The proposed 500 kV bundled conductor—954 kcmil ACSR Cardinal—had a maximum summer and emergency line rating of 3,287 Amps and a maximum normal and emergency maximum operating temperature of 212°F (with wind speed of two feet per second).

The 230 kV transmission line would use primarily braced post galvanized steel monopole structures, also on vibratory caisson foundations. Proposal 207 would have right-of-way width for the 230 kV transmission line of 150 feet, and relatively long 230 kV transmission lines (approximately 1.4 miles for each circuit, with combined circuit length of roughly 5.6 miles). This was longer than all but two proposals, and less responsive to the RFP aspect and element of minimizing 230 kV line length than other proposals. The 230 kV bundled conductor was of the same conductor type as the 500 kV transmission line (and had a maximum line rating of 2,191 Amps). The maximum normal and emergency maximum operating temperature was 212°F (with wind speed of two feet per second).

Proposal 207's foundation design discussion was thorough but had limited supporting data compared to other proposals. Proposal 207 did not discuss lightning strike density or target



outages per mile per year, which higher-scoring proposals did, and lacked attention to interconnection and crossing requirements comparable to higher-scoring proposals.

Proposal 207's substation design had less advantageous design features than some of the higher-scoring proposals, but was generally well supported. Proposal 207 included top-view and side-view drawings for its control shelter, which increased specificity for its design for the protection and control system.

Proposal 207 was one of several proposals with a ring bus arrangement design for the 230 kV bus. RFP Respondent 207 elected to mitigate flood risk by designing a site (approximately five acres in size) further away from coastal waterways, in an area it deemed to have minimal flooding and no designated base flood elevation. As noted above, this increased the length of its 230 kV transmission line. RFP Respondent 207 also took soil borings near its proposed substation site, another measure to reduce risk. Equipment ratings for the circuit breakers and the transformers met RFP requirements.

While Proposal 207's substation design and location did not preclude future expansion, the proposal has less thorough discussion of substation flexibility into the planning horizon than some other proposals. Proposal 207 did discuss converting the 230 kV ring bus arrangement into a breaker-and-a-half and provided a drawing.

#### **4.7.3 Project Implementation for Proposal 207**

When MISO evaluated Proposal 207, it found Proposal 207's project implementation was 'Good' compared to other proposals, as depicted in Table 4-16.

MISO found that Proposal 207's schedule was not as comprehensive as some other proposals. Proposal 207 prepared a comprehensive risk register that included probability of occurrence, schedule and cost impact, risk owner, mitigation, and contingency.

The project management plan for Proposal 207 had less supporting information and discussion and did not delineate which parties would be responsible for which tasks as well as other proposals. Proposal 207's information on regulatory permitting, route, and site evaluation, included a thorough discussion of the routing process, including segment impact categories, identification of routing segments, and extensive supporting narrative. RFP Respondent 207 demonstrated experience obtaining previous CCNs for projects in Texas.

Proposal 207 evaluated a number of potential routes. It provided an impact comparison study and selected a preferred route by applying specified criteria and adhering to PUCT routing guidelines. Proposal 207's supporting information for routing studies was not as comprehensive as other proposals. RFP Respondent 207 met with some permitting agencies (though fewer than higher-scoring proposals) and demonstrated its ability to navigate through the permitting process.

Proposal 207 secured an option on its selected substation site. Although Proposal 207 discussed high water impacts, it did not address adjacent infrastructure impacts or mitigation.





Proposal 207 provided less information than other proposals regarding key parcels and property rights for its preferred route.

For the construction materials procurement and management plan Proposal 207 did not consistently delineate the roles between RFP Respondent 207 and its contractors. The primary construction contractor identified in Proposal 207 listed experience up to 345 kV but did not include as much discussion regarding 500 kV experience.

Proposal 207 identified an engineering and surveying company that had worked on 500 kV and 230 kV projects in the area within the past two years, and described the qualifications of the key personnel. Proposal 207 was less specific about the roles and responsibilities of the relevant contractors than higher-scoring proposals. Proposal 207 included safety processes for key contractors (but not for subcontractors).

#### **4.7.4 Operations and Maintenance for Proposal 207**

When MISO evaluated Proposal 207, it found Proposal 207's operations and maintenance were 'Good' compared to other proposals, as depicted in Table 4-16.

RFP Respondent 207 had robust control center staffing and operating tools and a "hot" backup control center. RFP Respondent 207 had experience with the project Reliability Coordinator, but did not describe other assets, relationships, or experience in the project area. Proposal 207 clearly described the overall Balancing Authority process and its plan to incorporate the project into an interconnecting Local Balancing Authority Area, including a hard completion date.

Although RFP Respondent 207 demonstrated its experience as a transmission operator for 500 kV transmission lines and substations, its plans to incorporate local modeling into its energy management system were less specific than those of proposals categorized as 'Best/Better' in operations and maintenance. RFP Respondent 207 proposed to enter into a first responder agreement with a third party. One first responder, located one hour from the project would perform local switching. A supporting contractor could be available in less than six hours.

Proposal 207 would rely on the same supporting contractor for emergency repairs, and had only one field person within four hours of the project. RFP Respondent 207 could tap into substantial resources of its parent company and contractors if major repairs were needed. Proposal 207 was the only proposal that did not provide for a spare transformer phase or spare breakers either onsite at the Stonewood 500kV Substation or in a remote location. This would considerably increase replacement time in the event of a failure. RFP Respondent 207 would have temporary towers available to restore one-half mile of transmission line and had access to a substantial credit facility for necessary replacements or rebuilds, but was not as specific in this area as some other proposals.

For maintenance activities, RFP Respondent 207 had a master agreement with a contractor to perform 230 kV and 500 kV transmission line maintenance. Proposal 207 included a comprehensive asset management and predictive maintenance systems and tools. Proposal





207 would rely on membership in multiple industry group collaborations and contractors for sparing strategy, but did not mention any centralized spare management system.

Proposal 207 provided thorough safety documentation for RFP Respondent 207 and its contractor, which included a dedicated safety manager, site-specific safety plan, and an emergency plan. Proposal 207 also had robust procedures for preventing induced or transient over-voltage scenarios. RFP Respondent 207 showed top-tier safety metrics over the last four years. Safety data for contractors included both construction and operations and maintenance.

#### **4.7.5 Planning Participation for Proposal 207**

MISO evaluated planning participation for Proposal 207, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.

## 4.8 Proposal 208

### 4.8.1 Overview of Proposal 208

Proposal 208 was submitted by the same RFP Respondent that submitted Proposals 204 and 206. Proposal 208 shared some of the strengths of Proposal 206, particularly in the areas of project implementation and transmission line design. Proposal 208 had a moderate to high project implementation cost estimate (\$132.9 million) and a project cost cap equal to that estimate. Like Proposals 204 and 206, Proposal 208 capped several other inputs to its ATRR, including return on equity (at 9.8%), equity in capital structure (at 45%), and the first 10 years of operations and maintenance costs. Proposal 208 offered a 10-year ATRR cap and included no AFUDC. The multiple cost-capping components of Proposal 208 were responsive to the aspect and element from the RFP emphasizing cost certainty to maintain or increase the benefit-to-cost ratio of the project.

Proposal 208 differed from Proposal 204 by offering H-frame transmission towers as the primary structures for the 500 kV transmission line (rather than the guyed-V lattice towers for Proposal 204). Proposal 208 was the same as Proposal 204 in calling for a gas-insulated substation with a breaker-and-a-half bus arrangement for the 230 kV bus. Proposal 208 was also the same as Proposal 204 in operations and maintenance.

The Executive Committee assigned Proposal 208 a total evaluation score of 83 and found it to be better than most other proposals (Figure 4-7).

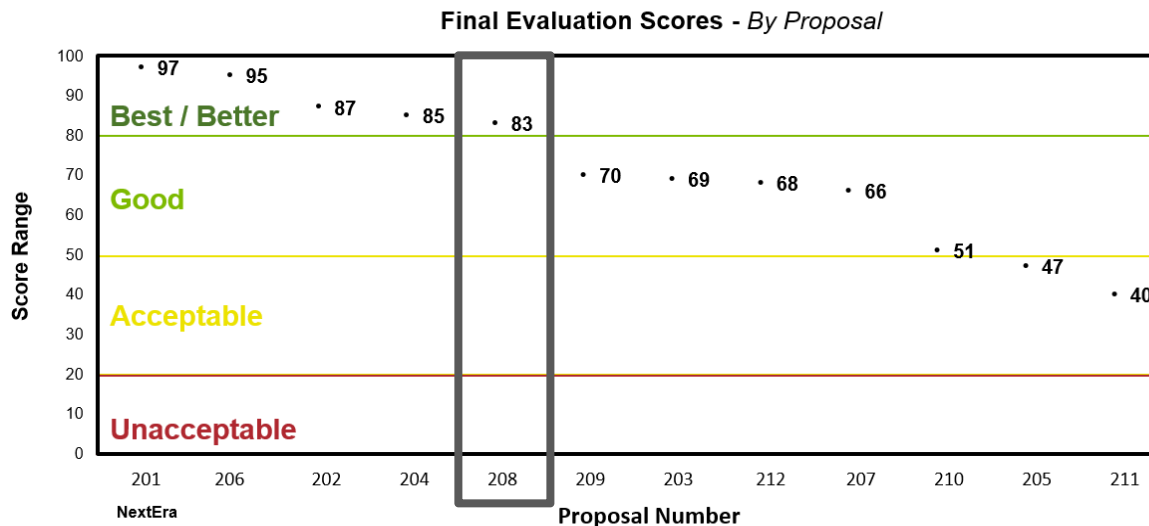


Figure 4-7: Proposal 208 Final Scoring Summary

In evaluating Proposal 208 against the four Tariff evaluation criteria, MISO categorized it as 'Good' in cost and design, 'Best' in project implementation (tied with three other proposals), and 'Better' in operations and maintenance, as compared to the other proposals (Table 4-19).



Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	Redacted
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 4-19: Proposal 208 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-20: Proposal 208 Ranking

### 4.8.2 The Project Cost and Design for Proposal 208

When MISO evaluated Proposal 208, it found Proposal 208's cost and design were 'Good' compared to other proposals, as depicted in Table 4-19.

#### Cost Highlights

In evaluating Proposal 208's estimated project cost, MISO found Proposal 208 submitted a moderate to high project implementation cost of \$132.9 million (compared to the median project implementation cost of \$121.3 million). Proposal 208's 'rate base cap' was equal to its project implementation cost. Like Proposals 204 and 206, Proposal 208 would not seek AFUDC or CWIP.

Proposal 208's project implementation cost included a high amount of contingency, which was determined in the same manner as Proposal 204. Proposal 208 was one of eight proposals with a schedule guarantee.



OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

Table 4-21: Proposal 208 Cost Cap Summary

Proposal 208 submitted an ATRR estimate of \$109.3 million (compared to the median ATRR estimate of \$106 million). The other elements of Proposal 208's ATRR estimate (for example, the types of cost caps, return on equity, equity percentage, foregoing CWIP and AFUDC) were analogous to Proposal 204.

Proposal 208's transmission line design was identical to Proposal 206. Proposal 208's substation design was identical to Proposal 204.

### 4.8.3 Project Implementation for Proposal 208

When MISO evaluated Proposal 208, it found Proposal 208's project implementation was 'Best,' as compared to other proposals, as depicted in Table 4-19. Project implementation for Proposal 208 was analogous to Proposals 204 and 208.

### 4.8.4 Operations and Maintenance for Proposal 208

When MISO evaluated Proposal 208, it found Proposal 208's operations and maintenance were 'Better' compared to other proposals, as depicted in Table 4-19.

Proposal 208's discussion of operations and maintenance was analogous to the discussion in Proposal 204.

### 4.8.5 Planning Participation for Proposal 208

MISO evaluated planning participation for Proposal 208, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.

## 4.9 Proposal 209

### 4.9.1 Overview of Proposal 209

Proposal 209 had varied performance across MISO's evaluation criteria. Its relative area of strength was in operations and maintenance.

Proposal 209 had the lowest project implementation cost of all proposals, at \$104.4 million, and offered a 40-year cap on its ATRR (including AFUDC)—something no other proposal did. Proposal 209's low project costs were offset, to some degree, by its high rate of return on equity (at 11.35%) and the highest percentage of equity in capital structure (at 60%). Proposal 209 expressly assumed cost risk for route and design changes ordered by the PUCT. Only three other proposals expressly offered to assume some or all of this risk.

Although Proposal 209 had a generally well-designed transmission line, Proposal 209 did not fully demonstrate that its proposal conformed to Entergy's interconnection requirements. Proposal 209 had a robust substation design, but its substation site was located significantly farther away from the 230 kV line interconnection point than most other proposals. Although Proposal 209 did some things well in project implementation (for example, identifying a well-qualified permitting team with recent relevant experience in the project area), it was not as thorough in addressing project-specific infrastructure and other implementation risks. Proposal 209's plan for operations and maintenance was relatively robust.

The Executive Committee assigned Proposal 209 a total evaluation score of 70 and found that overall, it was good, as compared to the other proposals (Figure 4-8).

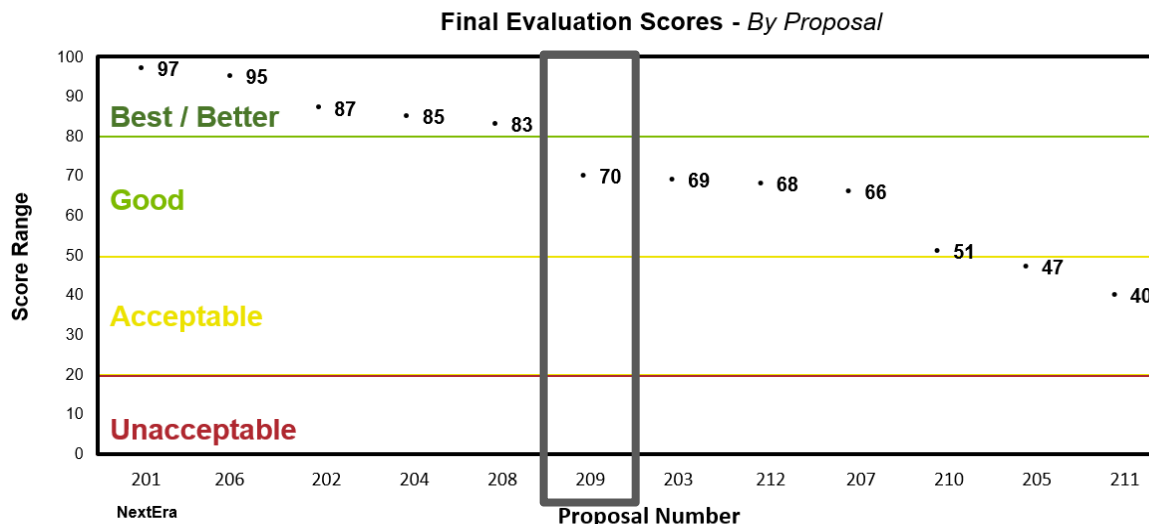


Figure 4-8: Proposal 209 Final Scoring Summary

In evaluating Proposal 209 against the four Tariff evaluation criteria, MISO categorized it as 'Good' in cost and design, 'Acceptable' in project implementation, and 'Better' in operations and maintenance, as compared to the other proposals (Table 4-22).



Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	Redacted
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	Redacted
212	Good	Good	Good	

Table 4-22: Proposal 209 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-23: Proposal 209 Ranking

#### 4.9.2 Project Cost and Design for Proposal 209

When MISO evaluated Proposal 209, it found Proposal 209's cost and design were 'Good' compared to other proposals, as depicted in Table 4-22.

##### *Cost Highlights*

In evaluating Proposal 209's estimated project cost, MISO found Proposal 209 had the lowest project implementation cost, at \$104.4 million. The median project implementation cost was \$121.3 million. According to MISO's calculations, Proposal 209's had the lowest total cost for its 500 kV and 230 kV transmission lines and the lowest engineering and project management costs. This was true even though three other proposals had shorter 500 kV transmission lines.

Proposal 209's project implementation cost included a low amount of contingency. Proposal 209 was one of only four proposals that did not offer a schedule guarantee, and was one of only three proposals that did not offer to forego recovery of funds for CWIP. Although Proposal 209 did not offer to separately cap any individual project cost components, its ATRR cap, which was structured as individual annual caps on ATRR for each of the first 40 years of project operation, contained its overall project costs. RFP Respondent 209 also expressly



assumed risk of cost-increases from PUCT-mandated changes to its transmission line routing and design.

OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table 4-24: Proposal 209 Cost Cap Summary**

Proposal 209 submitted an ATRR estimate of \$110.3 million, and offered to cap its ATRR at this amount for the first 40 years of the project. Even though Proposal 209 had the lowest project implementation cost, its ATRR was higher than the median of \$106 million. This was because, offsetting Proposal 209's low project costs were the highest return on equity (at 11.35%), the highest percentage of equity in capital structure (at 60%, although one other proposal had an equally high percentage), and the highest taxes of all proposals.

Proposal 209 described several contingencies, with associated cost risks contained by its 40-year cap on ATRR. Proposal 209 did not offer to cap its return on equity or the equity percentage in its capital structure, whereas all other proposals did. Proposal 209 did not separately cap its operations and maintenance costs. The supporting information for Proposal 209's cost estimates was modest compared to proposals categorized as 'Best/Better' in cost and design.

### Design Features

Overall, Proposal 209's transmission facilities reflected modest design in both performance and rigor, supported by limited narratives and engineering studies. All transmission line facilities would be designed to withstand 140 mph winds, but Proposal 209 did not fully demonstrate that its proposal conformed to Entergy interconnection requirements for either the 500 kV or the 230 kV transmission lines.

The estimated length of Proposal 209's 500 kV transmission line was roughly 22.4 miles, with a right-of-way width of 180 feet. The line would use primarily steel H-frame V-string structures, with all structures on concrete drilled pier foundations.

Proposal 209 elected to design for a construction buffer to wire clearance two feet greater than the minimum required by the RFP, which was intended to serve several purposes, including reducing field effects and providing future flexibility. The proposed 500 kV bundled conductor—954 kcmil ACSR Cardinal per phase—had a summer normal and emergency temperature rating of 3,342 Amps at 212°F with a wind speed of two feet per second.





The proposed length of Proposal 209's 230 kV transmission line (approximately 9,000 feet for each circuit, with combined length for all four circuits of 36,000 feet) was longer than all but one other proposal, and therefore less responsive to the aspect and element emphasizing limiting 230 kV line length. The 230 kV transmission structures would be primarily double-circuit brace-post monopoles on drilled pier foundations, positioned in a right-of-way approximately 225 feet wide. The proposed 230 kV conductor would be 954 kcmil ACSS Cardinal per phase, with a summer normal and emergency temperature rating of 1,918 Amps at 392°F with wind speed of two feet per second.

Proposal 209's substation area would cover approximately 7.5 acres and would feature a breaker-and-a-half 230 kV bus arrangement. Three other proposals (Proposals 204, 208, and 211) had similar bus arrangements, which are more flexible and robust than a ring bus arrangement.

Proposal 209 selected a substation site that was not within the 100-year or 500-year floodplains. While the location of Proposal 209's substation (more distant from coastal waterways) mitigated flood risk, it also increased the length of its 230 kV lines. Proposal 209 demonstrated its strong substation design process through its well-described approaches to structure selection, protection and control design, and relay device selection. RFP Respondent 209 also included equipment outline drawings, steel drawings and sketches, alternating current and direct current station service diagrams, bus and electrical jumper ampacity calculations, a lightning protection study, and a microwave feasibility study. Proposal 209 enhanced the value of its proposed substation by designing its control enclosure to withstand winds of up to 200 mph.

Proposal 209's substation design was responsive to the aspect and element calling for operational and planning flexibility by supporting more cost-effective flexibility in the planning horizon than some other proposals. Proposal 209 laid out its substation for ready expansion of the 500 kV bus, discussed plans for a potential additional 500 kV line, and provided illustrative drawings (as well as a drawing of a potential additional 230 kV line). Proposal 209 also discussed the possibility of an additional 500/230 kV transformer bank, again, supported by a drawing.

Equipment ratings for the circuit breakers and the transformers all met MISO's RFP requirements in the RFP. Proposal 209 was comparable to several other proposals in providing for one spare single-phase transformer unit installed on site.

#### **4.9.3 Project Implementation for Proposal 209**

When MISO evaluated Proposal 209, it found Proposal 209's project implementation was 'Acceptable' compared to other proposals, as depicted in Table 4-22. MISO based its finding on the following facts and conclusions from its comparative analysis of Proposal 209.

Proposal 209 had a general project schedule, and supporting discussion on critical path and weather days was minimal. Proposal 209's project management plan was less comprehensive and had less supporting information compared to most other proposals. In



addressing project risk management, Proposal 209 provided a high-level risk register, with limited supporting discussion and identification of risks. Proposal 209 evaluated several potential routes for its 500 kV transmission line, which it narrowed down to one preferred route.

Proposal 209 included KMZ files and parcel maps for transmission line routing, but they were less specific and had more limited supporting discussion than other proposals. Proposal 209's routing studies covered only a subset of its route alternatives and reflected limited geotechnical analysis, and, in general, were less thorough than higher-scoring proposals. RFP Respondent 209's regulatory permitting team had recent relevant experience in project area.

For substation siting, Proposal 209 began with a number of potential sites, which it narrowed down to one recommended site. Proposal 209 provided less robust evidence supporting its site evaluation, including minimal comparative analysis between sites and little discussion of constraints for its chosen site. Although Proposal 209 stated that its recommended site was not in 100- and 500-year floodplains, it provided minimal background information in comparison to other proposals' analysis of flood risks. Proposal 209's treatment of site related-risks and mitigation was not as thorough as other proposals.

Proposal 209 identified a large set of parcels for its proposed transmission line and substation siting, but accompanying maps showed less specificity than higher-ranking proposals. There was minimal discussion of high-risk parcels. Proposal 209's engineering and surveying plans were not as project specific, and did not delineate roles and responsibilities with the specificity shown in other proposals. Proposal 209 noted an affiliate with 500 kV experience to support its design and construction activities.

Proposal 209 included several site-specific drafts of safety forms and information, but the submitted safety plans were not site specific. There would be designated onsite safety authorities with stop-work authority.

#### **4.9.4 Operations and Maintenance for Proposal 209**

When MISO evaluated Proposal 209, it found Proposal 209's operations and maintenance were 'Better' compared to other proposals, as depicted in Table 4-22. MISO based its finding on the information and comparative analysis results summarized below.

Proposal 209 described, in general terms, its plans to integrate the project into the interconnecting Local Balancing Authority. While Proposal 209 did not provide evidence of experience with operations in the project area, RFP Respondent 209 had an experienced control center in the Eastern Interconnection and demonstrated its ability to integrate the project.

RFP Respondent 209 demonstrated extensive outage coordination capabilities and tools, including procedures to study both reliability and congestion cost impacts when scheduling facility outages. Proposal 209 stated that there would be a field person stationed at the Stonewood 500 kV Substation, immediately available during business hours, to perform local



switching. The resume for this designated resource showed experience and training with facilities up to 345 kV.

To address forced outages and emergency repairs, Proposal 209 would have one immediately available first responder. Several dozen additional personnel would be less than 90 minutes away from the project location, with hundreds of additional company personnel available within 24 hours. Proposal 209 did not specify the 500 kV experience of its field crews, but could draw on 500 kV engineering and design experience from an affiliated organization.

Among other support capabilities, Proposal 209 would have in-house relay and engineering staff available 24 hours a day, seven days a week for diagnosis and repair design. There would be wetlands equipment, as well as a helicopter, available for emergency repairs.

For preventive and predictive maintenance activities, Proposal 209 provided a comprehensive list of specialized testing equipment to be regularly contracted, but did not specify criteria for triggering maintenance or prioritization. Because Proposal 209 would have a spare transformer phase installed on site, it could be in service in less than a week. Proposal 209 did not propose to have a spare 230 kV breaker for the project.

Major facility replacement or rebuilds could be performed by contractors. RFP Respondent 209 provided evidence of access to large cash and credit facilities, with enough cash on hand to rebuild the entire project. Proposal 209 stated that it would have enough 230 kV transmission materials to replace all project facilities. RFP Respondent 209 would rely on its materials procurement team for further needs.

To address safety considerations related to operations and maintenance, Proposal 209 submitted a comprehensive safety handbook. RFP Respondent 209's training department would conduct thorough contractor safety reviews and certifications. Although RFP Respondent 209 did not demonstrate specific experience with 500 kV facilities, it did indicate experience with EHV facilities and had procedures for 500 kV facilities. Proposal 209 did not include an induced-current hazard mitigation plan.

RFP Respondent 209 had top-tier safety metrics over the last 10 years. Its average DART rate had improved in that period. Because Proposal 209 provided a single combined metric for its parent company and contractor safety records, MISO was unable to assess how the metrics would apply to operations and maintenance personnel.

#### **4.9.5 Planning Participation for Proposal 209**

MISO evaluated planning participation for Proposal 209, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.

## 4.10 Proposal 210

### 4.10.1 Overview of Proposal 210

Proposal 210, as a whole, performed less well than most other proposals. Proposal 210 had project costs of \$122.8 million and offered a ‘rate base cap’ equal to its project implementation cost. Proposal 210’s cost cap included AFUDC. Proposal 210 offered a cap on return on equity (at 9.8%) and equity in its capital structure (at 45%). Proposal 210 had a higher net present value for its ATRR than all proposals MISO categorized as ‘Best/Better.’

Proposal 210 had a robust transmission line design and well-supported substation design details. Proposal 210 did not perform as well as most other proposals in project implementation because the majority of its routing options terminated at the existing Sabine Substation, rather than at the new Stonewood 500kV Substation to be constructed for the project. Proposal 210 demonstrated less relevant experience or lower certainty than other higher-scoring proposals in several key areas of operations and maintenance.

The Executive Committee assigned Proposal 210 a total evaluation score of 51 and found it to be generally good, as compared to the other proposals (Figure 4-9).

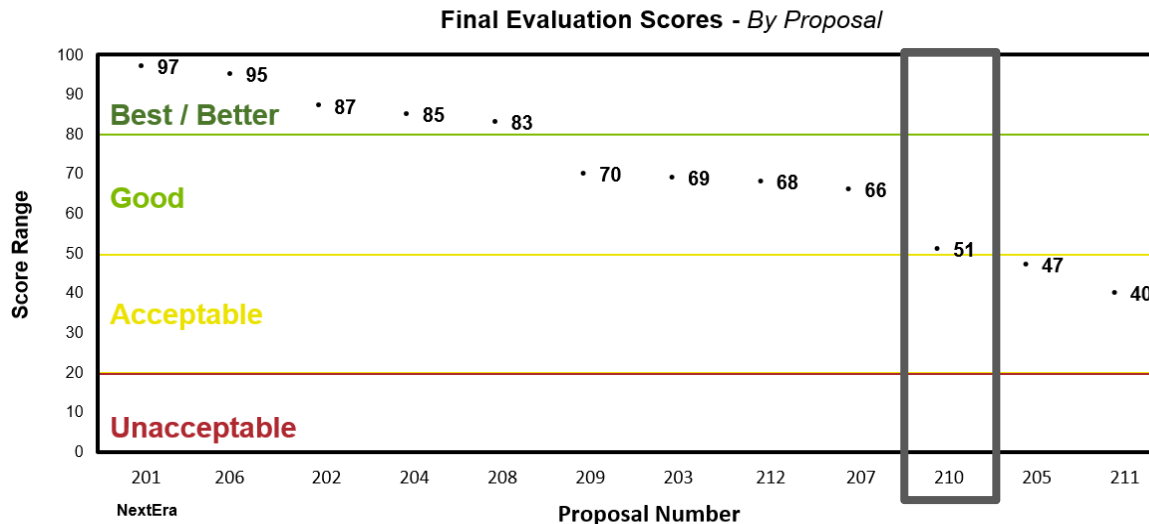


Figure 4-9: Proposal 210 Final Scoring Summary

In evaluating Proposal 210 against the four Tariff evaluation criteria, MISO categorized it as ‘Good’ in cost and design, ‘Acceptable’ in project implementation, and ‘Acceptable’ in operations and maintenance, as compared to the other proposals (Table 4-25).



Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	Redacted
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	Redacted
212	Good	Good	Good	

Table 4-25: Proposal 210 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-26: Proposal 210 Ranking

#### 4.10.2 Project Cost and Design for Proposal 210

When MISO evaluated Proposal 210, it found Proposal 210's cost and design were 'Good' compared to other proposals, as depicted in Table 4-25.

##### *Cost Highlights*

In evaluating Proposal 210's estimated project cost, MISO found that Proposal 210's estimate of \$122.8 million was close to the median project implementation cost of \$121.3 million, which MISO considered moderate. Proposal 210 offered a "rate base cap" of \$122.8 million (equal to its project implementation cost), and included AFUDC in its cost cap.

Proposal 210's project implementation cost included one of the lowest amounts of contingency, yet Proposal 210 included minimal description of risks that could affect project costs. Proposal 210 was one of eight proposals to offer a schedule guarantee.



## Hartburg-Sabine Junction 500 kV Selection Report

### Section 4: Proposal Summaries

OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table 4-27: Proposal 210 Cost Cap Summary**

Proposal 210 submitted an ATRR estimate of \$106.2 million (very close to the median of \$106 million), but did not offer to cap its ATRR. Proposal 210 had a low return on equity cap of 9.8%, including adders, which would remain in effect for the life of the project. Several other proposals proposed the same 9.8% cap on return on equity; only one proposal was lower (at 9.75%). The equity percentage in Proposal 210's capital structure was low, at 45%, and capped for the life of the project. Seven other proposals had comparable equity percentages; only one proposal was lower (at 40%).

Proposal 210's offered to cap its operation and maintenance costs for the first five years following the project in-service date. Proposal 210 did not provide for capital expenditures in future years of the project.

#### *Design Features*

The route length of Proposal 210's 500 kV transmission line—approximately 24.3 miles—was longer than all but one other proposal. The proposed right-of-way width was 200 feet.

Proposal 210 featured galvanized steel H-frame structures with drilled pier foundations for its 500 kV transmission line. The proposed bundled 500 kV conductor—954 kcmil ACSS/TW Cardinal—had maximum operating temperature of 392°F and an emergency line rating of 5,440 Amps (with wind speed of two feet per second). This was approximately 82% above the MISO-specified minimum, while the line rating for the bundled 230 kV line conductor—954 kcmil ACSS/TW Cardinal—had maximum conductor temperature of 392°F with a summer emergency rating of 3,618 Amps (with wind speed of two feet per second). This was approximately 110% above the MISO-specified minimum. The route length for 230 kV transmission lines was about 0.4 miles, containing all four circuits, with a right-of-way width of 200 feet.

Proposal 210 lacked supporting discussion, for both the 500 kV and 230 kV lines, of load cases, sag-tension, foundation design, galloping and vibration, and RFP requirements for interconnecting with Entergy's existing system. Proposal 210 had more limited discussion and drawings for insulation or hardware than other proposals. While several proposals included lightning studies to tie their ground resistance targets to actual predicted outages, Proposal 210 did not.





Proposal 210 selected a substation site of approximately 7.5 acres and featured a ring bus design for the 230 kV bus for the new Stonewood 500 kV Substation. The substation design itself was well supported, although less advanced in the design process than some other proposals. Narrative and supporting information related to environmental risks were limited. Equipment ratings for substation circuit breakers and transformers met RFP requirements. Proposal 210 included a network communication diagram that clearly delineated the communication scopes of work between itself and the interconnecting Transmission Owner. This diagram enhanced certainty for RFP Respondent 210's proposed communication design.

Proposal 210's substation design provided more flexibility in the planning horizon than some other proposals. The proposal discussed the potential for one additional 500 kV line, an additional 500/230 kV transformer bank, and converting the 230 kV bus arrangement to breaker-and-a-half to add further 230 kV lines. Proposal 210 was unique in providing a bypass switch on the 500 kV circuit breaker. Proposal 210 was comparable to several other proposals in providing for one spare single-phase transformer unit installed on site.

#### **4.10.3 Project Implementation for Proposal 210**

When MISO evaluated Proposal 210, it found Proposal 210's project implementation was 'Acceptable' compared to other proposals, as depicted in Table 4-25.

Proposal 210's project management plan was less comprehensive than others. Overall staffing roles and responsibilities were not well delineated. Scheduling information was ambiguous with respect to project float and supported by limited discussion. Where other proposals had thorough risk registers, Proposal 210 had minimal risk identification.

While Proposal 210's preferred route terminated in the new Stonewood 500 kV Substation, as required by the RFP, the alternative routes evaluated for Proposal 210 had termination points inconsistent with the RFP (terminating at the existing Sabine Substation site). There was minimal comparison between preferred and alternative routes. Although Proposal 210 completed some geotechnical work using public data, study information focused on the preferred route and provided limited detail.

Proposal 210 identified a single substation site, with minimal supporting study information and no discussion of alternative sites. Proposal 210 lacked the thorough quantitative and qualitative analysis MISO found in other proposals, as well as process related to evaluating potential substation locations. Proposal 210 did not mention securing an option on its designated substation site. Although Proposal 210 provided project-specific permitting table, its description of permitting process was high level and not specific to the Hartburg-Sabine Project.

Proposal 210 included only high-level discussion of plans for land and right-of-way acquisition. Although Proposal 210 had identified 60 parcels needed for the project, it did not include a map showing the parcels (as most other proposals did). Proposal 210 provided a high-level overview of its materials procurement and management process and included quality assurance and quality control.





Proposal 210 had an adequate construction plan, which provided pole locations and included crew sizes and equipment. The discussion of the construction sequence was high level and not project specific, and lacked an access plan. RFP Respondent 210 had completed a LiDAR study. Proposal 210's discussion of the commissioning process was relatively preliminary, but the proposal included a list of equipment to be tested and described the experience of commissioning personnel.

Proposal 210 included construction-related project safety risks and mitigation in table form and provided a safety manual. Although the safety manual did not mention stop-work authority, the proposal narrative stated that stop-work authority is every employee's responsibility.

#### **4.10.4 Operations and Maintenance for Proposal 210**

When MISO evaluated Proposal 210, it found Proposal 210's operations and maintenance were 'Acceptable' compared to other proposals, as depicted in Table 4-25, and generally lacked supporting information to enable MISO to ascertain relevant capabilities and experience.

RFP Respondent 210 intended to contract with a third party to provide various operations services, but the contract could be terminated at will by RFP Respondent 210. This significantly reduced certainty for MISO in evaluating the activities for which the third-party contractor would be responsible, such as local balancing authority functions and real-time operations monitoring and control.

Proposal 210 also lacked description of transmission operator experience, either within the project area or with 500 kV facilities, and included no plans for area modeling, state estimation, and real-time contingency analysis capability. Proposal 210 identified sufficient resources for planned outages, assuming the contractor arrangements described in the proposal would not change. Proposal 210 provided comprehensive plan for working with the project Reliability Coordinator for project outage coordination.

The main contractor identified in Proposal 210 for field switching had experience with 500 kV facilities. There was limited information on other contractors. RFP Respondent 210 would rely on the control center contractor to perform remote switching, although the contractor currently operates solely in the Western Interconnection.

RFP Respondent 210 intended to have transmission and substation fieldwork, as well as emergency repairs, performed by a primary contractor. Response times were relatively long. While the primary contractor had local experience with 500 kV facilities and substantial staff and equipment, the proposal did not specify what was located within reasonable proximity to the project. Backup capabilities for loss of power to the substation were shorter than some other proposals. Proposal 210 lacked a comprehensive plan for emergency repairs, major replacements, and maintenance for the project. Proposal 210 did provide for a spare transformer phase installed on site, with bus work built for quick replacement.

RFP Respondent 210 did not intend to have spare structures for the project but would acquire wood poles for temporary repairs if needed. There was no mention of a spare parts



management system, and limited spare parts for the substation apart from the spare transformer phase.

Proposal 210 included thorough safety information from one operations and maintenance contractor, but had more limited discussion of how RFP Respondent 210 would provide safety leadership for the project than other proposals. The contractor had experience with safety on 500 kV facilities and submitted comprehensive safety manuals covering various equipment and processes. There was a procedure in place to create location-specific emergency plans, as well as a plan to de-energize parallel circuits to mitigate induced current hazard when grounding. The primary contractor also had top-tier safety metrics, but the proposal has no safety data for subcontractors.

#### **4.10.5 Planning Participation for Proposal 210**

MISO evaluated planning participation for Proposal 210, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.

## 4.11 Proposal 211

### 4.11.1 Overview of Proposal 211

Proposal 211, as a whole, performed less well than most other proposals. Proposal 211 had the highest project cost among all proposals submitted, at \$146.3 million. Proposal 211 was also the only proposal that did not offer a firm cap on overall project costs and did not apply its cost cap to AFUDC. Proposal 211 was one of only three proposals that did not offer a schedule guarantee. Proposal 211 offered to cap its return on equity at 10% and the equity percentage in its capital structure at 55%, both of which were higher than most other proposals.

Proposal 211 had fewer supporting details for its transmission line and substation designs than most other proposals and proposed the longest 230 kV transmission lines, even though minimizing 230 kV line length was another aspect and element noted in the RFP. The project implementation section of Proposal 211 had a strong approach to safety, but did not provide a risk register and was generally vague about project contractors. Proposal 211 did not provide the strong evidence of relevant experience and certainty in operations and maintenance comparable to higher-scoring proposals.

The Executive Committee assigned Proposal 211 a total evaluation score of 40 and found it to be generally acceptable, as compared to the other proposals (Figure 4-10).

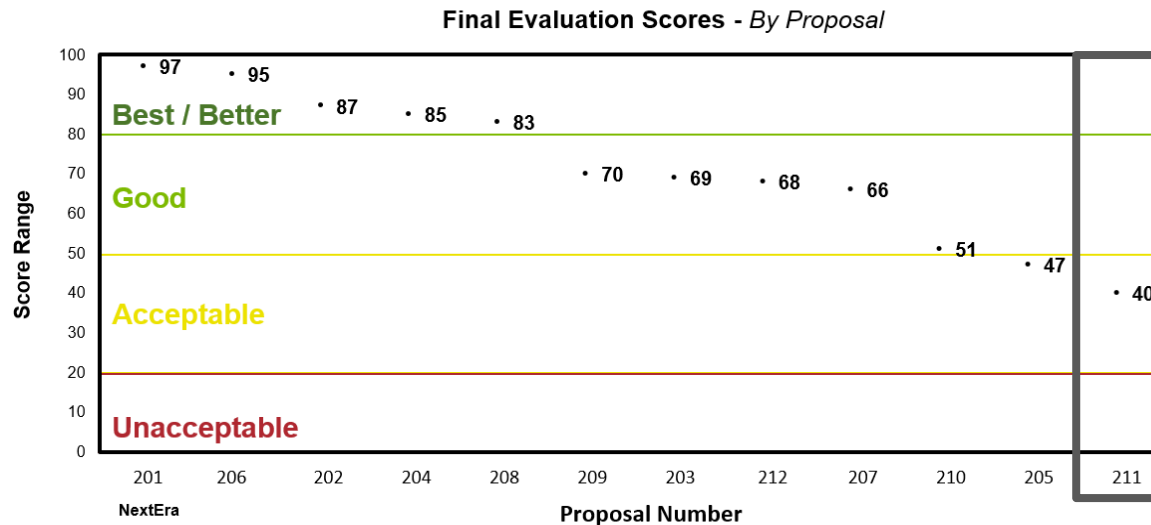


Figure 4-10: Proposal 211 Final Scoring Summary

In evaluating Proposal 211 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 4-28).



Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	Redacted
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 4-28: Proposal 211 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-29: Proposal 211 Ranking

#### 4.11.2 Project Cost and Design for Proposal 211

When MISO evaluated Proposal 211, it found Proposal 211's cost and design were 'Acceptable' compared to other proposals, as depicted in Table 4-28.

##### *Cost Highlights*

In evaluating Proposal 211's estimated project cost, MISO found that Proposal 211 submitted the highest project implementation cost, at \$146.3 million, as well as the highest cost cap. The median project implementation cost was \$121.3 million. Proposal 211 had higher substation and AFUDC costs than all other proposals. Proposal 211 was one of only three proposals that did not commit to forego recovery of funds for CWIP.

At the same time, cost risks associated with Proposal 211 were higher than many other proposals because Proposal 211 offered to cap most, but not all, of its project costs. In fact, Proposal 211 was the only proposal without a firm cap on 100% of project cost, even though cost certainty was called out in the RFP as one of four important aspects and elements. Proposal 211 provided for less contingency funding than most other proposals, with minimal discussion of risks.



OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table 4-30: Proposal 211 Cost Cap Summary**

Proposal 211 submitted the highest ATRR estimate, at \$166.3 million, with no cap. The median ATRR estimate was \$106 million. Proposal 211's high ATRR estimate result from the highest project costs and the highest operations and maintenance costs (although cost risk associated with operations and maintenance was somewhat offset by a 40-year cumulative cap on operations and maintenance expenses).

Proposal 211 had a return on equity cap of 10% (including adders). Only three proposals had higher return on equity. Likewise, the equity percentage in Proposal 211's capital structure (55%) was high compared to most other proposals. Only two proposals had higher equity percentages.

### Design Features

The route length of the 500 kV transmission line for Proposal 211 (roughly 21.1 miles) was shorter than most other proposals and the route length of the 230 kV line (approximately 2.33 miles, containing all four circuits) was the longest proposed. This was less responsive to the RFP aspect and element of minimizing 230 kV line length than other proposals. The proposed right-of-way width for the 500 kV transmission facilities would be 200 feet, and 175 feet for the 230 kV facilities.

Proposal 211 was the only proposal to feature galvanized steel monopoles with davit arms, and Y-frame structures, for its 500 kV designs. The monopoles would be supported on drilled pier foundations. The proposed 500 kV bundled conductor—1,033.5 kcmil ACSS Curlew—had a maximum summer emergency line rating of 3,398 Amps at 257°F and no wind. The 230 kV bundled conductor—795 kcmil ACSS Drake—had a maximum summer emergency line rating of 1,948 Amps at 257°F and no wind. Both conductors would provide some additional transfer capacity above the MISO-specified minimum.

Proposal 211 lacked thorough discussion of another important consideration in project transmission line design, that is, meeting line tension and catenary constant parameters related to Entergy interconnection and crossing requirements. Proposal 211 also lacked data supporting targets for grounding and lightning protection.

Proposal 211's contemplated new substation site was approximately nine acres. The arrangement for Proposal 211's 230 kV bus—a breaker-and-a-half—was more flexible and robust than a ring bus arrangement. Three other proposals (Proposals 204, 208, and 209) offered a similar arrangement with a breaker-and-a-half. Equipment ratings for the circuit breakers and the transformers all met MISO's RFP requirements.

Proposal 211 selected a substation site intended to minimize flooding concerns and avoid tree clearing and wetlands. While the location of Proposal 211's substation (more distant from coastal waterways) mitigated flood risk, it also increased the length of its 230 kV lines.

Proposal 211 offered less supporting information for its substation design, less consideration of project-specific requirements, and was in general more preliminary than many other proposals. While Proposal 211's design did not preclude future expansion, the proposal had limited discussion of substation design flexibility into the planning horizon. Proposal 211 was comparable to several other proposals in providing for one spare single-phase transformer unit installed on site.

#### **4.11.3 Project Implementation for Proposal 211**

When MISO evaluated Proposal 211, it found Proposal 211's project implementation was 'Acceptable' compared to other proposals, as depicted in Table 4-28.

In many areas Proposal 211 offered minimal supporting discussion for its project schedule and management information. For example, several other proposals provided greater detail on critical path considerations, risk analysis, weather delays, and project float. While Proposal 211 discussed managing schedule at a high level, there were fewer specifics linking the elements of the project together than MISO found in other proposals.

Proposal 211 had identified several potential routes for its 500 kV transmission lines, but provided less supporting data and narrative than other proposals. Proposal 211 also did not thoroughly explain how potential routes were evaluated, including assessment of route feasibility, mitigation steps for pipeline crossings, and co-location.

Although RFP Respondent 211 secured an option for its proposed substation site, there was limited supporting information explaining its site evaluation process or associated roles and responsibilities. Proposal 211 provided fewer details about geotechnical studies, risk analysis, and mitigation steps than most other proposals. Proposal 211 identified a large percentage of landowners and parcels needed for the project.

Proposal 211 had a more general discussion of the construction process than most other proposals. Proposal 211 included a comprehensive construction plan, but did not tailor it specifically to the Hartburg-Sabine Project. Discussion of project commissioning described relevant roles but not who would do the commissioning work. Proposal 211's discussion of engineering and surveying processes was limited.

Proposal 211 provided thorough construction-related safety plan and job briefings, although they were not project specific. Proposal 211 identified positions relevant to safety



oversight, but overall provided less specific information regarding safety-related roles and responsibilities than other proposals. MISO found it difficult to determine from the safety history information Proposal 211 provided which entities and personnel the safety data applied to.

#### **4.11.4 Operations and Maintenance for Proposal 211**

When MISO evaluated Proposal 211, it found Proposal 211's operations and maintenance were 'Acceptable' compared to other proposals, as depicted in Table 4-28, based on the facts and conclusions summarized below.

For most aspects of operations and maintenance, RFP Respondent 211 intended to engage contractors to be identified after proposal selection. Because the proposal did not identify intended contractors, MISO could not meaningfully evaluate relevant capabilities, experience, response time, or safety metrics.

RFP Respondent 211 proposed to incorporate the project into the Local Balancing Authority Area of the interconnecting utility. While the Local Balancing Authority with which RFP Respondent 211 proposed to contract for operations services was experienced and willing to provide Local Balancing Authority services, Proposal 211 did not describe its proposed operations contractor's experience with the project Reliability Coordinator.

RFP Respondent 211 planned to have a local (unspecified) transmission operator monitor and operate the project, which reduced certainty for real-time operation. RFP Respondent 211 also submitted information about its own control center (which was considered a fallback option). Proposal 211 described an internal application used for outage coordination, but stated that RFP Respondent 211 intended to contract for a different control center to handle outage coordination. Proposal 211 did not specify whether the control center was experienced with 500 kV or the project area. RFP Respondent 211 expressed a preference to engage unspecified contractors for most aspects of non-normal operations, including forced outages and emergency repairs.

Proposal 211 included a plan for capital replacement of project equipment such as protection and control systems, battery, backup generator, and surge arrestors. Proposal 211 laid out specific plans for various substation equipment failures and would have a spare transformer installed at the substation, but did not describe its policy for transmission repair after a catastrophic failure.

Proposal 211 included ample funding for operations and maintenance and included a specific description of on-going capital expenditures. MISO found, however, that these notably high costs were not supported by the operations and maintenance plan laid out in the proposal. Many maintenance tasks for Proposal 211 were to be assigned to undetermined contractors. Proposed spare parts for substation and transmission line maintenance (apart from a spare transformer) were limited. Proposal 211 did not identify how many transmission line miles could be restored with materials on hand, or a strategy for procuring more equipment.





MISO found that Proposal 211's operations and maintenance safety information was difficult to evaluate because so many elements depended on engaging contractors to be determined in the future. MISO could not assess the experience, procedures, and safety ratings of unspecified contractors. Proposal 211 did include a comprehensive safety handbook. Details on RFP Respondent 211's safety history were limited.

#### **4.11.5 Planning Participation for Proposal 211**

MISO evaluated planning participation for Proposal 211, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.

## 4.12 Proposal 212

### 4.12.1 Overview of Proposal 212

Proposal 212, as a whole, was roughly average among the 12 proposals submitted. Proposal 212 had a moderate project implementation cost of \$117.1 million, and offered a project cost cap equal to its project estimate (which included AFUDC). Proposal 212 was one of four proposals to expressly assume some or all of the risk that project costs could increase due to PUCT-required routing or design changes to the project's 500 kV transmission line. Proposal 212 was also one of only four proposals that did not offer a schedule guarantee.

Proposal 212 offered a cap on return on equity (at 10.35%, including adders), but only for the first 10 years of operation (which reduced cost certainty). Although Proposal 212's cap on equity in its capital structure was the lowest proposed (at 40%), that cap would likewise apply for only the first 10 years. Proposal 212, in general, provided less supporting information for its cost estimates than proposals categorized as 'Best/Better.'

Proposal 212 had well-supported transmission line design details, but had lower transmission line ratings than all 'Best/Better' proposals. Proposal 212 provided only general discussion of routing, siting, and project implementation, but had a detailed, project-specific discussion of the construction process. Proposal 212 did not have as much specificity on Local Balancing Authority considerations as most other proposals.

The Executive Committee assigned Proposal 212 a total evaluation score of 68 and found it to be generally good, as compared to the other proposals (Figure 4-11).

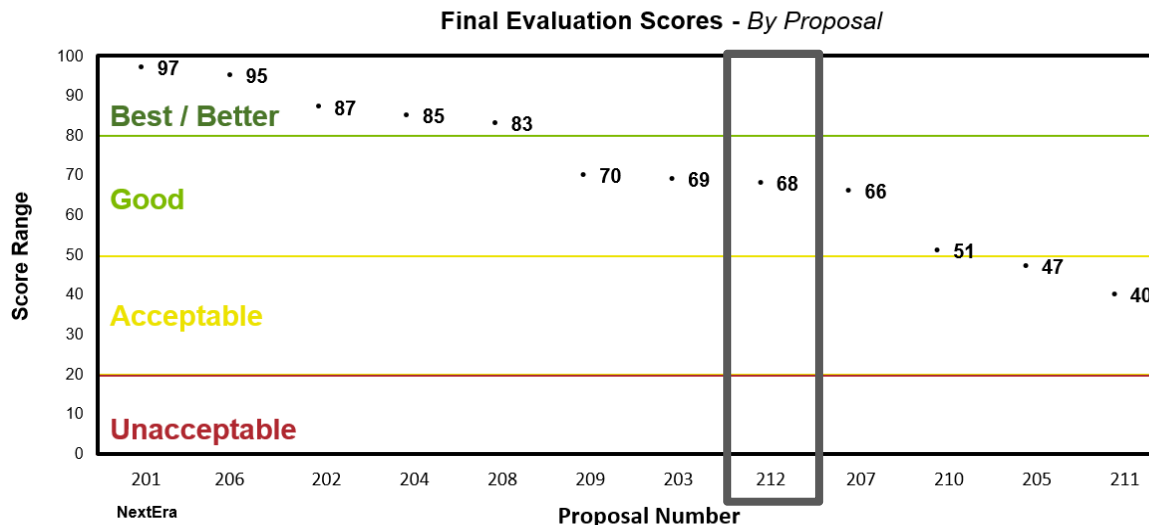


Figure 4-11: Proposal 212 Final Scoring Summary

In evaluating Proposal 212 against the four Tariff evaluation criteria, MISO categorized it as 'Good' in cost and design, 'Good' in project implementation, and 'Good' in operations and maintenance, as compared to the other proposals (Table 4-31).



Proposal ID #	Cost and Design (35%)	Project Implementation (30%)	Operations and Maintenance (30%)	Planning Participation (5%)
201	Best	Best	Better	Redacted
202	Better	Better	Good	
203	Acceptable	Good	Best	
204	Good	Best	Better	
205	Acceptable	Acceptable	Acceptable	
206	Better	Best	Better	
207	Good	Good	Good	
208	Good	Best	Better	
209	Good	Acceptable	Better	
210	Good	Acceptable	Acceptable	
211	Acceptable	Acceptable	Acceptable	
212	Good	Good	Good	

Table 4-31: Proposal 212 Criteria-Level Categorization

Proposal Number	201	202	203	204	205	206	207	208	209	210	211	212
Cost and Design	Best	3	11	5	10	2	8	6	4	9	12	7
Project Implementation	Best	5	6	Best	10	Best	7	Best	9	12	11	8
Operations and Maintenance	2	9	Best	4	10	2	8	4	6	11	12	7

Table 4-32: Proposal 212 Ranking

#### 4.12.2 Project Cost and Design for Proposal 212

When MISO evaluated Proposal 212, it found Proposal 212's cost and design were 'Good' compared to other proposals, as depicted in Table 4-31.

##### *Cost Highlights*

MISO found that Proposal 212 submitted a moderate project implementation cost of \$117.1 million (compared to the median project implementation cost of \$121.3 million). Proposal 212 offered a 'rate base cap' that was equal to its project implementation cost and included AFUDC. Proposal 212 presented minimal discussion of project risks and had one of the lowest amounts of contingency funding in its project implementation cost.

Proposal 212 had lower substation costs than many other proposals, accompanied by limited supporting information. Proposal 212 was one of four proposals to expressly assume some or all of the risk that project costs could increase due to PUCT-required routing or design changes to the project's 500 kV transmission line. Proposal 212 was one of four proposals that did not offer a schedule guarantee.



OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

Table 4-33: Proposal 212 Cost Cap Summary

Proposal 212's ATRR estimate was the lowest submitted, at \$88.2 million. The median ATRR estimate among proposals was \$106 million. RFP respondent 212 did not offer to cap its ATRR, did not include capital expenditures for future years of the project, and its estimated operations and maintenance costs were among the lowest of all proposals, with less supporting information than other proposals.

Contributing to Proposal 212's low ATRR estimate were low operations, maintenance, and administration costs (the second-lowest submitted) and the lowest percentage of equity in capital structure (at 40%). At the same time, the cap restricting equity in Proposal 212's capital structure would apply only during the first 10 years of project operation. This was also true of Proposal 212's cap on base return on equity (which was set at 9.85%, but, with adders, could increase total return on equity to 10.35%). Only two proposals had higher total return on equity.

### Design Features

Proposal 212 provided a modest transmission line design with some supporting engineering studies. The 500 kV transmission line would feature primarily self-supporting lattice towers on drilled pier foundations. Proposal 212 did not discuss foundation design criteria (other than adjusting drilled pier foundation depth based on soil conditions), and provided less project-specific geotechnical data than proposals categorized as 'Best/Better' in cost and design.

The right-of-way width for the 500 kV facilities would be 175 feet, with an estimated line length of roughly 21.8 geographical miles. The proposed 500 kV bundled conductor—954 kcmil ACSR Cardinal per phase—had a summer normal and emergency temperature rating of 3,219 Amps at 212°F (with wind speed of two feet per second). Proposal 212 showed that 500 kV transmission line spans crossing local utility lines would follow the catenary constant criteria from the RFP, but did not provide as much lightning performance data (for the 500 kV line or the 230 kV lines) as other proposals did.

Proposal 212's 230 kV transmission line would feature galvanized steel monopole tangent structures with polymer insulator assemblies on directly embedded with concrete backfill foundations. Discussion of 230 kV structure foundations was limited as with the 500 kV structures.



The right-of-way width on the 230 kV lines would be 230 feet, with an estimated length for each 230 kV line of just under 5,000 feet. The proposed 230 kV conductor would be 1,033.5 kcmil ACSS Curlew per phase, which had a summer normal and emergency temperature rating of 1,920 Amps (based on an operating temperature of 392°F and wind speed of two feet per second). Proposal 212 demonstrated that it had considered industry guidelines in evaluating its 230 kV line, with additional ice and wind beyond guidelines, and stated it would consider broken wire and unbalanced ice cases for tangent and running angle and all wires broken on dead-end structures.

Proposal 212 selected a substation site that was roughly five-and-a-half acres and did not lie in a floodplain, but provided less thorough treatment of flooding considerations than other proposals. Some aspects of Proposal 212's substation design were contingent on future analysis of potential environmental impacts, and in general supporting information was less well developed than proposals categorized as 'Best/Better.' Proposal 212 provided steel drawings and sketches for its substation structures, which increased certainty for its design.

Proposal 212 called for a ring bus arrangement for its 230 kV bus and met all minimum MISO substation equipment ratings as stated in the RFP. Proposal 212 provided evidence that it had considered coastal wind conditions at the substation site and selected steel substation structures and foundations that were more robust to withstand higher wind speeds.

While Proposal 212's design did not preclude future expansion, the proposal had limited discussion of substation flexibility into the planning horizon other than identifying a position for one additional 230 kV line, along with an associated drawing. This was less responsive to the operational and planning flexibility component of the aspects and elements than several other proposals. Proposal 212 did not provide for spare single-phase transformer unit at its substation site, whereas several other proposals did.

#### **4.12.3 Project Implementation for Proposal 212**

When MISO evaluated Proposal 212, it found Proposal 212's project implementation was 'Good' compared to other proposals, as depicted in Table 4-31. MISO based its finding on the following facts and conclusions from its comparative analysis of Proposal 212.

Proposal 212 had a comprehensive project schedule, which included a critical path. The schedule had ample float, with specific subsets of days identified for regulatory delays and transmission line tie-in activities. Proposal 212's presentation of schedule information (including screen shots) helped show the connections between its schedule and associated sections of the proposal throughout. Proposal 212 had a less thorough risk register than proposals categorized as 'Best/Better,' and did not explain how associated cost impacts might affect the schedule, but did include risk mitigation and how it would tie back to project schedule.

The project management plan for Proposal 212 was well formatted and easy to understand. The scopes of work for each of the entities responsible for project implementation were thoroughly described, with each entity's roles discussed separately from its responsibilities.

In addressing regulatory permitting, route, and site evaluation, Proposal 212 identified a number of potential routes for its 500 kV transmission line and one preferred route. The discussion of Proposal 212's preferred route was high level and Proposal 212's routing study offered less certainty as compared to other proposals. Proposal 212 provided fewer specifics regarding roles and responsibilities than other proposals.

Geotechnical analysis in Proposal 212 was less comprehensive than other proposals. Although Proposal 212 identified crossings for its preferred route, supporting narrative was limited. KMZ files were included with Proposal 212 but provided less specific supporting information than other proposals.

Proposal 212 described its process for routing evaluation studies, but the process was less specific than other proposals and had minimal discussion to support evaluated routes. Information about who would conduct environmental assessments lacked certainty.

Proposal 212 described a plan to purchase an option on its substation site, and provided maps showing its location. Although the narrative in Proposal 212 described evaluating several sites, there was minimal background on the sites evaluated and limited information on site constraints. Supporting discussion of wetlands and pipeline crossings was minimal.

Proposal 212 provided a map showing parcels and the quantity of land to be acquired, but with very little information about landowners or other supporting discussion. Proposal 212 provided a comprehensive, project-specific description of the construction process, including specific schedules, activities, and tasks. The proposal included separate construction plans for the transmission lines and substations and explained the sequence of construction steps.

Proposal 212 provided an organization chart that identified the project engineer, as well as roles associated with engineering and surveying. Proposal 212 included a surveying plan and a thorough engineering plan, although it was not project specific.

With respect to construction-specific safety information, Proposal 212 provided information related to different entities that would be involved in project implementation, including a safety manual, a job hazard assessment, and an emergency action plan.

#### **4.12.4 Operations and Maintenance for Proposal 212**

When MISO evaluated Proposal 212, it found Proposal 212's operations and maintenance were 'Good' compared to other proposals, as depicted in Table 4-31. This finding was supported by the information and comparative analysis results summarized below.

In general, Proposal 212 described robust control center capabilities and qualified personnel. Proposal 212 demonstrated experience with EHV facilities in the project area and operations tied into multiple control centers, but did not specify which would serve as the backup control center for the project. Proposal 212 provided less evidence supporting its discussion of control center characteristics than other proposals that scored higher in operations and maintenance. Proposal 212 described one control center as lead for managing state



estimation and real-time contingency analysis, but did not discuss current capabilities or a plan to model the project area for state estimation and real-time contingency analysis.

Although RFP Respondent 212 identified dedicated personnel for outage response and emergency repairs (as well as coordinated crisis command capabilities), the crews' response times were longer than many other proposals. Proposal 212 described plans to contract for first responder services, but potential vendors were three hours away from the project area and the proposal lacked associated details, resumes, and safety metrics.

RFP Respondent 212 would rely on internal resources for disaster response (as well as major facility replacements or rebuilds), with support from contractors if needed. Because Proposal 212 did not identify these potential third-party contractors, MISO could not determine their experience or safety records. However, RFP Respondent 212 demonstrated recent, relevant experience with large-scale storm response.

Proposal 212 laid out a comprehensive re-energization plan and testing for the substation transformer, but did not do so for other equipment. Resources included one all-terrain vehicle for wetlands with limited capability. Proposal 212 did not discuss operations and maintenance funding or an on-going capital expenditure budget to fund project rebuilds, although it demonstrated the financial capability to do so. There were EHV structures available for temporary construction if needed, as well as in-house engineering, project management, procurement, and field services.

Proposal 212 described comprehensive asset management programs for line maintenance, substation maintenance, and vegetation management. Preventive maintenance and test results trigger maintenance decisions using a defined algorithm. RFP Respondent 212 could monitor substation transformer phases in real time, but did not have a spare transformer phase at the substation and did not explain its transportation plan to move a remotely located spare transformer to the project site if needed. In general, while Proposal 212 laid out a robust maintenance plan, it had significantly lower estimated operations and maintenance costs than all other proposals, and did not offer to cap these costs.

With respect to safety information for operations and maintenance, MISO found that Proposal 212 submitted a thorough safety program, which included a contractor safety program with specific requirements. Among other details, Proposal 212 described a human performance initiative, an initial screening and safety metric review, penalties for violations, and required job site briefings for local hazards. Proposal 212 included a plan for mitigating induced current hazard on grounded equipment.

Proposal 212 showed top-tier safety metrics for a parent company, but without sufficient detail for MISO to determine whether stated rates related to operations and maintenance activities or to the company as a whole.





#### **4.12.5 Planning Participation for Proposal 212**

MISO evaluated planning participation for Proposal 212, as described in Section 2.6.5 of this report; however, the results of this analysis are redacted to maintain the confidentiality of all RFP Respondents other than the Selected Developer.

## 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
<b>AFUDC</b>	<b>AFUDC</b> 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.
<b>Annual Transmission Revenue Requirement (ATRR)</b>	<p>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.</p> <p>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.</p> <p>All statements in this report describing proposals’ ATRR estimates are referring to the net present value, in 2018 dollars, of submitted ATRR over a 40-year period, discounted annually at 8%.</p>
<b>Aspects and Elements</b>	Particular characteristics MISO emphasized out in the RFP as particularly important to the success of the Hartburg-Sabine Project. These aspects and elements are summarized in Section 2.6.4.

Term	Meaning for Purposes of Selection Report
<b>Business Practices Manual (BPM)</b>	<p>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.</p> <p>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).</p>
<b>CCN</b>	Certificate of Convenience and Necessity.
<b>CEII</b>	Critical Energy Infrastructure Information, as described in 18 C.F.R. § 388.113(c)(1), as it may be amended from time to time.
<b>Competitive Developer Selection Process</b>	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.
<b>Competitive Transmission Executive Committee (Executive Committee)</b>	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.
<b>Competitive Transmission Process</b>	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.
<b>CWIP</b>	<b>CWIP</b> 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.
<b>DART</b>	" <b>DART</b> " stands for "days away, restricted, or transferred," which is an OSHA safety metric.
<b>EHV</b>	<b>Extra-High Voltage.</b>
<b>Entergy</b>	Entergy Texas, Inc.

Term	Meaning for Purposes of Selection Report
<b>Evaluation Criteria</b>	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.
<b>Evaluation Principles</b>	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.
<b>Evaluation Team</b>	Designated members of MISO management and staff responsible, together with independent consultants retained by MISO to assist management and staff, responsible for administration of MISO's competitive developer selection process, subject to oversight by the Executive Committee.
<b>FERC</b>	The Federal Energy Regulatory Commission.
<b>KMZ</b>	KMZ is a file extension for a file type used by Google Earth. KMZ stands for "Keyhole Markup language Zipped," which is a compressed version of a KML (Keyhole Markup Language) file. KML is notation related to geographic display and visualization within Internet-based, two-dimensional maps and three-dimensional Earth browsers.
<b>LiDAR</b>	LiDAR ( <b>L</b> ight <b>D</b> etection <b>A</b> nd <b>R</b> anging) is a surveying method that measures distance to a target by illuminating the target with pulsed laser light and measuring the reflected pulses with a sensor.
<b>Local Balancing Authority</b>	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.
<b>MISO</b>	Midcontinent Independent System Operator, Inc.
<b>MISO Tariff (Tariff)</b>	MISO's Open Access Transmission, Energy and Operating Reserve Markets Tariff (including all of its schedules and attachments), as amended from time to time.
<b>MTEP</b>	<p>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.</p> <p>The MTEP is developed biennially or more frequently, and subject to review and approval by MISO's Board of Directors.</p>

Term	Meaning for Purposes of Selection Report
<b>MTEP17</b>	MISO's 2017 Transmission Expansion Plan, which was the transmission plan in which the project was approved.
<b>NESC</b>	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.
<b>Nominal Dollars</b>	<b>Nominal dollars</b> reflect the costs to construct / operate the project at the time the cost is incurred. For example, if an RFP Respondent expects an item will cost \$1,000 in 2023, then the cost estimate in nominal dollars in 2023 will be \$1,000.
<b>OSHA</b>	The U.S. Occupational Safety and Health Administration.
<b>Project</b>	The Hartburg-Sabine Junction 500 kV Competitive Transmission Project, which consists of a new single-circuit 500 kV transmission line that will interconnect the existing Hartburg 500 kV substation (owned by Entergy) to a new substation (the Stonewood 500 kV substation). The Stonewood 500 kV substation will interconnect with two of Entergy's existing 230 kV transmission lines, and will include one 500 kV transmission position, one 500/230 kV transformer, and four 230 kV transmission positions. This report uses the term "project" throughout in lower-case form.
<b>Project Implementation Cost</b>	For purposes of this report, <b>project implementation cost</b> (or simply " <b>implementation cost</b> ") refers to the cost estimate (in nominal 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 cost categories explained in Part 2 of the RFP package.
<b>Proposal Participant</b>	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.
<b>Proposal Submission Deadline</b>	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 20, 2018.

Term	Meaning for Purposes of Selection Report
<b>Proposal Template Workbook</b>	An Excel spreadsheet template, included as part of the RFP materials, for each RFP Respondent to use in submitting financial information for its proposal.
<b>PUCT</b>	Public Utility Commission of Texas
<b>Qualified Transmission Developer</b>	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.
<b>RFP</b>	<p>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.</p> <p>The RFP for this project, which was issued on February 6, 2018, is available at <a href="https://www.misoenergy.org/planning/competitive-transmission-administration/#nt=%2FctadocType%3ACurrent%20Projects&amp;t=10&amp;p=0&amp;s=FileName&amp;sd=desc">https://www.misoenergy.org/planning/competitive-transmission-administration/#nt=%2FctadocType%3ACurrent%20Projects&amp;t=10&amp;p=0&amp;s=FileName&amp;sd=desc</a></p>
<b>RFP Respondent</b>	Any one or more of the Qualified Transmission Developers that elected to submit proposals responding to the RFP.
<b>SCADA</b>	<b>S</b> upervisory <b>C</b> ontrol <b>A</b> nd <b>D</b> ata <b>A</b> cquisition.
<b>Selected Developer</b>	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.
<b>Selected Developer Agreement</b>	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.
<b>Selected Proposal</b>	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.

Term	Meaning for Purposes of Selection Report
<b>Switching Order</b>	<p>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:</p> <ul style="list-style-type: none"><li>• switching activities step by step,</li><li>• estimated times,</li><li>• responsibility assignments,</li><li>• applicable safety measures, and</li><li>• necessary personal protective equipment for each step.</li></ul>



## Attachment 2 Design-Related Terminology

Term	Explanation
<b>ACSR</b>	Aluminum conductor, steel reinforced. With <b>ACSR</b> 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.
<b>ACSS</b>	Aluminum conductor, steel supported. <b>ACSS</b> 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.
<b>Bittern</b>	<b>Bittern</b> 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, 1,272 kcmil 45/7, denoting 45 aluminum strands surrounding seven steel strands in each conductor bundle.
<b>Bluebird</b>	<b>Bluebird</b> 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, 2,156 kcmil 84/19, denoting 84 aluminum strands surrounding 19 steel strands in each conductor bundle.
<b>Breaker-and-a-half (or breaker-and-a-half arrangement)</b>	A <b>breaker-and-a-half</b> arrangement consists of two main buses, both of which are normally energized. Associated facilities interconnect with the main buses in sets of two positions, and these pairs of positions each have three associated breakers – a center circuit breaker common to the two positions and two additional circuit breakers specific to each of the two positions. Each position is therefore associated with one-and-a-half breakers. A breaker-and-a-half arrangement is more robust than a ring bus, but not as robust as a double-breaker, double-bus.
<b>Bus</b>	An electrical <b>bus</b> in a substation is a conductor or group of conductors that serves as a collection and transfer point for energy flowing into and out of substation feeders. A bus has an associated arrangement of circuit breakers that allow the bus to be disconnected from individual or sets of positions, so that, with all breakers open, the bus is electrically isolated from remaining power system elements. The number and positions of the circuit breakers vary with different substation designs, as further described in this glossary

Term	Explanation
	under the definitions for “double-breaker, double-bus,” “breaker-and-a-half,” and “ring bus.”
<b>Cardinal</b>	<b>Cardinal</b> 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.
<b>Catenary constant</b>	For a wire with no wind and no ice, the <b>catenary constant</b> is the ratio of horizontal tension to unit mass of the wire (H/w). In transmission line design, the catenary constant determines the shape of the sag (catenary) and corresponding tension in the wire. This is one of the controlling mechanisms used in transmission line design for wire sag and tension.
<b>Counterpoise</b>	The term <b>counterpoise</b> 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.
<b>Creep</b>	<b>Creep</b> is the permanent elongation of conductor cable due to everyday tensions that the cable experiences over a period of time.
<b>Curlew</b>	<b>Curlew</b> 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.
<b>Dead-end structures (also failure containment, containment, or storm structures)</b>	<b>Dead-end</b> 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.
<b>Direct embed</b>	Transmission structures that are <b>direct embedded</b> are generally anchored by extending the structure shaft below grade, relying on the surrounding

Term	Explanation
	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.)
<b>Double-breaker, double-bus</b>	A <b>double-breaker, double-bus</b> arrangement consists of two main buses, both of which are normally energized. Associated positions interconnect individually to each bus, with two circuit breakers for each position (one for each of the connections to each of the buses). As compared to a ring bus or a breaker-and-a-half arrangement, a double-breaker, double-bus is the most robust arrangement.
<b>Drake</b>	<b>Drake</b> 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.
<b>Drilled pier</b>	A <b>drilled pier</b> 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.
<b>Galloping</b>	<b>Galloping</b> 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.
<b>Galvanized steel</b>	A <b>galvanized steel</b> transmission structure is one in which the steel has been coated in zinc to prevent corrosion. This gives it a shiny appearance.
<b>Guying</b>	<b>Guying</b> is the practice of attaching tensioned cables (typically steel) to transmission structures to increase their stability.
<b>Helical anchor/helical pile</b>	A <b>helical anchor/pile</b> is an extendable foundation system with helical plates welded to a central steel shaft. Load is transferred from the shaft to the soil through these plates.
<b>Kcmil</b>	<b>Kcmil</b> is an abbreviation for thousands of circular mils, a measurement of wire gauge (a mil is 1/1000 inch).

Term	Explanation
<b>MA3</b>	<b>MA3</b> behind ACSS conductor denotes core high-strength steel strands available in ACSS.
<b>Monopole</b>	A <b>monopole</b> 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.
<b>Optical ground wire</b>	<b>Optical ground wire</b> (or “OPGW”) 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.
<b>Pheasant</b>	<b>Pheasant</b> 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, 1,272 kcmil 54/19, denoting 54 aluminum strands surrounding nineteen steel strands in each conductor bundle.
<b>PLS-CADD</b>	<b>PLS-CADD™</b> (Power Line Systems - Computer Aided Design and Drafting) is a line design program that includes all the terrain, sag-tension, loads, clearances and drafting functions necessary to design an electric power line. It is a trademark of Power Line Systems.
<b>Position</b>	In an electrical substation, the term <b>position</b> refers to the connection point between a particular facility—either a transmission line or a transformer—and a bus within the substation.
<b>Rail</b>	<b>Rail</b> 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 45/7, denoting 45 aluminum strands surrounding seven steel strands in each conductor bundle.
<b>Ring bus (or ring bus arrangement)</b>	In a <b>ring bus</b> arrangement, the positions associated with the bus form a closed loop or “ring,” with each position separated by a circuit breaker. The numbers of circuit breakers and positions are equal. A ring bus arrangement is a sound design, but is not as robust as a breaker-and-a-half or a double-breaker, double-bus arrangement.
<b>Running angle (structure)</b>	<b>Running angle</b> 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

Term	Explanation
	insulators to swing away from the support structure.
<b>Shield (or shielding) angle</b>	The terms <b>shield angle</b> or <b>shielding angle</b> 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.
<b>Tangent (structure)</b>	<b>Tangent</b> structures are structures used for portions of a transmission line route that are mostly straight or have very minor turns).
<b>TW</b>	TW denotes Trapezoidal Wire, Trapezoidal Shaped Aluminum Strands in conductor construction.
<b>Vibratory Caisson/Pipe Pile</b>	A <b>vibratory caisson</b> or a <b>pipe pile</b> is a steel tube or pipe pile driven in the ground using vibrations induced by a hammer mounted on top. This foundation type can be used when soil conditions allow a steel caisson to be driven into the ground without excavating the site.

## Attachment 3 Overview of Comparative Analysis Process

### A3.1 Evaluation Process

With the tremendous volume of information that accompanied 12 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. Figure A3-1 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.”)

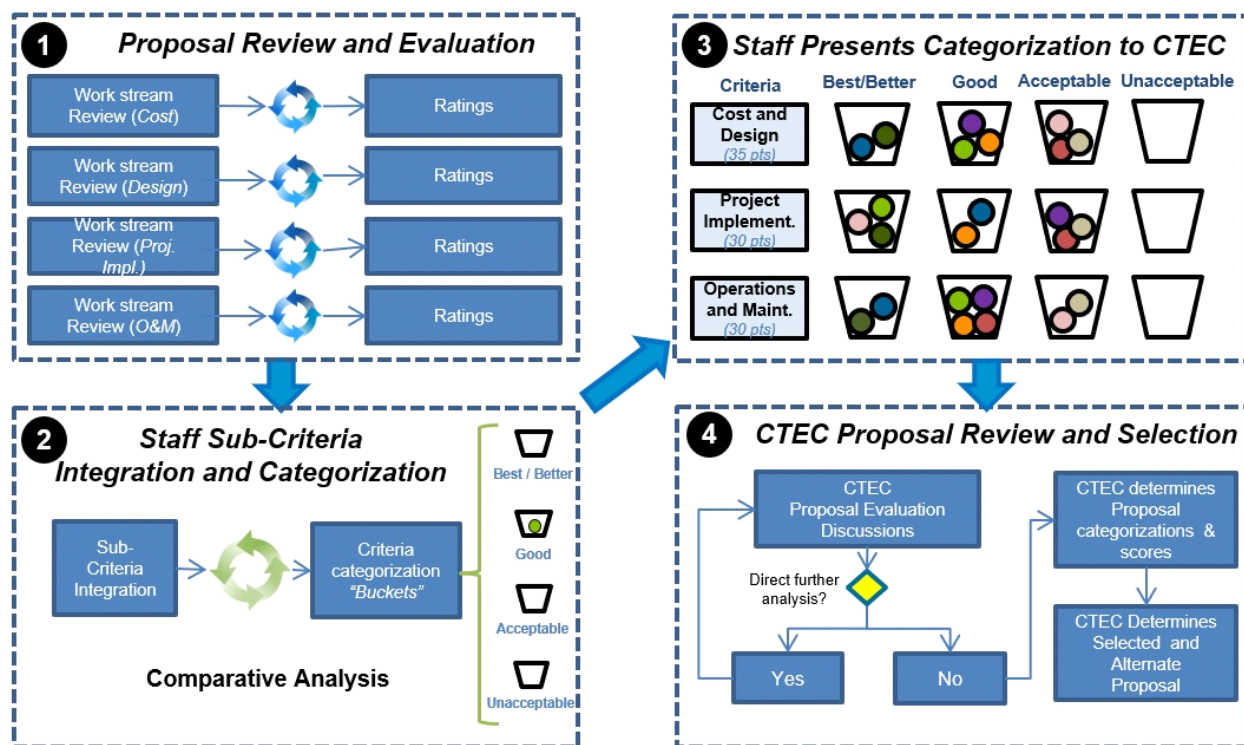


Figure A3-1: Illustrative Overview of MISO Evaluation Process

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 (certainty, risk mitigation, cost, and specificity) as it applied the four evaluation criteria (cost and design, project implementation, operations and maintenance, and planning participation) and their associated sub-criteria in the competitive developer selection process. The evaluation team remained focused on the evaluation criteria, sub-criteria, evaluation principles, and the RFP’s aspects and elements, 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.



Figure A3-2 below shows the organization of the evaluation team.

CRITERIA	COST AND DESIGN		PROJECT IMPLEMENTATION		OPERATIONS AND MAINTENANCE	PLANNING PARTICIPATION
WORK STREAM	DESIGN	COST	CAPITAL RESOURCES AND FINANCING PLAN	PROJECT IMPLEMENTATION	OPERATIONS AND MAINTENANCE	PLANNING PARTICIPATION
MISO STAFF MEMBERS	Lead	Lead		Lead	Lead	Lead
CONSULTANTS	Consultant	Consultant		Consultant	Consultant	
MISO MANAGEMENT	Competitive Transmission Administration					
	Finance					
	Legal					
DECISION MAKER	Competitive Transmission Executive Committee					

Figure A3-2: Organization of the MISO Evaluation Team

### A3.2 Work Stream Team Analytical Framework

The discussion below presents a high-level description of the approach MISO's 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.

#### *Cost and Design*

Cost and design is unique among the criteria in requiring substantial comparative analysis and integration of two distinct work streams. In evaluating the sub-criteria of estimated project cost and estimated ATRR for each proposal, MISO used the associated factors, as shown in the correlation 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.

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, ATRRs, and transmission line and substation design. MISO's internal and external finance and rate analysis experts collaborated with evaluation team members specializing not only in transmission line and substation design, but project implementation and



## Attachment 3 – Overview of Comparative Analysis Process

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, return on equity, cost of debt, the percentages of equity and debt in 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. This enabled MISO to compare the rigor of submitted cost estimates and assess resulting certainty and risk mitigation offered to ratepayers while taking into account all relevant binding cost caps and cost containment features.

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). This flexible approach entailed greater complexity, but enabled RFP Respondents to craft diverse approaches to project cost mitigation. The selection report notes proposals that offered cost caps, concessions, and cost containments that delivered significant long-term value and cost risk mitigation benefits to ratepayers.

To illustrate the wide range of innovative cost elements included in the proposals, Table A3-1 summarizes the cost caps, concessions, and commitments of all of the proposals.

OFFERED COST CAPS / CONTAINMENT	PROPOSAL NUMBER											
	201	202	203	204	205	206	207	208	209	210	211	212
Implementation Cost – nominal (\$M)	114.8	127.5	152.3 <sup>1</sup>	127.9	135.0 <sup>2</sup>	119.7	118.8	132.9		122.8	✓ <sup>3</sup>	117.1
Forego AFUDC	✓			✓		✓		✓				
Forego CWIP	✓	✓	✓	✓	✓	✓		✓		✓		✓
PUCT Route Change		✓			✓ <sup>4</sup>				✓			✓
ROE and Incentives (%)	9.8 <sup>5</sup>	9.8 <sup>5</sup>	9.8 <sup>5 6</sup>	9.8 <sup>5</sup>	10.7 <sup>5</sup>	9.8 <sup>5</sup>	9.75	9.8 <sup>5</sup>		9.8 <sup>5</sup>	10	10.35 <sup>7</sup>
Capital Structure (Equity %)	45	45	45 <sup>8</sup>	45	60	45	52.5	45		45	55	40 <sup>7</sup>
Operations and Maintenance	10 yr.			10 yr.	5 yr.	10 yr.		10 yr.		5 yr.	40 yr.	
ATRR	10 yr.			10 yr.		10 yr.		10 yr.	40 yr.			

<sup>1</sup> Also capped the AFUDC rate

<sup>2</sup> Cap increases subject to commodity inflation

<sup>3</sup> Only a portion of construction costs are capped

<sup>4</sup> Project cost cap includes additional 1.5 miles and caps the per mile cost of additional miles

<sup>5</sup> Schedule guarantee

<sup>6</sup> Reliability guarantee

<sup>7</sup> 10 year ROE and capital structure cap

<sup>8</sup> Cap on cost of debt through 2025

**Table A3-1: Cost Cap Summary**

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.

In evaluating each proposals for the sub-criteria of electrical design and structural design (which pertained to project transmission lines and the substation), MISO used the associated factors, as shown in the correlation tables in Attachment 4, which reflect the information requested in the RFP.



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. MISO evaluated 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, pipelines, and line crossings; and consideration of potential environmental and external impacts on the design (relevant flood 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.

MISO evaluated the ability of the design to perform well throughout its expected life. A design with lower risk increases the likelihood the line will perform in an adequate and reliable manner over its life.

In evaluating transmission line design for the Hartburg-Sabine Project, MISO noted that all proposals met the minimum transmission line rating requirements. A few proposals provided the transmission design software (PLS-CADD) line models to support their designs. Several proposals did not fully demonstrate how they conformed to Entergy interconnection and existing transmission line crossing requirements. The selection report notes proposals that most distinguished themselves in their transmission line designs.

For the new Stonewood 500 kV Substation, MISO evaluated the civil, structural, and physical design for all proposals. MISO found that all RFP Respondents demonstrated adequate means to design their substations. In addition to the required physical top-down drawings, some RFP Respondents also provided grading plan drawings, conduit and cable trench drawings, grounding plan drawings, and bills of material, which increased specificity and enabled MISO to assess the merits of these proposals in greater detail. The selection report notes proposals that most distinguished themselves in the civil, structural, and physical substation designs.

MISO also evaluated substation protection, control, and communication system designs for all proposals. All proposals explained their approaches to line protection, bus protection, breaker failure protection, and transformer protection. In addition to required one-line diagrams, and protection and control functional diagrams, many RFP Respondents also provided control enclosure drawings, relay panel front drawings, and preliminary SCADA points lists. For their communication systems, all proposals had similar designs to communicate with the interconnecting substations. The selection report notes proposals that most distinguished themselves in their approach to protection, control, and communication systems.

#### *Calculation of Estimated Benefit-to-Cost Ratios*

For MTEP17, MISO's scoping-level cost estimate and the gross-plant weighted average of MISO Transmission Owners was used to estimate the benefit-to-cost for the project of 1.35. The benefit-to-cost calculation reflects the present value of the benefits and the ATRR for the project up to and including the year 2042.

MISO used the same present value of the benefits from MTEP17, converting the results to 2018 dollars. MISO used the same assumptions (including assumed discount rate) when calculating the present value of each RFP Respondent's ATRR estimates up to and including the year 2042 to calculate the benefit-to-cost ratio discussed in the selection report. All proposals had benefit-to-cost ratios higher than MISO's estimate, reflecting RFP Respondents' ability to deliver lower up-front costs, lower costs over time, or both.

#### *Project Implementation*

MISO evaluated proposals for project implementation based on sub-criteria identified in the Tariff, including project schedule and management, regulatory permitting, route and site evaluation, right-of-way and land acquisition, construction, financing and capital resources, and safety.

To analyze how the proposals performed against these sub-criteria, the project implementation team used the associated factors, as shown in the tables in correlation tables in Attachment 4, which correspond to information requested in the RFP. Through in-depth review of these factors collectively, the project implementation team gained a holistic view of each RFP Respondent's ability to successfully implement the project while managing costs and risks.

In assessing each proposal's project implementation information, MISO found that all RFP Respondents had adequate approaches to managing their projects, including schedules, plans, relevant experience, analysis, and process descriptions. Notable proposals included thorough, project-specific risk registers and project management plans that linked all elements of the proposal together. Although most RFP Respondents submitted construction plans, commissioning plans, permitting plans, routing studies, site analyses, and right-of-way and land acquisition plans, the quality of supporting discussion varied markedly among the proposals. The selection report notes proposals that most distinguished themselves in project implementation.

#### *Operations and Maintenance*

MISO evaluated proposals for operations and maintenance based on sub-criteria identified in the Tariff, including normal operations, non-normal operations, maintenance activities, and safety. To analyze how the proposals performed against these sub-criteria, the operations and maintenance team used the associated factors, as shown in the correlation tables in Attachment 4, which correspond to information requested in the RFP.

Through in-depth review of these factors collectively, the operations and maintenance team gained a holistic view of each RFP Respondent's ability to successfully integrate, operate, and maintain the project. MISO found that all RFP Respondents demonstrated the necessary capability and resources to operate and maintain the project. Some RFP Respondents provided comprehensive, project-specific operations and maintenance plans and demonstrated thoughtful consideration of the particular challenges of maintaining extra-high voltage facilities under the conditions found in the project area. The selection report notes proposals that most distinguished themselves with respect to their strategies and fitness to operate and maintain the project.



*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.<sup>23</sup>

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 or an affiliated entity participated in MTEP17. If not, a proposal received zero points for planning participation.<sup>24</sup>

### **A3.3 Evaluation Scorecard**

The evaluation scorecard below (Figure A3-3) illustrates how MISO synthesized the evaluation criteria, sub-criteria, and evaluation principles to develop categorizations and final scores in the competitive developer selection process.<sup>25</sup>

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<sup>23</sup> Attachment FF, Section VIII.E.1.4.

<sup>24</sup> 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.

<sup>25</sup> 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.

## Attachment 3 – Overview of Comparative Analysis Process

Evaluation Principles Applied (Certainty, Risk Mitigation, Cost, & Specificity)	Tariff Criteria		Tariff Subcriteria	Score
	Cost & Design	35%	Electrical Design	0-35 pts.
			Structual Design	
			Estimated Project Cost	
			Estimated Annual Transmission Revenue Requirement	
	Project Implementation	30%	Project Schedule & Management	0-30 pts.
			Regulatory Permitting & Route Evaluation	
			Right-of-Way & Land Acquisition	
			Construction	
			Financing & Capital Resources Plan	
			Safety	
	O & M	30%	Normal Operations	0-30 pts.
Non-Normal Operations				
Maintenance Activities				
Safety				
Planning Participation	5%	Transmission Solution Idea Submittal Form	0 or 5 pts.	
Total Score:			0-100 pts.	

**Figure A3-3: 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.<sup>26</sup> The maximum total score was 100 points. The proposals the Executive Committee determined to be best for a given evaluation criterion was awarded the maximum points available for that criterion.<sup>27</sup> 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 or an affiliated entity participated in MTEP17. 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 Executive Committee also designated the Alternate Selected Developer. MISO will not publicly disclose the identity of the Alternate Selected Developer unless the Alternate Selected Developer is required to assume the obligations of the Selected Developer.

<sup>26</sup> MISO Tariff, Attachment FF, Section, VIII.E.2; Module A (Definitions), Section 1.C, "Competitive Transmission Executive Committee."

<sup>27</sup> BPM-027, Section 8.2.1.



#### **A3.4 Completion of the Competitive Developer Selection Process**

After completing reconciliation of proposal evaluation expenses, MISO will publicly post on the MISO website the expenses it has incurred to facilitate the competitive developer selection process for the Hartburg-Sabine Project. These expenses include the issuance of the Hartburg-Sabine Project RFP, the management and facilitation of MISO's project questions and responses log, the evaluation of all 12 proposals, and the issuance of the Hartburg-Sabine Project selection report.



## **Attachment 4 Correlation Tables**



## Factors from RFP: Cost and Design

TARIFF		PROPOSAL INFORMATION
CRITERIA	SUBCRITERIA	FACTOR
Cost and Design	Estimated Project Cost	Project Cost Estimate Supporting Information
		Project Cost Estimate Binding Cost-Caps
		Project Cost Estimate Binding Cost-Containment
	Estimated Annual Transmission Revenue Requirement	40-Year ATRR Estimate Supporting Information
		Operation and Maintenance Estimate Supporting Information
		Taxes Supporting Information
		Return on Rate Base Assumptions
		Additional or On-going Capital Expenditures
		Annual Transmission Revenue Requirements Binding Cost-Caps
		Annual Transmission Revenue Requirements Binding Cost-Containment
	Electrical Design	Proposed Conductor Selection
		Estimated Positive Sequence Line Impedance & Pi-Equivalent Shunt Susceptance
		Galloping and Vibration Consideration
		Line Rating Information Considered
		Line Losses and Normalized Loss Value
		OPGW or Communication System Provided and Considered
		Detailed One-Line Diagram
		Protection, Control and Communication System
		Bus Configuration and Ratings
		Facility Design Complies with all Applicable Laws and Regulations
	Structural Design	Estimated Line Length and Termination Points
		Structure Types, Structure Materials, and Structure Foundations Identified
		Proposed Grounding Consideration
		Lightning Protection and Reliability Consideration
		Location and Site Work
		Structures and Equipment
		Detailed Physical Layout Drawing
		Facility Design Complies with all Applicable Laws and Regulations

## Factors from RFP: Project Implementation

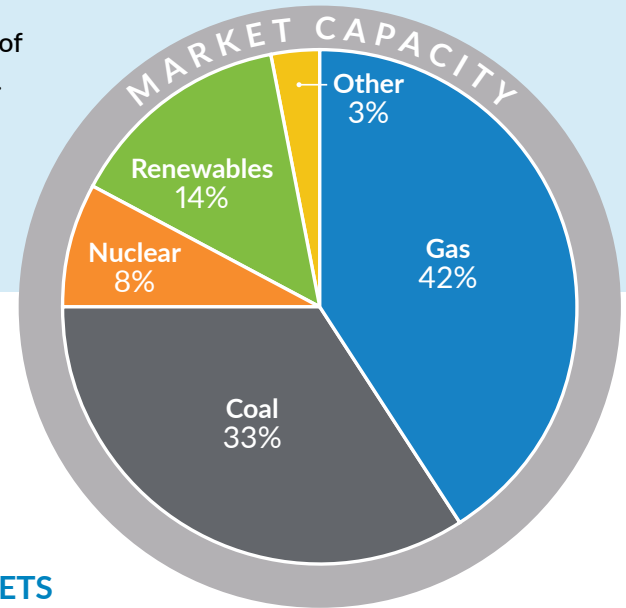
TARIFF		PROPOSAL INFORMATION
CRITERIA	SUBCRITERIA	FACTOR
Project Implementation	Project Schedule and Management	Project Schedule (Route, Permitting, Engineering and Design, Materials, etc.)
		Project Management Plan
	Regulatory Permitting, Route and/or Site Evaluation	Identification of Potential Routing Corridors
		Routing Evaluation Studies
		Feasibility of Proposed Routes
		Site Evaluation
		Siting Evaluation Studies
		Feasibility of Proposed Routes
	Right-of-Way and Land Acquisition	Right-of-Way and/or Land Acquisitions Identified
		Right-of-Way and/or Land Acquisitions Plan
	Construction	Materials Procurement and Management Plans
		Construction Plan
		Commissioning Plan
		Constructability
		Engineering and Surveying Required
	Financing and Capital Resource Plan	Description of Capital Resources
		Expected Cash Flows
		Schedule of Significant Expenditures
		Capital Reserves
		Credit Ratings
		Audited and Pro Forma Financial Statements
	Safety	Site Specific Safety Considerations (Construction Specific)
		Safety Record including OSHA/DART report (Construction Specific)

## Factors from RFP: Operation & Maintenance and Planning Participation

TARIFF		PROPOSAL INFORMATION
CRITERIA	SUBCRITERIA	FACTOR
Operations and Maintenance	Normal Operations	Local Balancing Authority (Project Specific)
		Real-Time Operations Monitoring and Control (Project Specific)
		Planned Outages and Response Plan
		Switching Coordination (Project Specific)
	Non-Normal Operations	Forced Outage and Response Plan (Project Specific)
		Emergency Repair (Project Specific)
		Major Facility Replacement and/or Rebuilds (Facility Specific)
		Financial Strategy for Replacement and/or Rebuilds (Facility Specific)
	Maintenance Activities	Preventative and Predictive Maintenance (Project Specific)
		Maintenance and Management of Spare Parts
		Financial Strategy for Maintenance Activities (Facility Specific)
	Safety	Project/Site Specific Safety Considerations (O&M Specific)
		Safety Record including OSHA/DART report (O&M Specific)
Planning Participation	Proposal Participant or RFP Respondent participation in relevant Planning Study for specific MTEP cycle.	

LEGEND	Criteria
	Sub-Criteria
	Factor
	(Line, Substation, All Facilities)

The **Midcontinent Independent System Operator, Inc. (MISO)** is a not-for-profit, member based organization. We ensure the reliable delivery of electricity, at the lowest cost, across high-voltage power lines in 15 U.S. States and the Canadian province of Manitoba. MISO also conducts transmission planning and manages the buying and selling of wholesale electricity in one of the world's largest energy markets. The company's vision is to be the most reliable, value-creating RTO.



## SCOPE OF OPERATIONS

### Generation Capacity

- 174,724 MW (market)
- 191,062 MW (reliability)

### Historic Summer Peak Load (set July 20, 2011)

- 127,125 MW (market)
- 130,917 MW (reliability)

### Historic Winter Peak Load (set January 6, 2014)

- 109,336 MW (market)
- 117,903 MW (reliability)

### Transmission

- 65,800 miles

### Balancing Authorities

- 36 Local Balancing Authorities in MISO

### Network Model

- 293,009 SCADA data points
- 6,640 generating units

Registered Wind Generation Capacity	18,204 MW
Registered In-Service Wind Generation Capacity	17,117 MW
Registered Solar Generation Capacity	312 MW
Registered In-Service Solar Generation Capacity	312 MW

## MARKETS OVERVIEW

**MISO manages one of the world's largest energy and operating reserves markets using security-constrained economic dispatch of generation.**

The Energy and Operating Reserves Market includes a Day-Ahead Market, a Real-Time Market, and a Financial Transmission Rights (FTR) market. These markets are operated and settled separately.

- \$26.9 billion annual gross market charges (2017)
- 453 Market Participants who serve ~42 million people

## TRANSMISSION EXPANSION PLANNING

- 354 approved new projects in MTEP17, representing \$2.7 billion investment and 6,129 miles of new or upgraded line transmission

## MEMBERSHIP

- 50 Transmission Owners with \$37.9 billion in transmission assets under MISO's functional control
- 131 Non-transmission owners

## CONTACT US

### MISO Central Region & Corporate Headquarters

720 West City Center Drive  
Carmel, IN 46032  
866-296-6476 | 317-249-5400

### MISO North Region

2985 Ames Crossing Road  
Eagan, MN 55121

### MISO South Region

1700 Centerview Drive  
Little Rock, AR 72211

### MISO South Region Transmission Planning

3850 N. Causeway Blvd.  
Two Lakeway, Suite 442  
Metairie, LA 70002