



# PART 2: Proposal Instructions

Duff - Coleman EHV 345 kV

Competitive Transmission Project

January 8, 2016

Revision 3 (April 26<sup>th</sup>, 2016)

Midcontinent Independent System Operator, Inc.

## Table of Contents

Proposal Executive Summary .....	4
Proposal Contact Information .....	5
Section A. RFP Respondent Information .....	6
A.1. Identification of RFP Respondents .....	6
A.2. Form of Proposal .....	6
A.3. RFP Respondent Information for Joint-Developer Proposals .....	6
Section B. Proposal Participant Information .....	8
B.1. Identification of Proposal Participants .....	8
B.2. Conveyance of Ownership Interest .....	8
B.3. Conveyed Interest Agreements .....	8
B.4. Joint Functional-Control Agreement Commitment .....	8
B.5. Commitment to Execute ISO Agreement .....	9
B.6. RFP Respondent's Liability for Proposal Participant(s) .....	9
Section C. Cost & Facility Design .....	10
C.1. Reasonably Descriptive Facility Design and Rigor .....	10
C.2. Facility Design Complies with Applicable Laws & Regulations .....	15
C.3. Modeling Data .....	15
C.4. Project Cost Estimate and Estimate Rigor .....	15
C.5. Estimated Annual Transmission Revenue Requirement .....	17
C.6. Binding Cost-Caps .....	20
C.7. Binding Cost-Containment .....	21
Section D. Project Implementation Capabilities .....	22
D.1. Project Implementation Schedule .....	22
D.2. Project Management .....	22
D.3. Route and Site Evaluation .....	22
D.4. Regulatory Permitting .....	23
D.5. Right-of-way & Land Acquisition .....	23
D.6. Engineering & Surveying .....	23
D.7. Material Procurement .....	23
D.8. Construction .....	24
D.9. Commissioning & Energization .....	24

D.10.	Description of Capital Resources .....	24
D.11.	Expected Capital Cash Flows .....	25
D.12.	Schedule of Significant Expenditures .....	25
D.13.	Capital Reserves.....	26
D.14.	Credit Ratings .....	26
D.15.	Audited and Pro Forma Financial Statements .....	26
D.16.	Previous Applicable Experience and/or Demonstrated Ability .....	26
Section E.	Operations & Maintenance Capabilities .....	27
E.1.	Local Balancing Authority Area .....	27
E.2.	Switching .....	27
E.3.	Preventative and/or Predictive Maintenance & Testing .....	27
E.4.	Spare Parts, Structures, and/or Equipment .....	28
E.5.	Forced Outage Response .....	31
E.6.	Emergency Repair and Testing .....	31
E.7.	Major Facility Replacement and/or Rebuilding Capabilities.....	32
E.8.	Financial Strategy for Facility Rebuilds and/or Replacement .....	32
E.9.	Safety Assurance & Risk Management Plan .....	32
E.10.	Previous Applicable Experience and/or Demonstrated Ability .....	33
Section F.	Planning Participation.....	34
Section G.	Miscellaneous Proposal Information .....	34
G.1.	Formation and Governance Documents.....	34
G.2.	Disclosure of Assignments .....	34
G.3.	Proposal Attestations and Commitments .....	35
G.4.	Project Financial Security .....	35
G.5.	Acknowledgment of Support.....	36
List of Attachments	.....	37

**NOTE TO THE RFP RESPONDENT:**

*This document is intended to provide context and explanatory instructions as a guide to Proposal preparation. The outline of this document matches that of the Proposal Template (.doc). RFP Respondents must utilize the clean Proposal Template document provided by MISO, entering their own text and documentation in the appropriate sections, as necessary. Completion of each of the sections and sub-sections is required for Proposals to be considered complete.*

## **Proposal Executive Summary**

Provide an executive summary of the Proposal, not to exceed three (3) pages in length, highlighting the key project-related attributes including, at a minimum, cost, schedule, design, project implementation, and operations and maintenance. A summary of any proposed cost cap, cost containment, and/or rate recovery commitment information along with the annual transmission revenue requirements, must also be included in the Executive Summary.

It is important that this executive summary discusses key attributes of the Proposal as opposed to merely providing general descriptions of the RFP Respondents' organization and/or the RFP Respondent's accomplishments (these can be provided through various requirements in the Proposal Template).



## Proposal Contact Information

### Primary Contact Information

Designate a representative for the Proposal to be the primary contact person with MISO and provide the requested contact information below:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

### Secondary Contact Information

Designate a representative for the Proposal to be the secondary contact person with MISO and provide the requested contact information below:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

## Section A. RFP Respondent Information

### A.1. Identification of RFP Respondents

Section A.1 of the Proposal shall clearly identify each RFP Respondent involved; first by identifying the number (#) of RFP Respondents involved in the Proposal submission and second by providing the legal name of each and every RFP Respondent involved.

### A.2. Form of Proposal

Proposals may be submitted in one of two different forms: (i) a Single-Developer Proposal; or (ii) a Joint-Developer Proposal. Section A.2 of the Proposal shall identify whether the Proposal is submitted as a 'Single-Developer Proposal' or a 'Joint-Developer Proposal'<sup>1</sup>.

☐ Single-Developer Proposal

☐ Joint-Developer Proposal

### A.3. RFP Respondent Information for Joint-Developer Proposals

Section A.3 of the Proposal is only to be completed for 'Joint-Developer Proposals'; each Single-Developer Proposal submission shall state "N/A – Single-Developer Proposal" for Section A.3 if the Proposal is identified as a 'Single-Developer Proposal' in Section A.2.

#### A.3.i. Roles & Responsibilities:

Section A.3.i of the Proposal shall clearly and specifically identify each RFP Respondent's respective roles and responsibilities (including the respective percentage of responsibility) to finance, construct, implement, own, operate, maintain, repair, and restore the Competitive Transmission Project in such a manner that one hundred percent (100%) of the responsibilities are identified and disclosed in the Joint-Developer Proposal. Any agreements between or among the RFP Respondents governing the division of roles and responsibilities shall be submitted with the Proposal in Attachment A.3.i.

#### A.3.ii. Joint and Several Liabilities of RFP Respondents

Section A.3.ii of the Proposal shall state whether each and every RFP Respondent of the Joint-Developer Proposal agrees to be jointly and severally liable for all aspects of the Proposal. In such a case, the Proposal shall include an agreement executed by each and every RFP Respondent stating such in Attachment A.3.ii of the Proposal. If each and every RFP Respondent of the Proposal does not agree to be jointly and severally liable, the Proposal shall clearly specify the aspects of the Competitive Transmission Project for which each RFP

<sup>1</sup> If Section A.1 of the Proposal identifies only (1) RFP Respondent, the Proposal shall be a Single-Developer Proposal in accordance with the Tariff Attachment FF §VIII.D.4.1. Otherwise, the Proposal shall be a Joint-Developer Proposal in accordance with the Tariff Attachment FF §VIII.D.4.2.

Respondent will be solely liable, such that all aspects of the Joint-Developer Proposal are accounted for in Attachment A.3.ii.

**A.3.iii. Joint Functional-Control Agreement Commitment**

If the Proposal identifies in Section A one or more RFP Respondents, a written commitment from the applicable RFP Respondent(s) to execute the Joint Functional-Control Agreement is required to be submitted in Attachment G.3-1 of the Proposal.

**A.3.iv. Commitment to Execute ISO Agreement**

If the Proposal identifies in Section A one or more RFP Respondents, each RFP Respondent must commit to execute the ISO Agreement no later than the date the Competitive Transmission Facilities are energized, to the extent that such entity is not already a signatory to the ISO Agreement. This commitment is contained in Attachment G.3-1 for RFP Respondents.

## Section B. Proposal Participant Information

Section B of the Proposal shall clearly identify whether any of the RFP Respondent(s) plan to convey an interest in the Competitive Transmission Project to any Proposal Participants. If any conveyance of interest is planned, the Proposal shall include the information requested in Sections B.1 through B.6. If no interest is planned to be conveyed to a Proposal Participant, Sections B.1 through B.6 of the Proposal shall state “N/A – No Proposal Participants”.

### B.1. Identification of Proposal Participants

If the Proposal identifies in Section B that one or more RFP Respondents plans to convey an interest in the Competitive Transmission Project to one or more Proposal Participants, the Proposal shall specify the number (#) of Proposal Participants and the legal name of each and every Proposal Participant involved with the Proposal.

### B.2. Conveyance of Ownership Interest

If the Proposal identifies in Section B that one or more RFP Respondents plans to convey an interest in the Competitive Transmission Project to one or more Proposal Participants, each conveyance of interest shall be identified in Section B.2 of the Proposal including, at a minimum, the type of conveyance planned, the amount of interest to be conveyed, and the expected timing of any such transfer of ownership or interest.

### B.3. Conveyed Interest Agreements

If the Proposal identifies in Section B that one or more RFP Respondents plans to convey an interest in the Competitive Transmission Project to one or more Proposal Participants, any agreements between or among the RFP Respondent(s) and the Proposal Participants regarding the conveyed interest in the Competitive Transmission Project shall be submitted in Attachment B.3 of the Proposal.

### B.4. Joint Functional-Control Agreement Commitment

If the Proposal identifies in Section B that one or more RFP Respondents plans to convey an interest in the Competitive Transmission Project to one or more Proposal Participants, a written commitment from the applicable RFP Respondent(s) and each applicable Proposal Participant to execute the Joint Functional-Control Agreement is required to be submitted in Attachment G.3-2 of the Proposal.



**B.5. Commitment to Execute ISO Agreement**

If the Proposal identifies in Section B that one or more RFP Respondents plans to convey an interest in the Competitive Transmission Project to one or more Proposal Participants, an agreement to execute the ISO Agreement not later than the date that the Competitive Transmission Facilities to be conveyed are energized, to the extent that such entity is not already a signatory to the ISO Agreement, shall be included in the Proposal. This agreement is included in Attachment G.3-2, which each Proposal Participant must execute.

**B.6. RFP Respondent's Liability for Proposal Participant(s)**

If the Proposal identifies in Section B that one or more RFP Respondents plans to convey an interest in the Competitive Transmission Project to one or more Proposal Participants, the RFP Respondent must provide a signed agreement acknowledging that a RFP Respondent is responsible for all aspects of the Competitive Transmission Project notwithstanding, any default of any Proposal Participant's obligations, whether identified in the Proposal or under any contractual agreement(s) between the Proposal Participant and the respective RFP Respondent(s). The required signed agreement is included in Attachment G.3-1, which must be executed by all RFP Respondents.

## Section C. Cost & Facility Design

### C.1. Reasonably Descriptive Facility Design and Rigor

Provide a reasonably descriptive facility design for the Project including, at a minimum, the items listed in Sections C.1.i through C.1.xiv, below. Identify any facility studies performed and/or any other specific supporting data that clearly documents and supports the RFP Respondent(s) consideration and attention given to the proposed facility design in Attachment C.1 of the Proposal. Any additional information the RFP Respondent(s) deem necessary or otherwise desire to include in the Proposal for MISO's consideration in evaluating the Proposal associated with this descriptive design shall be submitted as an attachment to this section (e.g. typical structure drawings, etc.). This descriptive facility design shall be used as the basis for developing the Facility cost-estimate specified in Section C.4 of the Proposal.

#### C.1.i. Estimated Line Length and Termination Points

Provide the estimated length (miles) of the Facility rounded to the nearest mile. Include a description of how the estimated length was determined including, but not limited to, any potential routing corridors analyzed, desktop exercises performed, or potential routing concerns identified. In addition, describe the width of the right-of-way being considered for the Facility.

#### C.1.ii. Conductor Specifications

Provide a description of the proposed phase conductor configuration (e.g. single-conductor, two-conductor bundle, three-conductor bundle, etc.) for the Facility including, at a minimum, the conductor type, size, stranding, and code word name for the phase conductor (e.g. 954 ACSR 54/7 Cardinal, etc.) or each individual conductor in a multi-conductor bundle (e.g. 954 ACSR 54/7 Cardinal, etc.) if bundling is being proposed.

#### C.1.iii. Tangent Structure Specifications

Provide a description of the typical tangent structure being proposed for the Facility including, at a minimum, the information specified in the tables below.

### Proposed Tangent Structure Specifications

<b>Structure Type</b>	(e.g. monopole with davit arms, H-frame, lattice tower, etc.)
<b>Structure Material</b>	(e.g. galvanized steel, weathering steel, wood, aluminum, concrete, etc.)
<b>Davit-Arm or Cross-Arm Material</b>	(e.g. galvanized steel, weathering steel, wood, etc.)
<b>Structure Support</b>	(e.g. self-supporting or guyed)
<b>Estimated # of Structures</b>	(enter # of Tangent Structures for the line)
<b>Foundation Type</b>	(e.g. drilled pier, direct embedded, etc.)
<b># of Foundations per Structure</b>	(enter #)
<b>Suspension Insulator Configuration</b>	(e.g. single string, V-string, middle V-string and outer single string, etc.)

#### C.1.iv. Running – Angle Structure Specifications

Provide a description of the typical running – angle structure being proposed including, at a minimum, the information specified in the table below.

### Proposed Running–Angle Structure Specifications

<b>Structure Type</b>	(e.g. monopole with davit arms, H-frame, lattice tower, etc.)
<b>Structure Material</b>	(e.g. galvanized steel, weathering steel, wood, aluminum, concrete, etc.)
<b>Davit-Arm or Cross-Arm Material</b>	(e.g. galvanized steel, weathering steel, wood, etc.)
<b>Structure Support</b>	(e.g. self-supporting or guyed)
<b>Estimated # of Structures</b>	(enter # of Running-angle structures for the line)
<b>Foundation Type</b>	(e.g. drilled pier, direct embedded, etc.)
<b># of Foundations per Structure</b>	(enter #)

#### C.1.v. Typical Non-angle Dead-end Structure Specifications

Provide a description of the typical non-angle dead-end structure being proposed including, at a minimum, the information specified in the table below.

### Proposed Typical Non-Angled Dead-End Structure Specifications

<b>Structure Type</b>	(e.g. monopole with davit arms, H-frame, lattice tower, three-pole, etc.)
<b>Structure Material</b>	(e.g. galvanized steel, weathering steel, wood, aluminum, concrete, etc.)
<b>Davit-Arm or Cross-Arm Material</b>	(e.g. galvanized steel, weathering steel, wood, etc.)
<b>Structure Support</b>	(e.g. self-supporting or guyed)
<b>Foundation Type</b>	(e.g. drilled pier, direct embedded, etc.)
<b># of Foundations per Structure</b>	(enter #)
<b>Estimated # of Structures</b>	(enter # of Non-Angled Dead-End Structures for the line)
<b>Max. Distance Between Structures</b>	(enter the maximum distance between dead-end structures for the line)

#### C.1.vi. Angle – Dead-end Structure Specifications

Provide a description of the typical angle – dead-end structure being proposed including, at a minimum, the information specified in the table below.

### Proposed Angled Dead-End Structure Specifications

<b>Structure Type</b>	(e.g. monopole with davit arms, H-frame, lattice tower, three-pole, etc.)
<b>Structure Material</b>	(e.g. galvanized steel, weathering steel, wood, aluminum, concrete, etc.)
<b>Davit-Arm or Cross-Arm Material</b>	(e.g. galvanized steel, weathering steel, wood, etc.)
<b>Structure Support</b>	(e.g. self-supporting or guyed)
<b>Foundation Type</b>	(e.g. drilled pier, direct embedded, etc.)
<b># of Foundations per Structure</b>	(enter #)
<b>Estimated # of Structures</b>	(enter # of Angled Dead-End Structures for the line)

#### C.1.vii. Ohio River Crossing Structure Specifications

Provide a description of the typical dead-end crossing structure being proposed including, at a minimum, the information specified in the table below.

### Proposed Ohio River Crossing Structures

<b>Structure Type</b>	(e.g. monopole with davit arms, H-frame, lattice tower, three-pole, etc.)
<b>Structure Material</b>	(e.g. galvanized steel, weathering steel, wood, aluminum, concrete, etc.)
<b>Davit-Arm or Cross-Arm Material</b>	(e.g. galvanized steel, weathering steel, wood, etc.)
<b>Structure Support</b>	(e.g. self-supporting or guyed)
<b>Structure Application</b>	(e.g. tangent, dead-end, etc.)
<b>Foundation Type</b>	(e.g. drilled pier, direct embedded, etc.)
<b># of Foundations per Structure</b>	(enter #)

#### C.1.viii. Positive Sequence Line Impedance & Pi-Equivalent Shunt Susceptance

Provide the estimated positive sequence line impedance (in ohms  $\Omega$ ) for the Facility based on the estimated line length and the specified conductor and its anticipated phase configuration. Provide the pi-equivalent shunt susceptance (in Mhos) for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility (the shunt susceptance that would be modeled at each terminal of the line in the pi-equivalent model).

#### C.1.ix. Ratings

Provide the calculated normal and emergency seasonal load ratings of the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility including, at a minimum, the following:

- the Emergency Summer Ampere Rating in accordance with Section 3.3.1 of MISO Business Practices Manual 029 "Minimum Project Requirements for Competitive Transmission Projects" ("BPM-029");
- the Emergency Winter Ampere Rating in accordance with Section 3.3.1 of BPM-029;
- the Normal Summer Ampere Rating in accordance with Section 3.3.4 of BPM-029;
- the Normal Winter Ampere Rating in accordance with Section 3.3.4 of BPM-029;
- the Emergency Summer MVA Rating in accordance with Sections 3.3.2 and 3.3.3 of BPM-029;
- the Emergency Winter MVA Rating in accordance with Sections 3.3.2 and 3.3.3 of BPM-029;
- the Normal Summer MVA Rating in accordance with Sections 3.3.5 and 3.3.6 of BPM-029;
- the Normal Winter MVA Rating in accordance with Sections 3.3.5 and 3.3.6 of BPM-029;
- the specification of all IEEE 738 rating calculation input parameters used for each individual rating calculation above in accordance with BPM-029, including the

maximum allowable conductor operating temperatures specified for normal and emergency ratings; and

- (j) the specification of the Basic Impulse Level ("BIL") (in kV) for which the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be designed and constructed, including the basis for such calculations.

#### **C.1.x. Lightning Protection System**

Provide a description of the proposed lightning protection system that will typically be used and its key attributes for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility including, at a minimum, the following: (a) the number of shield wires; (b) the typical and maximum shielding angle in degrees (°); and (c) the shield wire attachment heights in feet at the structures with maximum shielding angle.

#### **C.1.xi. Typical Grounding Specifications**

Provide a description of the proposed typical grounding method to be used for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility and its key attributes including, at a minimum, the following: (a) specification of the proposed grounding method (e.g. multiple ground rods, counterpoise including number of legs per structure, etc.); and (b) the targeted grounding resistance for each structure in ohms.

#### **C.1.xii. Conductor Vibration Mitigation**

Provide a description of the proposed method to address or mitigate any adverse effects of galloping conductors and/or Aeolian vibration on the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility including, at a minimum, the following: (a) the specifications of any proposed devices used to reduce or control Aeolian vibration, galloping conductors, and/or sub-span oscillations if bundled conductors are used (e.g. Stockbridge dampers, spacer dampers, etc.); and (b) a description of any other proposed design measures to mitigate the effects of Aeolian conductor vibration, galloping conductors, and/or sub-span oscillations of bundled conductors (e.g. use of phase-to-phase spacers, use of vibration resistant conductors, etc.).

#### **C.1.xiii. Switchgear**

Note: No field mounted switchgear is required to be installed on the Competitive Transmission Line Facility outside the terminating substations. If the RFP Respondent elected to include field mounted switchgear as part of their Proposal, the switchgear must be sized with a continuous load rating equal to or greater than the minimum emergency summer ampere rating specified in Section C.1.ix of the Proposal and with a BIL equal to or greater than the BIL specified in Section C.1.ix of the Proposal.

**C.1.xiv. Protective Relaying Communication System**

Provide a description of the proposed method to provide the redundant fiber optic communications cables specified in the RFP to facilitate protective relaying of the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility in the Duff Substation and the Coleman Substation (e.g. dual OPGW shield wires, one OPGW cable and one underbuilt fiber optic cable, one OPGW and one underground fiber optic cable on the right-of-way, etc.).

**C.2. Facility Design Complies with Applicable Laws & Regulations**

Provide a statement or narrative demonstrating that the RFP Respondent(s) and Proposal Participant(s) currently have or reasonably expect(s) to obtain all necessary registrations, certifications, and/or other necessary legal statuses to develop, construct, operate, and maintain the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility, to the extent required by Applicable Laws and Regulations.

**C.3. Modeling Data**

Provide the modeling data files necessary to model the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility in power flow, production costing, and short-circuit electrical simulation software. At a minimum, the Proposal shall include: (a) the PSS/E compliant IDEV files necessary to incorporate the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility into the MTEP 2016 series power flow model including voltage level, terminal buses, positive sequence pi-equivalent model (series impedance and shunt charging branches), and normal and emergency seasonal load ratings; (b) the PSS/E compliant IDEV files necessary to model new contingencies associated with the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility; and (c) the short-circuit modeling data files necessary to model the positive sequence impedance and zero sequence impedance of the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility in short-circuit models.<sup>2</sup>

**C.4. Project Cost Estimate and Estimate Rigor**

Provide a detailed cost estimate for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility by completing the relevant sections in the Proposal Template Workbook (see instructions below). This detailed cost estimate shall be based upon the reasonably descriptive Competitive Transmission Line Facility design submitted in Section C.1 of this Proposal and the project implementation capabilities and plans submitted in Section D. It shall be based on 2016 (\$ U.S.) cost estimates, which the spreadsheet will convert to the year 2021 based on an annual inflation rate of 2.5%.

The cost-estimates developed by MISO for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility and utilized during the transmission planning process shall be

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<sup>2</sup> Additional detail from MISO on modeling can be found at:  
<https://www.misoenergy.org/Library/Repository/Study/MOD-032%20Model%20Data%20Requirements%20and%20Reporting%20Procedures.pdf>



considered as informational only and are not guaranteed to be accurate or complete in all respects. RFP Respondents shall create and rely on their own cost-estimates when developing and submitting Proposals. Proposals shall include the supporting information and financial assumptions used in developing the provided Competitive Transmission Line Facility construction cost estimate to display the RFP Respondent's analytic rigor by clearly demonstrating a thorough analysis in support of the facility's construction cost estimate.

For the breakdown of project cost estimates below submit supporting evidence for each cost category in Attachment C.6 labeled with the cost category and line number. Input the total cost estimate for each category in the indicated line on the Project Cost Estimates tab of the Proposal Template Workbook.

Project Management Costs, line 1: Provide and explain cost estimates for the project implementation scheduling and project management activities and resources described in Sections D.1 and D.2 below.

Route & Site Evaluation Costs, line 2: Provide and explain cost estimates for the route and site evaluation activities and resources, including public outreach, described in Section D.3 below.

Regulatory Permitting Costs, line 3: Provide and explain cost estimates for the regulatory permitting activities and resources described in Section D.4 below. Be sure to include cost estimates for the Ohio River crossing permit(s) and the Kentucky siting certification.

Right-of-Way & Land Acquisition Costs, line 4: Provide and explain cost estimates for the right-of-way and land acquisition activities and resources described in Section D.5 below. Be sure to include the cost of clearing and preparing the right-of-way for construction including development of access roads and other land acquisition costs typically charged to FERC plant accounts 350 and 359.

Engineering & Surveying Costs, line 5: Provide and explain cost estimates for the engineering and surveying activities and resources described in Section D.6 below.

Structure Material Costs, line 6: Provide and explain cost estimates for the structure materials and associated structure material activities and resources described in Section D.7 below which are typically charged to FERC plant accounts 354 and 355.

Conductor Material Costs, line 7: Provide and explain cost estimates for the conductor materials and conductor material activities and resources described in Section D.7 below which are typically charged to FERC plant account 357.

Other Material Costs, line 8: Provide and explain cost estimates for other material not included in line 6 or 7 above, if applicable, as described in Section D.7 below.

Structure Construction Labor Costs, line 9: Provide and explain cost estimates for the structure construction labor activities and resources described in Section D.8 below which are typically charged to FERC plant accounts 354 and 355.



Conductor Construction Labor Costs, line 10: Provide and explain cost estimates for the conductor construction labor activities and resources described in Section D.8 below which are typically charged to FERC plant account 357.

Other Construction Labor Costs, line 11: Provide and explain cost estimates for other construction labor activities and resources not included in line 9 or 10 above, if applicable, as described in Section D.8 below.

Commissioning & Energization Costs, line 12: Provide and explain cost estimates for the commissioning and energization activities and resources described in Section D.9 below. This does not include costs incurred by the incumbent Transmission Owners to switch the Competitive Transmission Line Facility into service at the terminal substations.

Allowance for Contingencies, line 13. Provide and explain cost allowances for potential contingencies or other unanticipated expenses that may be incurred to implement the Competitive Transmission Line Facility.

Administrative and General Overhead, line 14. Provide and explain all projected overhead costs that will be allocated to the Competitive Transmission Line Facility.

Miscellaneous and Other Expenses, line 15: Provide and explain any other facility cost or expense not included in lines 1 through 14 above.

Project Specific Capitalization for the Allowance for Funds Used During Construction ("AFUDC"), line 16: Provide and explain the capitalization for AFUDC for each month of construction, based on the cost estimates provided in line 1-14 above and the cost of funds information provided for C.5.iii below. Even where the RFP Respondent(s) is intending to seek Construction Work In Progress ("CWIP") in rate base treatment from FERC, provide the requested AFUDC values assuming CWIP in rate base treatment is not granted.

## **C.5. Estimated Annual Transmission Revenue Requirement**

Provide an estimated annual transmission revenue requirement ("ATRR") for the Competitive Transmission Line Facility by completing the relevant sections in the Proposal Template Workbook (see instructions below) and providing the information specified in C.5.i – C.5.v below. Prepare a separate ATRR with all four tabs for each individual RFP Respondent and Proposal Participant identified in the Proposal, beginning in the year costs would first be recovered through the first forty (40) years that the Competitive Transmission Line Facility will be in service. There should be one Aggregate ATRR tab, which includes the ATRR values (line 21) for each RFP Respondent and Proposal Participant and then aggregates them to represent the combined effect of the individual ATRRs. Please note, the inputs provided for the estimated ATRR values should be consistent with Attachment O & GG but they do not need to conform with the generic Attachment O & GG that has been included as a reference in the Proposal Template Workbook. Alternatively, an entity may use its own Attachment O & GG already in the MISO Tariff, a FERC approved formula rate not in the MISO tariff or a proposed formula rate it commits to file with FERC. Provide narrative in Section C.5 describing the basis and reasoning for the

estimate. Supporting work papers and assumptions shall be provided in Attachment C.5 to the Proposal Template.

### **C.5.i. 40-Year ATRR Estimate Supporting Information**

Provide the following information for the first forty (40) years that the Competitive Transmission Line Facility will be in service:

1. Provide an estimate for and support expected gross transmission plant and accumulated depreciation. Input the estimates in line 1 and 2 on the 40-Year ATRR tab of the Project Template Workbook. Submit evidence in Attachment C.5.i to the Proposal Template.
2. Provide an estimate for and support the project gross plant for the Competitive Transmission Line Facility. Input the estimates in line 16 on the 40-Year ATRR tab of the Project Template Workbook. Project gross plant for 2021 should match the project cost estimate in current year dollars developed on the Project Cost Estimates tab unless CWIP recovery is indicated. Submit evidence in Attachment C.5.i.
3. Provide an estimate for and support the project depreciation expense for the Competitive Transmission Line Facility. Input the estimates in line 20 on the 40-Year ATRR tab of the Project Template Workbook. Submit evidence in Attachment C.5.i to the Proposal Template including any applicable approved or anticipated depreciation schedules.

### **C.5.ii. Operation & Maintenance Estimate Supporting Information**

Provide the following information related to the Competitive Transmission Line Facility Operation & Maintenance ("O&M") and Administrative & General ("A&G") cost estimates:

1. A description of each maintenance activity and its frequency over the life of the Competitive Transmission Line Facility.
2. The number of full-time equivalent employees ("FTE"), by job category that will be allocated to each of the Operations activities, Maintenance activities, and A&G activities.
3. Whether the RFP Respondent intends to contract for O&M services and if so, the name of the counterparty and any documents that provide the terms of the agreement.

### **C.5.iii. Taxes Supporting Information**

1. If the state income tax provided in the Proposal Template Workbook is a blended rate, provide the assumed state income tax for each state and the calculation used to arrive at the blended tax rate.
2. Provide the assumed effective property tax rate applicable to the property tax estimate, such as county rates and assessment ratios.
3. Provide a description of any other income- or revenue-based taxes that may be applicable.

**C.5.iv. Return on Rate Base Assumptions**

1. Provide the percentage total return on equity that the RFP Respondent(s) intends to seek from FERC, including a description of any incentives or adders (e.g. RTO incentives). If the RFP Respondent(s) has already made a filing at FERC or has a previously approved formula rate it intends to use for the Competitive Transmission Line Facility, provide a copy of the filing and FERC's Order of approval for the rate, if any.
2. Provide an indication if the RFP Respondent(s) would seek to increase the proposed return on equity if FERC finds a higher return on equity would not be unreasonable.
3. Provide the underlying calculations used to arrive at the deferred tax estimates (Lines 17 through 21, Return to Capital tab), including the Federal and state tax depreciation schedules and the methods applied to arrive at each of these estimates (e.g. 15 year MACRS under Half year convention).

**C.5.v. Additional or On-going Capital Expenditures**

Provide an estimate for and support any additional or on-going capital expenditures that are proposed or expected to be necessary for the Competitive Transmission Line Facility. Explain the timing and include the capital expenditure amounts in project gross plant (line 16) on the 40-Year ATRR tab of the Proposal Template Workbook. Submit evidence, if any, in Attachment C.5.v to the Proposal Template. If applicable, provide the estimated depreciation of these on-going or additional capital expenditures and confirm they were depreciated under the same methodology as those of the constructed Competitive Transmission Line Facility. Include the estimated depreciation for additional or on-going capital expenditure amounts in project depreciation expense (line 20) on the 40-Year ATRR tab of the Proposal Template Workbook.

**Instructions for completing the Proposal Template Workbook:**Operation and Maintenance Costs

Provide estimated O&M expenses and A&G expenses for the Competitive Transmission Line Facility on the O&M tab, in the subject section. First, provide a summary of estimated O&M and A&G costs consistent with Attachment O and GG. Second, provide the estimated project specific O&M and A&G costs by FERC account that are attributable to the Competitive Transmission Line Facility, specifically. Note, the aggregate project specific values may differ from the summary costs. Add additional rows as necessary for FERC accounts not contained in the O&M table provided.

Cost of Capital Assumptions

Provide cost and percentage of debt and equity assumptions within the Return to Capital tab, consistent with Attachment O. These estimates should align with the narrative provided in Section D.10 in regards to the detailed financing plan.

#### Adjustment to Rate Base

Provide adjustments to rate base and working capital assumptions within the Return to Capital tab, consistent with Attachment O.

#### Income, Property, and Other Taxes

Provide the Competitive Transmission Line Facility estimated income tax rates on the G&C and Taxes tab, in the subject section, consistent with Attachment O. Provide the Competitive Transmission Line Facility estimated taxes other than income on the G&C and Taxes tab, in the subject section, consistent with Attachment O.

*Note: Each Proposal must contain a separate estimated ATRR for each RFP Respondent and Proposal Participant as required pursuant to MISO Tariff Attachment FF, Section VIII.D.5.4.*

#### Generic Attachment O and GG Provided for Reference

The Ref. Att. O and Ref. Att. GG tabs are provided for reference to assist RFP Respondents and Proposal Participants to submit ATRR estimates which meet the requirements of Section VIII.D.5.4 of the Tariff. These two tabs are not required to be completed or submitted. RFP Respondent(s) or Proposal Participant(s) may complete and submit any portion of these tabs and reference such submission in Section C.5 of the Proposal Template along with narrative support as well as provide evidence in Attachment C.5 to the Proposal Template.

## **C.6. Binding Cost-Caps**

Describe any binding cost-caps that are being offered by the RFP Respondent(s) with specificity regarding what is being offered, what conditions or exemptions would apply, the specific risks being assumed or not assumed, and how the measures or commitments would be administered over the life of the Competitive Transmission Line Facility. Explain how the proposed binding cost-cap would benefit transmission ratepayers. If a binding cost cap is proposed, the Proposal shall also include a draft term sheet or agreement from each RFP Respondent and Proposal Participant offering such cap that clearly describes in detail the nature of the cost cap being proposed, including all exclusions, exceptions, conditions, enforcement mechanisms, and interaction with Competitive Transmission Line Facility change orders. Propose how your binding cost-cap would be adjusted, if at all, for costs that fall outside the terms and conditions presented on the required draft term sheet or agreement..

### **C.6.i. Construction Cost Cap**

If the RFP Respondent(s) is proposing a binding cap on construction costs, provide the following information:

1. The construction cost cap in year of occurrence dollars and present year dollars.
2. Indicate if AFUDC is included in the cap, and if not, explain if AFUDC would be otherwise limited or capped.
3. Indicate if the cap includes all costs incurred prior to construction.
4. Indicate if the binding cost cap includes a variable, fixed, or capped inflation rate and describe it.

### **C.6.ii. ROE Cap**

If the RFP Respondent(s) is proposing a binding cap on Return on Equity ("ROE"), either as part of a binding construction cost cap or during the period of cost recovery, provide the following information:

1. Describe the components of the ROE cap and which components Respondent(s) is proposing to cap (e.g. Base ROE, RTO adder, other incentives).
2. Describe any conditions under which this ROE cap would not apply. Does the RFP Respondent(s) commit that it will not seek or accept an ROE from FERC that is higher than the proposed cap?

## **C.7. Binding Cost-Containment**

The Proposal shall reflect whether any binding cost-containment measures and/or rate-recovery commitments (e.g. specific forgone rate incentives) for the Competitive Transmission Line Facility are being offered.

If the Proposal includes any such cost-containment measures and/or rate-recovery commitments, it shall also reflect with specificity what commitments the RFP Respondent(s) and/or Proposal Participant(s) are making to contain the total Competitive Transmission Line Facility cost.

Any binding cost-containment measures and/or rate-recovery commitments offered in the Proposal shall be described with specificity regarding what is being offered, what conditions or exemptions would apply, the specific risks being assumed or not assumed, and how the measures or commitments would be administered over the life of the Competitive Transmission Line Facility. Explain how the proposed binding cost-containment would benefit transmission ratepayers. If any binding cost containment is proposed, the Proposal also shall include a draft term sheet or agreement(s) from each RFP Respondent and Proposal Participant offering such measures and/or commitments that clearly describes in detail the nature of the cost-containment measures and/or rate-recovery commitments being proposed, including all exclusions, exceptions, conditions, enforcement mechanisms, and interaction with Competitive Transmission Line Facility change orders. Propose terms and provisions governing how your binding cost-containment would be adjusted, if at all, for activities that fall outside the terms and conditions presented on the required draft term sheet or agreement and briefly explain how those terms operate.

## Section D. Project Implementation Capabilities

### D.1. Project Implementation Schedule

A detailed project implementation schedule, driven by the Project's in-service date, is required to be submitted in Attachment D.1 of the Proposal and shall include, at a minimum, proposed schedules for: (a) route and site evaluation; (b) regulatory permitting, (c) land acquisition; (d) engineering and design; (e) land surveying; (e) material procurement; (f) construction; and (g) commissioning/energization for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility. Section D.1 of the Proposal shall include a brief but descriptive summary of the detailed project implementation schedules proposed and included in Attachment D.1 of the Proposal. Other information related to the project implementation schedule including, but not limited to: (h) a discussion of scheduling risks; (i) a critical path diagram; (j) a coordination plan with interconnecting incumbent Transmission Owners; and/or (k) a proposed project management plan, may be included in Attachment D.1 of the Proposal at the option of the RFP Respondent(s).

### D.2. Project Management

Include a description of the capabilities of the RFP Respondent(s), whether existing and/or anticipated, to perform the necessary project management activities associated with the Project relative to the locations and jurisdictions in which the Project will be routed and/or located. This shall include, at a minimum, a description of the following: (a) the anticipated staff and/or contractors to be used; (b) the anticipated number of staff and/or contractors to be used; (c) their base of operations during the Project; (d) a summary of their experience and expertise; and (e) the process to be used to manage the project including details relative to project scheduling, project coordination, and cost containment.

### D.3. Route and Site Evaluation

Include a description of capabilities of the RFP Respondent, whether existing and/or anticipated, to perform the necessary routing and/or siting evaluation studies associated with the Project relative to the locations and jurisdictions in which the Project will be routed and/or located. This shall include, at a minimum, a description of the following: (a) the anticipated staff and/or contractors to be used; (b) the anticipated number of staff and/or contractors to be used; (c) their base of operations during the Project; (d) a summary of their experience and expertise; and (e) the process to be used to evaluate alternative routes, recommendation of a final route and preferred alternatives, and public outreach during the route evaluation and selection process. This Section shall include an implementation narrative describing the RFP Respondents plan relating to route and site evaluation.



#### **D.4. Regulatory Permitting**

Include a description of capabilities of the RFP Respondent, whether existing and/or anticipated, to obtain the necessary regulatory permits for the Project with respect to the locations and jurisdictions in which the Project will be routed and/or located. This shall include, at a minimum, a description of the following: (a) the anticipated staff and/or contractors to be used; (b) the anticipated number of staff and/or contractors to be used; (c) their base of operations during the Project; (d) a summary of their experience and expertise; and (e) the process to be used to perform the necessary regulatory permitting activities, including preliminary engineering, preparation of the necessary applications, preparation of written testimony, participation in hearings, and responding to requests for additional data and/or testimony. This Section shall include an implementation narrative describing the RFP Respondents plan relating to regulatory permitting.

#### **D.5. Right-of-way & Land Acquisition**

Include a description of capabilities of the RFP Respondent(s), whether existing and/or anticipated, to perform the necessary right-of-way and/or land acquisition activities associated with the Project relative to the locations and jurisdictions in which the Project will be routed and/or located. This shall include, at a minimum, a description of the following: (a) the anticipated staff and/or contractors to be used; (b) the anticipated number of staff and/or contractors to be used; (c) their base of operations during the Project; (d) a summary of their experience and expertise; and (e) the process to be used to perform right-of-way acquisition in both Kentucky and Indiana including negotiation with land owners, preparation and execution of contracts, completion of land transactions, and when necessary and applicable, condemnation of right-of-way in accordance with eminent domain rights. This Section shall include an implementation narrative describing the RFP Respondents plan relating to right-of-way & land acquisition.

#### **D.6. Engineering & Surveying**

Include a description of capabilities of the RFP Respondent(s), whether existing and/or anticipated, to perform the necessary engineering and design activities associated with the Project relative to the locations and jurisdictions in which the Project will be routed and/or located. This shall include, at a minimum, a description of the following: (a) the anticipated staff and/or contractors to be used; (b) the anticipated number of staff and/or contractors to be used; (c) their base of operations during the Project; (d) a summary of their experience and expertise; and (e) the overall process to be used to perform the engineering and design work necessary to complete the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility. This Section shall include an implementation narrative describing the RFP Respondents plan relating to engineering & surveying.

#### **D.7. Material Procurement**

Include a description of capabilities of the RFP Respondent(s), whether existing and/or anticipated, to perform the necessary material procurement activities associated with the Project

relative to the locations and jurisdictions in which the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be routed and/or located. This shall include, at a minimum, a description of the following: (a) the anticipated staff and/or contractors to be used; (b) the anticipated number of staff and/or contractors to be used; (c) their base of operations during the Project; (d) a summary of their experience and expertise; and (e) the process to be used to purchase, store, transport, and stage all materials necessary for the project. This Section shall include an implementation narrative describing the RFP Respondents plan relating to material procurement.

## **D.8. Construction**

Include a description of capabilities of the RFP Respondent(s), whether existing and/or anticipated, to perform the necessary construction supervision, construction labor, tools, vehicles, and equipment for construction of the Project relative to the locations and jurisdictions in which the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be routed and/or located. This shall include, at a minimum, a description of the following: (a) the anticipated staff and/or contractors to be used; (b) the anticipated number of staff and/or contractors to be used; (c) their base of operations during the Project; (d) a summary of their experience and expertise; and (e) the safety program to be used during project construction including safety policies, safety procedures, safety rules, and safety training. This Section shall include an implementation narrative describing the RFP Respondents plan relating to construction.

## **D.9. Commissioning & Energization**

Include a description of capabilities of the RFP Respondent(s), whether existing and/or anticipated, to perform the necessary to commission the Project relative to the locations and jurisdictions in which the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be routed and/or located. This shall include, at a minimum, a description of the following: (a) the anticipated staff and/or contractors to be used; (b) the anticipated number of staff and/or contractors to be used; (c) their base of operations during the Project; (d) a summary of their experience and expertise; and (e) a high level summary of the process to be used to commission the Competitive Transmission Line Facility including final inspection, any necessary acceptance testing (e.g. fiber optic cable testing, etc.), and coordination with the terminal substation owners to develop and implement procedures to energize the line. This Section shall include an implementation narrative describing the RFP Respondents plan relating to commissioning & energization.

## **D.10. Description of Capital Resources**

The Proposal shall include a description of the capital resources the RFP Respondent(s) has available or plans to procure to fund at least one hundred percent (100%) of the estimated Project cost provided in Section C.4 of this Proposal. For each funding source the RFP Respondent(s) shall provide a description of how much capital is available, when the funds will be obtained, the credit quality of security being offered to the provider(s) of Project debt and equity, and what conditions must to be met to secure the funds. At a minimum, the RFP Respondent(s) shall



identify each funding source by type with a brief description and state the costs for each funding sources. If the RFP Response does not include ROE-caps on funding costs, the RFP Respondent(s) may submit projected interest rates and equity returns (aka cost of funds) based on the RFP Respondent's assumed Project creditworthiness during the construction and operational phases. If information regarding the cost of a funding source is not known, the RFP Respondent(s) shall submit a range or estimate of the funding costs and include a description as to why this information was not provided. RFP Respondent(s) may submit evidence to enhance the specificity and certainty of their bid. Such evidence could include the submission of signed agreements, demonstration of the previous use of the capital resource, and the description of mutual benefit to the RFP Respondent(s) and its source of financing in Attachment C.5 of the Proposal.

Please note that Transmission Provider is open to both Corporate Finance and Project Finance approaches to funding the Project:

- Corporate Finance: Balance sheet of RFP Respondent(s) or third-party provides financial support and financial resources.
- Project Finance: Stand-alone project with no third-party financial support and financial resources.

As applicable, please identify the financial firm(s) assisting the RFP Respondent(s) to provide funding for construction costs and contingencies, and as required, *pro-forma* reserves and deposits. If internal funding is being utilized, identify the financial firm(s) the RFP Respondent(s) has previously engaged in a capital raising capacity. In addition to the financial firm's name, office location, and capital markets area or financial function, please provide a contact person and contact info and describe all transactions executed on the RFP Respondent's behalf for the prior thirty six (36) months.

## **D.11. Expected Capital Cash Flows**

Include a high-level narrative description and an exhibit in Attachment D.11 of the Proposal of the expected cash flows between the RFP Respondent(s) and the funding sources identified in Section D.10 of this Proposal with enough specificity to explain the timing, form, and volume of cash flows expected between each RFP Respondent and the identified funding sources. Parties identified in the capital cash flows shall include at a minimum relevant parent organizations, affiliates, subsidiaries, financial institutions, and financial intermediaries.

## **D.12. Schedule of Significant Expenditures**

Include a high-level narrative description and an exhibit in Attachment D.12 of the schedule of significant expenditures (including, but not limited to, long-lead materials, permits, land acquisition, start of construction and right-of-ways) to demonstrate that the expected capital cash flows specified in Section D.11 of this Proposal will be available when required for the expected significant expenditures.

### **D.13. Capital Reserves**

Specify the amount of funds immediately available to the RFP Respondent(s) to deal with unforeseen contingencies arising during the Project's development, construction, and implementation; where immediately available funds may include, but are not limited to, cash and cash equivalents, revolving credit facilities, and certain callable investor commitments.

### **D.14. Credit Ratings**

Specify the credit ratings, if applicable, and credit rating reports from the last three years of the RFP Respondent(s) and any parent or affiliate providing an Acknowledgment of Support must be provided in Attachment D.14 of the Proposal.

### **D.15. Audited and Pro Forma Financial Statements**

Include a high-level narrative description and an exhibit in Attachment D.15 of the Proposal, of general financial information including, at a minimum, audited financial statements and notes for the RFP Respondent(s) (and/or any parent or Affiliate providing an Acknowledgment of Support) and *pro forma* financial statements for each RFP Respondent for each calendar year until the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility is expected to be placed into service.

#### **Instructions for completing the Proposal Template Workbook:**

##### IS Tab (Pro Forma Income Statements)

Provide estimated income statements for 12/31/2017 thru 12/31/2020.

##### BS Tab (Pro Forma Balance Sheets)

Provide estimated balance sheets for 12/31/2017 thru 12/31/2020.

##### CF Tab (Pro Forma Cash Flow Statements)

Provide estimated cash flow statements for 12/31/2017 thru 12/31/2020.

### **D.16. Previous Applicable Experience and/or Demonstrated Ability**

The RFP Respondent(s) may elect to include a brief but descriptive summary of any existing and/or previous experiences demonstrating an ability to implement transmission projects including, but not limited to, whether the RFP Respondent(s) have constructed or is/are constructing any transmission facilities and whether the RFP Respondent(s) have successfully been awarded or is vying for any other competitive transmission projects. If needed, any exhibits may be included in Attachment D.16 of the Proposal.

## **Section E. Operations & Maintenance Capabilities**

Any additional information the RFP Respondents' desire to include in the Proposal related to operations and maintenance shall be located in Attachment E of the Proposal (e.g. resume documents, list of references, list of maintenance policies and procedures, etc.).

### **E.1. Local Balancing Authority Area**

Include a description of the proposed plan to incorporate the Competitive Transmission Project into a MISO Local Balancing Authority Area ("LBAA").

### **E.2. Switching**

Include a description of any existing and/or planned capabilities, competencies, and processes, relative to the locations and jurisdictions where the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be routed and/or located, to perform any necessary switching. This description shall include, at a minimum: (a) the identification and description of any internal resources (e.g. supervision, labor, tools, vehicles, and equipment) and/or the contractors who will provide such supervision, labor, tools, vehicles, and/or equipment to be used; (b) the anticipated number (#) of internal staff and/or contractors to be used; (c) a summary of the experience and expertise of the internal staff and/or contractors to be used; (d) the base of operations and anticipated response time of the internal staff and/or contractors to be used; and (e) identification and description of any specialty tools, vehicles, and/or equipment that is not owned by the RFP Respondent(s) or contractors that would need to be contracted (e.g. special cranes, helicopters, etc.) to respond to and successfully complete any necessary switching on a 24/7 basis.

The overall process to be used to perform any necessary switching shall also be described in Section E.2 of the Proposal.

### **E.3. Preventative and/or Predictive Maintenance & Testing**

Include a description of any existing and/or planned capabilities, competencies, and processes, relative to the locations and jurisdictions where the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be routed and/or located, to perform preventative and/or predictive maintenance, including vegetation management, and any necessary equipment testing. This description shall include, at a minimum: (a) the identification and description of any internal resources (e.g. supervision, labor, tools, vehicles, and equipment) and/or the contractors who will provide such supervision, labor, tools, vehicles, and/or equipment to be used; (b) the anticipated number (#) of internal staff and/or contractors to be used; (c) a summary of the experience and expertise of the internal staff and/or contractors to be used; (d) the base of operations and anticipated response time of the internal staff and/or contractors to be used; and (e) identification and description of the tools, vehicles, and equipment to be available to support planned and predictive maintenance activities.

A description of the procedures, processes, methods, and practices proposed to be used to perform preventative and/or predictive maintenance for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility shall also be included in Section E.3 of the Proposal. This description shall include, at a minimum, the following: (a) detailed policies and procedures for vegetation management and equipment testing; (b) frequency and scope of routine transmission line inspections and/or patrols; (c) type of inspections made; (d) inspection methods used (e.g. ground, air, etc.); and (e) type of data recorded.

Include a description of how maintenance decisions are expected to be made regarding whether specific components of the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be subject to preventative and/or predictive maintenance. If preventative maintenance is employed, then documentation shall be provided in Section E.3 of the Proposal regarding specific maintenance tasks and the frequency with which they are performed. For example, right-of-way vegetation management may be performed on a three-year cycle, and this maintenance may include tree trimming back to the right-of-way edge, mowing and brush removal, removal of vines and other growth from transmission structures, and removal of danger trees and tree branches (e.g. dead or leaning trees or dead branches that could fall onto the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility). If predictive maintenance is employed, then documentation shall be provided in Section E.4 of the Proposal regarding specific data used to make maintenance decisions and the trigger levels or trending criteria used to make maintenance decisions for various types of equipment and maintenance activities. For example, certain results from wooden pole ground-line inspections on a transmission line with wood H-frame structures may trigger the need to replace the poles on such structures. This type of information shall be documented for each component of the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility where components include right-of-way, foundations, structures, grounds, guying, insulator assemblies, conductors, and shield wires. A combination of preventative and predictive maintenance techniques may be used and shall be explained in the documentation as well.

#### **E.4. Spare Parts, Structures, and/or Equipment**

Include a description of any existing and/or planned capabilities, competencies, and processes to manage and maintain spare parts, structures, equipment, and/or assembly inventories for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility. This description shall specifically include, at a minimum, a discussion on: (a) any sharing agreements and/or agreements to procure readily available parts from vendors in lieu of maintaining an inventory; (b) the quantity of spare parts held in inventory and/or otherwise available for use if requested; (c) where such spare parts will be stored and/or located; and (d) the anticipated response time to deploy such a spare part(s) for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility following a request for such spare part(s). The description provided in Section E.4 shall contemplate, at a minimum, the following spare parts, structures, equipment, and/or assembly inventories:

**E.4.i. Poles**

Poles are considered spare parts. If monopole or H-Frame structures are specified, the quantity of spare poles shall be specified categorized by height and application, where application includes tangent, running angle, non-angle dead-end, angle dead-end, and river crossing dead-end. It is acceptable to share spare poles with other transmission facilities.

**E.4.ii. Towers**

Towers are considered spare parts and include, at a minimum, the structural members and fasteners. Towers do not include foundations, insulators, and attachment hardware. If lattice towers are specified, the quantity of spare lattice towers (unassembled) shall be specified categorized by height and application, where application includes tangent, running angle, non-angle dead-end, angle dead-end, and river crossing dead-end. It is acceptable to share spare towers with other transmission facilities.

**E.4.iii. Conductor Reels**

Conductor reels are considered spare parts. The quantity of spare conductor reels to be maintained and the conductor length per reel shall be specified. It is acceptable to share spare conductor reels with other transmission facilities.

**E.4.iv. Shield Wire Reels**

Shield wire reels are considered spare parts. The quantity of spare shield wire reels to be maintained and the wire length per reel shall be specified. It is acceptable to share spare shield wire reels with other transmission facilities.

**E.4.v. Fiber Optic Reels**

Fiber optic cable reels are considered spare parts. In the event OPGW shield wires are not used as the fiber optic communications channels for protective relaying purposes, the quantity of spare fiber optic cable reels to be maintained and the cable length per reel shall be specified. It is acceptable to share spare fiber optic cable reels with other transmission facilities.

**E.4.vi. Monopole Assemblies**

Monopole assemblies are considered spare part assemblies and include, at a minimum, required fasteners and other structural hardware (other than anchor bolts), davit arms, suspension insulators, dead-end insulators, corona rings, structure attachment hardware for insulators (e.g. anchor shackles, Y-clevis fittings, extension links, etc.), conductor attachment hardware for insulators (e.g. strain clamps, suspension clamps, yoke plates, etc.), shield wire attachment hardware, guying hardware if applicable (e.g. guy anchors, guy grips, guy attachment hardware, guy wire, etc.), and grounds (e.g. ground wire, grounding connectors, ground rods, etc.). Monopole assemblies do not include poles or foundations. If monopole

structures are specified, the quantity of spare monopole assemblies shall be specified categorized by application, where application includes tangent, running angle, non-angle dead-end, angle dead-end, and river crossing dead-end. It is not necessary to specify the individual parts of a monopole assembly (i.e. just the quantity of spare monopole assemblies to be maintained shall be specified categorized by application). It is acceptable to share spare monopole assemblies with other transmission facilities.

#### **E.4.vii. H-frame Assemblies**

H-frame assemblies are considered spare part assemblies and include, at a minimum, the required fasteners and other structural hardware (other than anchor bolts), cross-arms, braces, suspension insulators, dead-end insulators, corona rings, structure attachment hardware for insulators (e.g. anchor shackles, Y-clevis fittings, extension links, etc.), conductor attachment hardware for insulators (e.g. strain clamps, suspension clamps, yoke plates, etc.), shield wire attachment hardware, guying hardware if applicable (e.g. guy anchors, guy grips, guy attachment hardware, guy wire, etc.), and grounds (e.g. ground wire, grounding connectors, ground rods, etc.). H-frame assemblies do not include poles or foundations. If H-frame structures are specified, the quantity of spare H-frame assemblies shall be specified categorized by application, where application includes tangent, running angle, non-angle dead-end, angle dead-end, and river crossing dead-end. It is not necessary to specify the individual parts of an H-frame assembly (i.e. just the quantity of spare H-frame assemblies to be maintained shall be specified categorized by application). It is acceptable to share spare H-frame assemblies with other transmission facilities.

#### **E.4.viii. Tower Assemblies**

Tower assemblies are considered spare part assemblies and include, at a minimum, the suspension insulators, dead-end insulators, corona rings, structure attachment hardware for insulators (e.g. anchor shackles, Y-clevis fittings, extension links, etc.), conductor attachment hardware for insulators (e.g. strain clamps, suspension clamps, yoke plates, etc.), shield wire attachment hardware, guying hardware if applicable (e.g. guy anchors, guy grips, guy attachment hardware, guy wire, etc.), and grounds (e.g. ground wire, grounding connectors, ground rods, etc.). Tower assemblies do not include the tower structure itself or foundations. If lattice towers are specified, the quantity of spare tower assemblies shall be specified categorized by application, where application includes tangent, running angle, non-angle dead-end, angle dead-end, and river crossing dead-end. It is not necessary to specify the individual parts of a tower assembly (i.e. just the quantity of spare tower assemblies to be maintained shall be specified categorized by application). It is acceptable to share spare tower assemblies with other transmission facilities.

#### **E.4.ix. Conductor Hardware Assemblies**

Conductor hardware assemblies are considered spare part assemblies and includes, at a minimum, the splices, spacers, dampers, and similar conductor and/or shield wire hardware that is installed per mile of transmission line. Conductor hardware assemblies do not include



insulators and/or the attachment hardware associated with a structure assembly. It is not necessary to specify the individual parts of a conductor hardware assembly (i.e. just the quantity of spare conductor hardware assemblies to be maintained shall be specified). It is acceptable to share spare conductor hardware assemblies with other transmission facilities.

## **E.5. Forced Outage Response**

Include a description of any existing and/or planned capabilities, competencies, and processes, relative to the locations and jurisdictions where the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be routed and/or located, to respond to and successfully address any forced outages on a 24/7 basis. This description shall include, at a minimum: (a) the identification and description of any internal resources (e.g. supervision, labor, tools, vehicles, and equipment) and/or the contractors who will provide such supervision, labor, tools, vehicles, and/or equipment to be used; (b) the anticipated number (#) of internal staff and/or contractors to be used; (c) a summary of the experience and expertise of the internal staff and/or contractors to be used; (d) the base of operations and anticipated response time of the internal staff and/or contractors to be used; and (e) identification and description of any specialty tools, vehicles, and/or equipment that is not owned by the RFP respondent(s) or contractors that would need to be contracted (e.g. special cranes, helicopters, etc.) to respond to and successfully complete any forced outages on a 24/7 basis.

The overall process to be used in responding to a forced outage shall also be described in Section E.5 of the Proposal.

## **E.6. Emergency Repair and Testing**

Include a description of any existing and/or planned capabilities, competencies, and processes, relative to the locations and jurisdictions where the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be routed and/or located, to respond to and successfully complete any emergency repairs and/or testing on a 24/7 basis. This description shall include, at a minimum: (a) the internal resources (e.g. supervision, labor, tools, vehicles, and equipment) and/or the contractors who will provide such supervision, labor, tools, vehicles, and/or equipment to be; (b) the anticipated number (#) of internal staff and/or contractors to be used; (c) a summary of the experience and expertise of the internal staff and/or contractors to be used; (d) the base of operations and anticipated response time of the internal staff and/or contractors to be used; and (e) identification and description of any specialty tools, vehicles, and/or equipment that is not owned by the RFP respondent(s) or contractors that would need to be contracted (e.g. special cranes, helicopters, etc.) to respond to and successfully complete any emergency repairs and/or testing on a 24/7 basis.

The overall process to be used in responding to an emergency repair and/or testing shall also be described in Section E.6 of the Proposal.

### **E.7. Major Facility Replacement and/or Rebuilding Capabilities**

Include a description of the current and/or planned capabilities, competencies, and processes relative to the locations and jurisdictions where the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be routed and/or located to complete any major facility replacements and/or rebuilds necessary as a result of catastrophic destruction and/or normal wear and tear. This description shall include, at a minimum, the general policies, procedures, methods, and practices that will be used to maintain and/or secure the resources required (e.g. labor, contractors, materials, equipment, etc.) to perform the major facility replacement and/or rebuilds for the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility in a timely manner.

Catastrophic restoration policies shall also be outlined, including but not limited to, the design criteria and estimated timeline for using temporary construction to restore service until permanent reconstruction can be completed (e.g. using wood H-frames to temporarily replace a large quantity of destroyed steel tangent structures until permanent structures, such as steel monopoles, steel H-frames, lattice towers, or similar structures can be made available, etc.).

### **E.8. Financial Strategy for Facility Rebuilds and/or Replacement**

Include a descriptive summary of the RFP Respondent's current and/or planned financial strategy to timely facilitate and finance potential major capital replacements and/or rebuilds that may be necessary through the life of the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility. This description shall, at a minimum, support the description of major facility replacement and/or rebuilding capabilities stated in the Proposal and demonstrate the RFP Respondents' ability to reasonably be relied upon to address any catastrophic destruction and/or normal wear and tear.

### **E.9. Safety Assurance & Risk Management Plan**

Include a brief but descriptive summary of any current and/or planned capabilities, competencies, processes, policies, resources, and practices relative to the locations and jurisdictions where the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility will be routed and/or located to that will be used to ensure safety during operations and maintenance of the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility including, at a minimum, specific information on any safety rules, practices, ratings, training programs, and/or equipment that will be used during operations and maintenance. This description shall also include the proposed procedures to obtain clearance and install safety grounds prior to performing dead-line work on the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility, whether such work is planned or unplanned.



**E.10. Previous Applicable Experience and/or Demonstrated Ability**

The RFP Respondent(s) may elect to provide a brief but descriptive summary of any existing and/or previous experiences demonstrating an ability to operate, maintain, repair, and/or replace any transmission facilities.

## Section F. Planning Participation

While not required, Section F of the Proposal may include a description whether any of the RFP Respondents and/or Proposal Participants have participated in the MISO North/Central Market Congestion Planning Study during MTEP 2015 and desires to have such participation considered in the evaluation of the Proposal. Planning Participation is demonstrated by including documentation in Attachment F of the Proposal indicating that at least one (1) RFP Respondent or Proposal Participant<sup>3</sup> identified in the Proposal submitted at least one (1) completed Transmission Solution Idea Submittal Form<sup>4</sup> during the 2015 MISO North/Central Market Congestion Planning Study's solution idea submission window. The submitted solution idea(s) did not have to be any of the facilities, or portion thereof, identified in this Project. The Transmission Solution Idea Submittal Form utilized during the MISO 2015 North/Central Market Congestion Planning Study was the mechanism<sup>5</sup> for stakeholders to provide information required to fulfill the Tariff planning participation requirements, which include the submission of: (a) relevant planning studies performed by the RFP Respondents and/or Proposal Participants<sup>3</sup> and the associated results that were supplied to MISO during the transmission expansion planning process for MTEP 2015; and (b) the transmission project solution ideas submitted by the RFP Respondents and/or Proposal Participants<sup>3</sup> to MISO that addressed the same Transmission Issues being addressed by the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility in MTEP 2015.

## Section G. Miscellaneous Proposal Information

### G.1. Formation and Governance Documents

Include draft formation and governance documents for any legal entities (including the RFP Respondent(s) as applicable) to be formed or materially altered in the event the Proposal is selected.

### G.2. Disclosure of Assignments

Include a declaration whether each RFP Respondent will seek to assign the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility to another entity pursuant to Article 14 of the *pro forma* Selected Developer Agreement.

<sup>3</sup> Any participation from an affiliate or parent of a RFP Respondent or Proposal Participant will be applied to that respective RFP Respondent or Proposal Participant. Any participation from an entity that is not certified as a QTD will be applied should that entity be a Proposal Participant, becomes certified as a QTD and is a RFP Respondent, or the entity is a parent or affiliate of a RFP Respondent or Proposal Participant, where such participation is applied to that respective RFP Respondent or Proposal Participant.

<sup>4</sup> The Transmission Solution Idea Submittal Form utilized during the 2015 MISO North/Central Market Congestion Planning Study is located on the MISO website at the following link: <https://www.misoenergy.org/Events/Pages/EPUG20150123.aspx>.

<sup>5</sup> The Transmission Solution Idea Submittal Form utilized during the 2015 MISO North/Central Market Congestion Planning Study was the mechanism for stakeholders to submit a transmission solution idea which included a detailed description of the idea, estimated cost, modeling files, one-line diagrams, associated geographical diagrams, and relevant planning studies performed by the submitter and the results of those studies. The Transmission Solution Idea Submittal Form utilized during the 2015 MISO North/Central Market Congestion Planning Study is located on the MISO website at the following link: <https://www.misoenergy.org/Events/Pages/EPUG20150123.aspx>.

### **G.3. Proposal Attestations and Commitments**

Various sections in the Request for Proposal require each RFP Respondent to include with its Proposal certain certifications, commitments and other agreements in the form of signed attachments and/or affidavits. These include the requirement that each RFP Respondent include an affidavit, signed by an officer of its organization, as part of Attachment G.12 of the Proposal attesting that: (i) it understands that MISO's evaluation of Proposals and designation of a Selected Proposal is governed by the Tariff and the Business Practices Manuals; (ii) it agrees to be bound by the Tariff and to follow the applicable Business Practices Manuals; (iii) it has submitted the Proposal in good faith; (iv) the information submitted by the organization in the Proposal is true to the best of the RFP Respondent's knowledge and belief; (v) it has complied with all Applicable Laws, and Regulations and Good Utility Practice in preparing the Proposal; and (vi) if selected, the RFP Respondent(s) agrees to be bound by its Proposal.

Various sections in the Request for Proposal require each Proposal Participant to provide certifications, commitments and other agreements in the form of signed attachments and/or affidavits. These include the requirement that each Proposal Participant include an affidavit, signed by an officer of its organization, as part of Attachment G.12 of the Proposal attesting that: (i) its Aggregate ATRR and any required financial information about it that has been submitted by the organization is true to the best of the Proposal Participant's knowledge and belief; and (ii) either (a) that it agrees to execute the ISO Agreement and identify the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility in Appendix H of the ISO Agreement prior to closing on its conveyed interest in the event MISO designates the Proposal as the Selected Proposal; or (b) prior to such closing it will demonstrate that it has already executed the ISO Agreement and it agrees to identify the Duff-Coleman EHV 345 kV Competitive Transmission Line Facility in Appendix H of the ISO Agreement.

Forms for the attestation affidavits applicable to RFP Respondents and Proposal Participants required to be included in Attachment G.3 of the Proposal are included with the Proposal Template and, once executed individually by each RFP Respondent or Proposal Participant, shall be titled Attachment G.3-1, Attachment G.3-2, Attachment G.3-3, etc. for each individual affidavit required. The form attestation affidavits do not include all commitments and agreements required by this Request for Proposals. RFP Respondents and Proposal Participants are responsible for ensuring that all required certifications, commitments and agreements are included with the completed Proposal.

### **G.4. Project Financial Security**

Include a sufficiently detailed description that clearly demonstrates how the required Project Financial Security of three percent (3%) of the estimated Project cost, provided in Section C.4 of this Proposal, will be obtained and provided to MISO within the timeframe required by the *pro forma* Selected Developer Agreement<sup>6</sup>. If an RFP Respondent plans to provide the Project

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<sup>6</sup> Within thirty (30) Calendar Days of execution or the unexecuted filing of the *pro forma* Selected Developer Agreement.

Financial Security with an Irrevocable Standby Letter of Credit, such RFP Respondents shall specify and include written documentation that the Irrevocable Standby Letter of Credit<sup>7</sup> is acceptable to both the RFP Respondent(s) and the RFP Respondent's financial institution in Attachment G.4 of the Proposal.

## **G.5. Acknowledgment of Support**

In the event that the RFP Respondent(s) intends to rely on personnel, material, technical, financial, and/or other resources from a parent, affiliate, and/or other entity, such RFP Respondent(s) shall provide an executed Acknowledgment of Support, in Attachment G.5 of the Proposal, for each such entity that identifies and lists the personnel, material, technical, financial, and/or other resources from the supporting entity that the RFP Respondent(s) desires MISO to consider when evaluating the Proposal. Such an Acknowledgment of Support demonstrates that such parent, affiliate, and/or other entity is aware of the RFP Respondent's reliance on such parent, affiliate, and/or other entity's resources and will make such resources available if the Proposal is designated as the Selected Proposal by MISO.

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<sup>7</sup> Provided in Appendix D of the *pro forma* Selected Developer Agreement.

## List of Attachments

Submit all attachments listed below and label accordingly. Where specific attachments are considered by the RFP Respondent not applicable or are not used, submit a 1-page attachment with the attachment title and the words “[Intentionally left blank]”.

Attachment A.1. Identification of RFP Respondents

Attachment A.2. Form of Proposal

Attachment A.3 RFP Respondent Information for Joint Developer Proposals

Attachment A.3.i. RFP Respondent Agreements Governing Roles & Responsibilities

Attachment A.3.ii. Jointly & Severally Liable Agreement or Roles & Responsibilities

Attachment B.1. Identification of Proposal Participants

Attachment B.2. Conveyance of Ownership Interest

Attachment B.3. Proposal Participant Agreements with RFP Respondents

Attachment C.1. Reasonably Descriptive Facility Design and Rigor

Attachment C.1.i. Estimated Line Length and Termination Points

Attachment C.1.ii. Conductor Specifications

Attachment C.1.iii. Tangent Structure Specifications

Attachment C.1.iv. Running – Angle Structure Specifications

Attachment C.1.v. Typical Non-running angle Dead-end Structure Specifications

Attachment C.1.vi. Angle – Dead-end Structure Specifications

Attachment C.1.vii. Ohio River Crossing Structure Specifications

Attachment C.1.viii. Positive Sequence Line Impedance & Pi–Equivalent Shunt Susceptance

Attachment C.1.ix. Ratings

Attachment C.1.x. Lightning Protection System

Attachment C.1.xi. Typical Grounding Specifications

Attachment C.1. xii. Conductor Vibration Mitigation

Attachment C.1.xiii. Switchgear

Attachment C.1.xiv. Protective Relaying Communication System

Attachment C.2. Facility Design Complies with Applicable Laws and Regulations

Attachment C.3. Modeling Data

Attachment C.4. Project Cost Estimate and Estimate Rigor

Attachment C.5. Estimated Annual Transmission Revenue Requirement

Attachment C.5.i. 40-Year ATRR Estimate Supporting Information

Attachment C.5.ii. Operation & Maintenance Estimate Supporting Information

Attachment C.5.iii. Taxes Supporting Information

Attachment C.5.iv. Return on Rate Base Assumptions

Attachment C.5.v. Additional or Ongoing Capital Expenditures

Attachment C.6. Binding Cost-Caps

Attachment C.6.i. Construction Cost Cap

Attachment C.6.ii. ROE Cap

Attachment C.7. Binding Cost-Containment

Attachment D.1. Project Implementation Schedule

Attachment D.2. Project Management

Attachment D.3. Route and Site Evaluation

Attachment D.4. Regulatory Permitting

Attachment D.5. Right-of-way & Land Acquisition

Attachment D.6. Engineering & Surveying

Attachment D.7. Material Procurement

Attachment D.8. Construction

Attachment D.9. Commissioning & Energization

Attachment D.10. Description of Capital Resources

Attachment D.11. Expected Capital Cash Flows

Attachment D.12. Schedule of Significant Expenditures

Attachment D.13. Capital Reserves

Attachment D.14. Credit Ratings

- Attachment D.15. Audited and pro-forma Financial Statements
- Attachment D.16. Previous Applicable Experience and/or Demonstrated Ability Exhibits
- Attachment E. Additional Information Related to Operation & Maintenance
  - Attachment E.1. Local Balancing Authority Area MOUs, Commitments, and/or Agreements
  - Attachment E.2. Real-Time Operations Monitoring and Control
  - Attachment E.3. Preventative and/or Predictive Maintenance & Testing
  - Attachment E.4. Spare Parts, Structures, and/or Equipment
    - Attachment E.4.i. Poles
    - Attachment E.4.ii. Towers
    - Attachment E.4.iii. Conductor Reels
    - Attachment E.4.iv. Shield Wire Reels
    - Attachment E.4.v. Fiber Optic Reels
    - Attachment E.4.vi. Monopole Assemblies
    - Attachment E.4.vii. H-frame Assemblies
    - Attachment E.4.viii. Tower Assemblies
    - Attachment E.4.ix. Conductor Hardware Assemblies
  - Attachment E.5. Forced Outage Response
  - Attachment E.6. Emergency Repair and Testing
  - Attachment E.7. Major Facility Replacement and/or Rebuilding Capabilities
  - Attachment E.8. Financial Strategy for Facility Rebuilds and/or Replacement
  - Attachment E.9. Safety Assurance & Risk Management Plan
  - Attachment E.10. Previous Applicable Experience and/or Demonstrated Ability
- Attachment F. Planning Participation Documentation
- Attachment G.1. Formation and Governance Documents
- Attachment G.2. Disclosure of Assignments
- Attachment G.3-1. RFP Respondent Proposal Attestation Affidavits
- Attachment G.3-2. Proposal Participant Proposal Attestation Affidavits



Attachment G.4-1. Project Financial Security

Attachment G.4-2. Written commitment that the Irrevocable Standby Letter of Credit is acceptable

Attachment G.5. Acknowledgment of Support