Gates-Gregg Project
Project Sponsor Selection Report

November 6, 2013

California Independent System Operator

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LIST OF ATTACHMENTS

1. INTRODUCTION

This report describes the competitive solicitation process conducted by the California Independent System Operator Corporation (ISO) for a 230 kV transmission line element between Pacific Gas and Electric Company's (PG&E) Gates and Gregg substations in the central California area (the "Gates-Gregg project"). The ISO has conducted this competitive solicitation because the ISO identified the Gates-Gregg project as a reliability-driven element with additional policy and economic benefits in its 2012-2013 transmission planning process. As required by the ISO Tariff, the ISO undertook a comparative analysis of the degree to which each project sponsor met the qualification criteria under tariff section 24.5.2.1 and the selection factors under tariff section 24.5.2.4 to determine the approved project sponsor to finance, own, construct, operate, and maintain the Gates-Gregg project. The result of this competitive solicitation process is that the ISO has selected the consortium of PG&E and MidAmerican Transmission (MAT), in conjunction with Citizens Energy Corporation, as the approved project sponsor to finance, own, construct, operate, and maintain the Gates-Gregg project.

2. BACKGROUND

2.1 The Gates-Gregg Project and Competitive Solicitation Process

In 2010, the Federal Energy Regulatory Commission (FERC) approved changes to the ISO's transmission planning process that included a competitive solicitation process for new, stand-alone transmission facilities needed for economic or public policy reasons. In the ISO's 2012-2013 transmission plan, the ISO identified the Gates-Gregg 230 kV line as a reliability-driven project eligible for competitive solicitation because of its additional policy and economic benefits. The ISO governing board approved the Gates-Gregg project in March 2013 as part of the 2012-2013 transmission plan approval. On April 1, 2013, the ISO posted a paper on its website entitled Gates-Gregg 230 kV Description and Functional Specifications (Gates-Gregg Functional Specifications) describing the Gates-Gregg project.[1] The project consists of a 230 kV line between two existing substations at Gates and Gregg and it is to be constructed as a double circuit 230 kV line with one side strung. This will facilitate future development requirements to supply load or integrate renewable generation in the area while minimizing the future rights-of-way requirements compared to single circuit development. In addition, it would be preferable to route the Gates-Gregg 230 kV line in the vicinity of the area identified as Raisin City junction. This will provide an opportunity for long-term planning of facilities in the area to allow for the potential future development of a switching station to interconnect this line with the existing 230 kV lines in the area. The transmission line will become a network facility and upon completion will be turned over to ISO operational control. The ISO's planning cost estimate for the Gates-Gregg project was $115-145 million. The Gates-Gregg Functional Specifications posted on April 1, 2013 specified a latest in-service date of May 2022 for the Gates-Gregg line.

The ISO governing board approved the 2012-2013 transmission plan during the March 20-21, 2013 board meeting. Following the approval of the transmission plan, the bid window, where project sponsors could submit proposals to finance, construct, and own the Gates-Gregg 230 kV line, was open on April 1, 2013. In accordance with ISO Tariff section 24.5.1 and applicable sections of the ISO's Business Practice Manual for the Transmission Planning Process, the bid solicitation window remained open through June 3, 2013.

The ISO received project sponsor applications from five entities – (1) Elecnor Inc., (2) Isolux Infrastructure, (3) the consortium of PG&E and MidAmerican Transmission (MAT), in conjunction with Citizens Energy, (4) Pattern Energy Group LP and the City of Pittsburg, and (5) G2G ProjectCo LLC (referred to as Trans Bay Cable or TBC). The ISO posted a list of project sponsors to the ISO website on June 6, 2013. The ISO found all five project sponsors to be qualified and posted the list of qualified project sponsors on August 13, 2013.

[1] http://www.caiso.com/Documents/Description-FunctionalSpecificationsGates-Gregg230kVLine.pdf

2.2 The ISO Transmission Planning Process and Competitive Solicitation Tariff Structure

The framework for the competitive solicitation process is set forth in ISO Tariff section 24.5 and details are provided in the ISO's Business Practice Manual for the Transmission Planning Process at section 5. In addition, the ISO posted the form of the application (Attachment 1) on its website and maintained a question and answer log so that all interested parties would have access to the same clarifying information while the bid solicitation window was open. In compliance with tariff section 24.5.5.2.3(c), the ISO hired an expert consultant to assist with the qualification and selection processes.

Each project sponsor completed the project application form, which included a series of questions in the following areas:

- Project Sponsor Qualifications (questions Q-1 to Q-3)
- Project Finance, Project Management and Cost Containment (questions P-1 to P-28)
- Environment and Public Processes (questions E-1 to E-12)
- Substation (questions S-1 to S-8)
- Transmission (questions T-1 to T-11)
- Operation and Maintenance (questions O-1 to O-26)
- Miscellaneous (question M-1)

As provided in the business practice manual, the project sponsors were given opportunities to correct deficiencies in their applications. Following the project sponsors' submissions of supplemental information necessary for the ISO's qualification assessment, the ISO next determined whether the project sponsors satisfied the minimum qualification criteria set forth in tariff section 24.5.2.1 to finance, own, construct, operate, and maintain the Gates-Gregg project. As specified in the tariff, the qualification criteria that the ISO applied were:

(a) whether the proposed project is consistent with needed transmission elements identified in the comprehensive Transmission Plan;

(b) whether the proposed project satisfies Applicable Reliability Criteria and CAISO Planning Standards; and

(c) whether the Project Sponsor and its team are physically, technically, and financially capable of (i) completing the project in a timely and competent manner; and (ii) operating and maintaining the facilities consistent with Good Utility Practice and applicable reliability criteria for the life of the project.

The ISO found that all five project sponsors met the minimum qualification criteria set forth in tariff section 24.5.2.1 with respect to the Gates-Gregg project.

Once the ISO determined that all project sponsors met the minimum qualification criteria, the ISO offered them an opportunity for possible collaboration and submission of a joint proposal pursuant to tariff section 24.5.2.3(a). The project sponsors subsequently advised the ISO that they were unable to arrive at a joint proposal. At that point, the ISO

moved to the phase of the competitive solicitation process to determine its selection of the approved project sponsor.

3. SELECTION OF THE APPROVED PROJECT SPONSOR

3.1 Description of Project Sponsor Selection Process

Once the ISO has determined that two or more project sponsors are qualified, and has provided an opportunity for collaboration, tariff section 24.5.2.3(c) directs the ISO to select one approved project sponsor "based on a comparative analysis of the degree to which each Project Sponsor meets the criteria set forth in section 24.5.2.1 [which are identified in Section 2.2 of this report] and a consideration of the factors set forth in 24.5.2.4."[2] The selection criteria set forth in tariff section 24.5.2.4 are:

(a) The current and expected capabilities of the Project Sponsor and its team to finance, license, and construct the facility and operate and maintain it for the life of the project;

(b) The Project Sponsor's existing rights of way and substations that would contribute to the project in question;

(c) The experience of the Project Sponsor and its team in acquiring rights of way, and the authority to acquire rights of way by eminent domain, if necessary, that would facilitate approval and construction;

(d) The proposed schedule for development and completion of the project and demonstrated ability to meet that schedule of the Project Sponsor and its team;

(e) The financial resources of the Project Sponsor and its team;

(f) The technical and engineering qualifications and experience of the Project Sponsor and its team;

(g) If applicable, the previous record regarding construction and maintenance of transmission facilities, including facilities outside the ISO Controlled Grid of the Project Sponsor and its team;

(h) Demonstrated capability to adhere to standardized construction, maintenance and operating practices;

(i) Demonstrated ability to assume liability for major losses resulting from failure of facilities; and

[2] As discussed in Sections 2, 3.14, 3.15, and 3.16 of this report, the ISO initially used the section 24.5.2.1 criteria to determine whether each project sponsor had the minimum qualifications to finance, own, construct, operate, and maintain the Gates-Gregg project. The ISO found that all five project sponsors met the minimum qualifications. The qualification assessment did not involve a comparative analysis of the degree to which each project sponsor satisfied the three qualification criteria (relative to other project sponsors), but simply considered whether each project sponsor met the minimum qualifications for the Gates-Gregg project. Consistent with tariff section 24.5.2.3(c), the ISO has now undertaken a comparative analysis of the degree to which each project sponsor's proposal has met the qualification criteria in section 24.5.2.1 as part of its project sponsor selection process pursuant to section 24.5.2.4.

(j) Demonstrated cost containment capability and other advantages the Project Sponsor and its team may have to build the specific project, including any binding agreement by the Project Sponsor and its team to accept a cost cap that would preclude project costs above the cap from being recovered through the ISO's Transmission Access Charge.

In selecting the approved project sponsor, the ISO has undertaken a comparative analysis of the proposals of the project sponsors with regard to each of the ten selection criteria set forth in tariff section 24.5.2.4 and each of the three qualification criteria set forth in tariff section 24.5.2.1 based on the information provided in the project sponsors' applications and supplemental responses.

This report summarizes key information provided by each project sponsor that was considered by the ISO in analyzing their proposals with respect to each of the selection and qualification criteria. *As this report is a summary, it does not repeat all of the information provided by the project sponsors. However, the ISO reviewed and considered all of the information provided by the project sponsors and failure to reference any specific information provided by a project sponsor does not indicate lack of consideration of such information.*

The ISO's comparative analysis for each of the ten selection criteria is set forth in Sections 3.3 to 3.13 below, followed by the ISO's comparative analysis for each of the three qualification criteria in Sections 3.14 to 3.16. The ISO's conclusion with respect to selection of the approved project sponsor is set forth in Section 3.17.

3.2 Description of Project Sponsors for the Gates-Gregg Project

The ISO received project sponsor applications for the Gates-Gregg 230 kV transmission line project from five entities:

- Elecnor Inc.,
- Isolux Infrastructure,
- Pacific Gas and Electric Company and MidAmerican Transmission, in conjunction with Citizens Energy Corporation,
- Pattern Energy Group LP and the City of Pittsburg, and
- G2G ProjectCo LLC (referred to as Trans Bay Cable or TBC)

The ISO found all five entities to be qualified and as a result all five project proposals were considered in the comparative analysis process for the selection of the approved project sponsor.

Following is a description of each project sponsor, including how it is organized and how it fits with its parent company, if applicable. This information was provided by the project sponsors as part of their applications.

Elecnor Inc. (Elecnor)

The application indicated that Elecnor Inc. is a wholly owned subsidiary of Elecnor, SA, which is a public company that is traded on the Madrid Stock Exchange (symbol ENO).

Elecnor SA and subsidiaries are referred to as Elecnor Group. According to the application, if selected, the project would be owned through a dedicated single purpose vehicle wholly owned by Elecnor Inc., which, in turn, is wholly owned by Elecnor, SA. This report refers to the project sponsor as Elecnor.

Isolux Infrastructure

The application indicated that Iccenlux, Corp (Iccenlux) is a subsidiary of Isolux Infrastructure Netherlands B.V., which, together with its various subsidiaries including Iccenlux, should be referred to as "Isolux Infrastructure." Iccenlux is a Delaware for-profit C corporation. According to the application, Iccenlux or another subsidiary of Isolux Infrastructure would create a special purpose entity that would ultimately be responsible for executing the project and providing the transmission service. This entity would likely be a limited liability company (LLC). This report refers to the project sponsor as Isolux Infrastructure.

Pacific Gas and Electric Company and MidAmerican Transmission (PG&E/MAT)

The application indicated that it is jointly submitted by a project consortium composed of Pacific Gas and Electric Company (PG&E) and MidAmerican Transmission (MAT), through a wholly owned subsidiary, in conjunction with Citizens Energy Corporation (CEC). The application indicated that as project sponsors PG&E and MAT would each be a 50% owner of the assets associated with this project through an undivided 50% "tenancy in common" interest. Citizens Energy Corporation, through a wholly owned subsidiary, would be a lessee of 25% of the capacity rights associated with this project.

The application indicated that PG&E is a California corporation, a wholly-owned subsidiary of PG&E Corporation, an investor-owned utility regulated by the California Public Utilities Commission, and is the principal provider of electric and gas transmission and distribution service in northern and central California.

The application indicated that MAT is a subsidiary of MidAmerican Energy Holdings Company.

According to the application, the project sponsors may create a stand-alone legal entity to wholly own the project assets as an alternative to the tenants in common ownership outlined above.

This report refers to the project sponsor as PG&E/MAT.

Pattern Energy Group LP and the City of Pittsburg (Pattern)

The application indicated that Pattern Energy Group LP (together with its affiliates "Pattern") is sponsoring the project in a public-private partnership with the City of Pittsburg and its municipal utility, Pittsburg Power Company (together "Pittsburg"). According to the application, if selected as the approved project sponsor, Pattern would establish a special purpose entity under which Pattern would develop the project. This entity would be 100% owned by an affiliate of Pattern Energy Group LP.

Upon commercial operation of the project, the application indicated that Pattern intends that Pittsburg would become the owner and operator of the special purpose entity's physical assets and would assume most of the contractual obligations of the project. Pattern's special purpose entity would retain the transmission service rights and would be the counterparty to the ISO's Transmission Control Agreement (TCA).

This report refers to the project sponsor as Pattern.

G2G ProjectCo LLC (TBC)

The application indicated that the project sponsor is "G2G ProjectCo LLC," an affiliate of Trans Bay Cable LLC (TBC) a company owned and managed by SteelRiver Infrastructure Partners LP and its affiliates. The term TBC is used to identify the project sponsor and its affiliates. If selected as the approved project sponsor, G2G ProjectCo LLC would be capitalized by equity partners of SteelRiver. This report refers to the project sponsor as TBC.

3.3 Selection Criterion 24.5.2.4(a)

The first selection criterion is "the current and expected capabilities of the Project Sponsor and its team to finance, license, and construct the facility and operate and maintain it for the life of the project."

The ISO notes that the first selection criterion is a broad criterion that encompasses several of the subsequent more narrow selection criteria. The ISO will therefore address satisfaction of this more general criterion in its discussion of the applicable, more specific selection criteria. The ISO will not duplicate here (1) the information provided by the project sponsors for purposes of demonstrating their capabilities and experience with respect to each of the encompassed selection criteria or (2) the ISO's comparative analysis of the project sponsors in this regard, as set forth in the following sections of this report. The ISO will discuss the comparative analysis for selection criterion 24.5.2.4(a) after the discussion of the other selection criteria in Section 3.13 of this report.

3.4 Selection Criterion 24.5.2.4(b)

The second selection criterion is "the Project Sponsor's existing rights of way and substations that would contribute to the project in question."

3.4.1 Information Provided by Elecnor

Elecnor did not indicate that it has any existing rights-of-way that could contribute to the project. (E-8)

3.4.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that it does not have any existing rights-of-way that could contribute to the project. (E-8)

3.4.3 Information Provided by PG&E/MAT

PG&E/MAT indicated that PG&E owns the existing Gates-Gregg 230 kV transmission line. This transmission line is primarily adjacent to the proposed transmission line route. PG&E/MAT proposed that the new line parallel a significant portion of this line. Paralleling the existing line would permit sharing of 20 feet of the existing rights-of-way and would require a smaller new easement than would otherwise be the case, resulting in a reduction of the aggregate easement requirements for the line. (E-7b, E-8, T-1)

3.4.4 Information Provided by Pattern

Pattern indicated that it does not have any existing rights-of-way that could contribute to the project. (E-8)

3.4.5 Information Provided by TBC

TBC indicated that it does not have any existing rights-of-way that could contribute to the project. (E-8)

3.4.6 ISO Comparative Analysis

For purposes of the comparative analysis for this criterion, the ISO has considered the representations by the project sponsors regarding the rights-of-way they possess that they propose to contribute to this project. The Gates-Gregg Functional Specifications specified an approximate line length of 59 miles. The ISO notes that the siting authority will ultimately determine the length of the route. All of the project sponsors except PG&E/MAT will require a separate, brand new rights-of-way. PG&E/MAT proposes to parallel and overlap existing rights-of-way. The ISO has determined that because PG&E has rights-of-way that can contribute to the project, PG&E/MAT's proposed project route will permit sharing of 20 feet of the existing rights-of-way for a significant portion of the route. Also, the other project sponsors are proposing rights-of-way corridors that are materially wider than that proposed by PG&E/MAT for the length of the route (*see* proposed rights-of-way information associated with the analysis set forth in Section 3.5 of this report for selection criterion 24.5.2.4(c)). The existence of such rights-of-way can contribute to lower project cost, fewer siting approvals, and less extensive rights-of-way acquisition efforts. Thus, PG&E/MAT's proposal is better than those of the other four project sponsors, and there are no material differences among the proposals of the other four project sponsors with regard to this criterion because they have no existing rights-of-way to contribute to the project.

3.5 Selection Criterion 24.5.2.4(c)

The third selection criterion is "the experience of the Project Sponsor and its team in acquiring rights of way, and the authority to acquire rights of way by eminent domain, if necessary, that would facilitate approval and construction."

For the purpose of performing the comparative analysis for this criterion, the ISO has initially considered the two components of the criterion separately and then combined them into an overall comparative analysis for this criterion. The two components are: (1) the experience of the project sponsor and its team in acquiring rights-of-way and (2) the

project sponsor's authority to acquire rights-of-way by eminent domain, if necessary, that would facilitate approval and construction.

Experience in Acquiring Rights-of-Way

3.5.1 Information Provided by Elecnor

Elecnor did not indicate any experience acquiring rights-of-way in the U.S. or California. Elecnor indicated it has contracted with a consultant to assist with rights-of-way acquisition; however, Elecnor provided no information regarding the experience of the consultant in acquiring rights-of-way. (E-3, E-3a, E-3b, E-9b)

Elecnor indicated that the separation between any transmission lines that are paralleled would be minimized, including through the use of overlapping rights-of-way if possible. (E-7a-d, T-5g(v), T-10)

3.5.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure did not indicate any experience acquiring rights-of-way in the U.S. or California. Isolux Infrastructure indicated it expects to contract with a consultant to assist with rights-of-way acquisition; however, it did not name the consultant or provide information regarding the experience of the consultant. (E-3, E-3a, E-3b, E-9b)

Isolux Infrastructure indicated in its rights-of-way proposal that where existing 230 kV lines appear in the same overall corridor, a spacing of 400 feet would generally be provided between the two 230 kV lines. This results in a strip of land of at least 300 feet between the two transmission rights-of-way. (E-7a-d, T-5g(v), T-10)

3.5.3 Information Provided by PG&E/MAT

PG&E/MAT indicated that PG&E and MAT have been involved with land acquisition for numerous transmission projects that they developed, own, and operate. PG&E/MAT indicated that PG&E and MAT staff will manage rights-of-way acquisition for this project. PG&E/MAT provided resumes of the personnel who will manage rights-of-way acquisition indicating that they have significant rights-of-way acquisition experience, including rights-of-way for nine PG&E transmission line projects in California. In addition, PG&E/MAT indicated that MAT has been involved with 10 transmission line projects in other states. PG&E/MAT identified seven consulting companies that they are considering to provide assistance to their staffs with land acquisition work, and all seven have significant land acquisition experience with PG&E transmission line projects in California. In addition, a significant portion of the new rights-of-way will constitute an extension of the existing rights-of-way that PG&E has already procured from landowners for the existing Gates-Gregg line. (E-3, E-3a, E-3b, E-9b)

PG&E/MAT's proposed rights-of-way would be adjacent to the rights-of-way of any existing line when the proposed line parallels an existing line. (E-7a-d, T-5g(v), T-10)

3.5.4 Information Provided by Pattern

Pattern indicated that it has transmission line rights-of-way acquisition experience in California and elsewhere in the U.S. as a transmission line developer, owner, and operator. Pattern indicated that its staff will manage rights-of-way acquisition for this project and provided details on its staff's rights-of-way acquisition experience. Pattern indicated that it has an in-house real estate team that has acquired over 400,000 acres for use in Pattern projects. Also, Pattern indicated that its law firm has assisted Pattern with rights-of-way acquisition on numerous projects, including rights-of-way for the Trans Bay Cable Project. Pattern indicated that its consultants have rights-of-way acquisition experience in California and elsewhere in the U.S. (E-3, E-3a, E-3b, E-9b)

Pattern indicated that the route would maximize paralleling existing transmission lines. Pattern also indicated that the separation between any parallel transmission lines would be minimized while still meeting all electrical codes and environmental requirements. (E-7a-d, T-5g(v), T-10)

3.5.5 Information Provided by TBC

TBC indicated that it has rights-of-way acquisition experience with one submarine cable project in California (the Trans Bay Cable Project). TBC indicated that it has contracted with a consultant and sub-consultant that have transmission line rights-of-way acquisition experience in California. (E-3, E-3a, E-3b, E-9b)

TBC proposed to locate the proposed transmission line rights-of-way within 25 feet to 50 feet and parallel to existing distribution lines. TBC's proposed routing does not parallel any existing transmission lines. (E-7a-d, T-5g(v), T-10)

Authority to Acquire Rights-of-Way by Eminent Domain

3.5.6 Information Provided by Elecnor

Elecnor indicated that it currently does not have eminent domain authority; however, Elecnor expects to receive eminent domain authority from the CPUC through the process of obtaining a certificate of public convenience and necessity (CPCN). (E-7e)

3.5.7 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that it currently does not have eminent domain authority; however, Isolux Infrastructure expects to receive eminent domain authority from the CPUC through the CPCN process. (E-7e)

3.5.8 Information Provided by PG&E/MAT

PG&E/MAT indicated that PG&E currently has eminent domain authority as a California regulated utility. (E-7e)

3.5.9 Information Provided by Pattern

Pattern indicated that through the City of Pittsburg and the city's municipal utility, the Pittsburg Power Company, it expects to have the power of eminent domain, if necessary, in connection with the aggregation of the rights-of-way for the project. (E-7e)

3.5.10 Information Provided by TBC

TBC indicated that it has eminent domain authority under Senate Bill 177. (E-7e)

3.5.11 ISO Comparative Analysis

Comparative Analysis of Experience in Acquiring Rights-of-Way

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the experience of both the project sponsors and their team members in acquiring rights-of-way, including but not limited to experience in the U.S. and California. The ISO considers experience in the U.S. and California to be an advantage over experience in rights-of-way acquisition in other jurisdictions because the project will be located in California and there are special aspects of rights-of-way acquisition in these jurisdictions for which experience is an advantage.

As described above, PG&E/MAT and their consultants have greater experience in transmission line rights-of-way acquisition in the U.S. and California than the other four project sponsors. Also, the additional rights-of-way they will need to acquire are essentially an extension of and will parallel the existing Gates-Gregg line and will overlap with the existing rights-of-way PG&E already possesses, as opposed to requiring a separate, entirely new rights-of-way corridor. Based on these factors, in conjunction with all of the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that PG&E/MAT's proposal is better than the proposals of the other four project sponsors with regard to this component of the criterion.

Both TBC and Pattern claim credit for rights-of-way acquisition in connection with the Trans Bay Cable Project. Neither project sponsor detailed any specific differentiation between their roles in that rights-of-way acquisition. However, Pattern demonstrated greater experience in acquiring rights-of-way. Pattern's team acquired the rights-of-way and land for the Trans Bay Cable Project. Further, Pattern's in-house real estate team has acquired over 400,000 acres for use in Pattern projects. Also, Pattern's law firm has assisted Pattern with rights-of-way acquisition on numerous projects, including the Trans Bay Cable Project.

Based on the foregoing factors, in conjunction with all of the other factors included in the ISO's analysis for this component of the criterion, the ISO concludes that Pattern's proposal is slightly better than TBC's proposal with respect to rights-of-way acquisition, and that both of their proposals are better than those of Elecnor and Isolux Infrastructure because they demonstrate that Pattern and TBC have more rights-of-way acquisition experience in California and because Elecnor and Isolux Infrastructure did not provide any information regarding the rights-of-way acquisition experience of their staff or consultants.

The ISO has determined that Elecnor's proposal is slightly better than that of Isolux Infrastructure because Isolux Infrastructure's proposed 400 foot separation from other existing transmission lines is significantly more than other project sponsors, and the existence of the resulting strip of land between rights-of-way corridors may create delays in the schedule for rights-of-way acquisition and higher costs due to the increased potential need to resort to eminent domain actions and having to acquire additional lands.

Comparative Analysis of Authority to Acquire Rights-of-Way by Eminent Domain

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding their authority to acquire rights-of-way by eminent domain. The ISO has determined that there is no material difference among the proposals of the five project sponsors with regard to this component of the criterion because all five will have eminent domain authority as of the time critical path permitting is complete for the project. PG&E/MAT indicated that PG&E has eminent domain authority as a regulated utility; Pattern indicated that it expects to have eminent domain authority through the City of Pittsburg's Pittsburg Power Company; and TBC indicated that it has eminent domain authority under SB 177. Elecnor and Isolux Infrastructure each expects to receive eminent domain authority once its CPCN application with the CPUC is granted.

Overall Comparative Analysis

For purposes of this project, the ISO considers this criterion less important than selection criterion 24.5.2.4(b) regarding the possession of existing rights-of-way that can contribute to the project because when a project sponsor has existing rights-of-way and other project sponsors do not, the capabilities in acquiring rights-of-way are of less importance. Also, possession of rights-of-way that contribute to a project can reduce costs, potentially facilitate siting approvals, mitigate potential hurdles, and potentially reduce the amount of time needed to complete the project.

The ISO has determined that PG&E/MAT's proposal is slightly better than those of the other four project sponsors with regard to this criterion because there is no material difference among the proposals with regard to eminent domain authority, so the analysis regarding rights-of-way acquisition experience is determinative. PG&E/MAT and their consultants have much more experience with transmission line rights-of-way land acquisition in the U.S., California, and the local region, including experience with the rights-of-way acquisition for the existing Gates-Gregg line, which will parallel the second Gates-Gregg line that is the subject of this competitive solicitation.

The ISO has determined Pattern's proposal is slightly better than TBC's proposal, and that both are better than Elecnor's and Isolux Infrastructure's proposals with regard to this criterion, because they and their consultants have more transmission line rights-of-way acquisition experience in California.

The ISO has determined that Elecnor's proposal is slightly better than that of Isolux Infrastructure with regard to this criterion due to the potential delays and increased costs that could result from Isolux Infrastructure's corridor separation proposal.

3.6 Selection Criterion 24.5.2.4(d)

The fourth selection criterion is "the proposed schedule for development and completion of the project and demonstrated ability to meet that schedule of the Project Sponsor and its team."

For the purpose of performing the comparative analysis for this criterion, the ISO has initially considered the two components of the criterion separately and then combined them into an overall comparative analysis for this criterion. The two components are: (1) the proposed schedule for development and completion of the project and (2) demonstrated ability to meet that schedule of the project sponsor and its team.

Proposed Schedule

3.6.1 Information Provided by Elecnor

Elecnor provided a project schedule, broken down by critical path activities, showing the project starting on June 2, 2014 and completing on January 3, 2022. The scheduled completion date is prior to the ISO's latest in-service date of May 2022 by about five months. (P-24)

3.6.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure provided a general project schedule, broken down by critical path activities, showing the project starting about January 2014 and completing about March 31, 2020. The schedule provided by Isolux Infrastructure had limited details. The scheduled completion date is prior to the ISO's latest in-service date of May 2022 by about two years. (P-24)

3.6.3 Information Provided by PG&E/MAT

PG&E/MAT provided a project schedule summarized by critical path items showing the project starting January 2014 and an in-service date of late March 2020. The scheduled completion date is prior to the ISO's latest in-service date of May 2022 by about two years. (P-24)

3.6.4 Information Provided by Pattern

Pattern provided a project schedule, broken down by critical path activities, showing the project starting on October 1, 2013 and going into operation on January 31, 2018. The scheduled completion date is prior to the ISO's latest in-service date of May 2022 by about 4¼ years. (P-24)

3.6.5 Information Provided by TBC

TBC provided a project schedule, broken down by critical path activities, showing the project starting on September 3, 2013 and completing on June 1, 2017. The start date is not consistent with the scheduled selection dates for the ISO's transmission planning process, so the project will start later than TBC's proposed schedule by a few months. As presented, the scheduled completion date is significantly prior to the ISO's latest in-service date of May 2022 by about five years. There is a schedule conflict in TBC's proposed schedule, as it shows an overlap between the CPCN approval process and start of construction activities. The CPUC normally does not allow construction to begin until the CPCN is issued. (P-24)

Ability to Meet Schedule

3.6.6 Information Provided by Elecnor

Elecnor provided details for several projects. Elecnor indicated that one project was completed six months later than the schedule with the other projects completed a few months ahead of schedule. (P-20)

Elecnor identified one major schedule risk – opposition from the public in the siting process. Elecnor indicated that its project schedule provides for a degree of "float" to partially accommodate this risk. (P-21, P-23, P-25)

Elecnor provided several organization charts depicting the project organization and the resume for the project manager. The project manager will report to a project committee formed by members of the company's upper management. (P-22)

3.6.7 Information Provided by Isolux Infrastructure

Isolux Infrastructure provided information on three example projects. Two transmission projects were in Brazil; one project was completed ahead of schedule and one behind schedule. The third project is a wind energy related project in Texas involving new transmission lines and substations, still in progress. Isolux Infrastructure indicated that it is behind schedule due to an expansion in scope and design changes. (P-20)

Isolux Infrastructure identified 18 project risks along with the risk likelihood, severity, and potential mitigation/minimization measures. (P-21, P-23, P-25)

Isolux Infrastructure provided a simple high level project organization chart and a more detailed engineering, procurement, and construction (EPC) project organization chart but identified no specific individuals in either chart and provided no statements of experience or capabilities for individuals associated with the positions in the organization chart. (P-22)

3.6.8 Information Provided by PG&E/MAT

PG&E/MAT provided a review of five example projects that were completed on or before the scheduled in-service date, except for one project changed substantially in the CPCN process. (P-20)

PG&E/MAT provided a risk register listing 26 potential risks for this project. PG&E/MAT evaluated these risks as to their potential cost impacts and probability of occurrence and summarized mitigation plans for each risk. (P-21, P-23, P-25)

PG&E/MAT described the "Executive Leadership Team" and also provided similar information for the "Project Delivery Team." The proposed project manager has 25 years of utility experience and 10 years in project management. (P- 22)

3.6.9 Information Provided by Pattern

Pattern provided a review of the TBC project and three wind turbine projects. The wind projects were at or near the required operation date. (P-20)

Pattern discussed numerous major risks and obstacles for successful project completion. Pattern and its consultant will develop a Risk Management and Mitigation Plan prior to the close of construction financing. (P-21, P-23, P-25)

Pattern indicated that it will manage and lead the development and construction of the project. Pattern provided a clear organization chart showing the relationships between key personnel and aspects of the project. The resumes showed power industry experience of 8 to 35 years for these individuals. (P- 22)

3.6.10 Information Provided by TBC

TBC provided a review of the Trans Bay Cable Project. TBC indicated that the project operation was delayed about nine months due to technical problems. (P-20)

TBC identified four risk areas and related mitigations: permitting risk, construction risk, commodity risk, and exchange risk. (P-21, P-23, P-25)

TBC provided the proposed management structure for the project. TBC indicated that its development adviser and eventual project manager (who will be the same person) has over 35 years of utility and construction experience and provided a "Statement of Qualifications." (P- 22)

3.6.11 ISO Comparative Analysis

Comparative Analysis of Proposed Schedule

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding their proposed schedules for development of the project, including but not limited to the scope of activities specified in their schedules and the reasonableness of the timelines they have specified. The ISO has determined that all project sponsors' schedules contain a set of all expected major activities and reasonable associated timelines (permitting, engineering, construction, etc.) given the ISO's understanding of how long similar activities have taken on projects that have been completed in the recent past in California.

The ISO specified a latest in-service date of May 2022 for the Gates-Gregg line in the Gates-Gregg Functional Specifications and did not solicit proposals for an earlier in-service date from the project sponsors. Some project sponsors proposed earlier in-service dates than others, and certain project sponsors indicated their willingness to work with the ISO to meet an earlier in-service date if the ISO desired it. The ISO has not quantified any net benefits for an earlier in-service date, and none of the project sponsors quantified any such benefits. Consequently, in the comparative analysis of the proposals the ISO has not identified any advantage favoring the proposals that specify earlier in-service dates.

Elecnor, Isolux Infrastructure, PG&E/MAT, and Pattern provided schedules that show completion of the project prior to the ISO's latest in-service date of May 2022 and that did not contain schedule conflicts. The ISO has determined that there are no material differences among their four proposals with regard to this component of the criterion.

Although TBC's schedule also showed completion of the project prior to May 2022, TBC provided a schedule that contains an internal schedule conflict because it showed construction starting before issuance of a CPCN. As a result, the ISO has determined that the proposals of the other four project sponsors are slightly better than TBC's proposal with regard to this component of the criterion.

Comparative Analysis of Ability to Meet Schedule

The ISO's analysis has focused primarily on the ability of the project sponsors to complete the project by the date in the Gates-Gregg Functional Specifications. For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the experience of both the project sponsors and their team members in meeting schedules, including but not limited to the information in their proposed schedules as well as their past experience in constructing projects on schedule, accounting for risk management, and performing project management.

The ISO has analyzed the information provided by all the project sponsors regarding their ability to meet a schedule. The proposals of the project sponsors varied in the areas of past experience, project management, and risk management, and indicate different skills. In particular, TBC was unable to provide an example of a project completed on schedule. Nevertheless, the ISO has determined that these variations in experience related to project management and risk management are not likely to impact the ability of the project sponsors to complete the project to meet the ISO in-service date and has therefore determined that there are no material differences among the proposals with regard to this component of the criterion.

Overall Comparative Analysis

The ISO has determined that there is no material difference among the proposals of Elecnor, Isolux Infrastructure, PG&E/MAT, and Pattern when considering the two components of this criterion and that they are slightly better than TBC's proposal in this regard.

3.7 Selection Criterion 24.5.2.4(e)

The fifth selection criterion is "the financial resources of the Project Sponsor and its team."

The ISO notes that the project sponsors provided substantial information regarding their finances in their applications; however, the ISO has only incorporated relatively limited and general financial information from the proposals of the project sponsors in the summaries below due to the sensitive nature of some of the financial information provided.

3.7.1 Information Provided by Elecnor

Elecnor indicated that it has experience with financing numerous transmission projects outside the U.S. (P-2)

Elecnor did not provide income and debt service data for evaluation. Elecnor provided its assets, liabilities, and ratio of total assets compared with the cost of this project. (P-4, P-6, P-7, P-13, P-14)

Elecnor did not provide a credit rating from an independent rating agency. (P-5)

Elecnor indicated that the Elecnor Group is fully capable of funding the development, construction, and operation of the project from internal group resources and that the successful execution of the project will not be dependent upon the raising of any additional capital. Elecnor further indicated that it anticipates using a prudent amount of debt financing. (P-8, P-11, P-15)

3.7.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that it has experience with financing numerous transmission projects outside the U.S. (P-2)

Isolux Infrastructure provided information regarding its net income. Isolux Infrastructure also provided assets, liabilities, and ratio of total assets (including the assets of Isolux and those of a significant source of its capital, the Public Sector Investment Board) compared to the cost of this project. (P-4, P-6, P-7, P-13, P-14)

Isolux Infrastructure provided credit ratings for some subsidiaries of A- and BBB+ from Feller (S&P affiliate focused on Latin America). (P-5)

Isolux Infrastructure indicated that Iccenlux or another Isolux Infrastructure subsidiary will be the equity holder of the special purpose entity that it would form to develop the project, and anticipates providing approximately 50% of the capital needed for the construction of the project in the form of equity. The remaining capital is anticipated to be in the form of debt financing. (P-8, P-11, P-15)

3.7.3 Information Provided by PG&E/MAT

PG&E/MAT indicated that it has experience with financing numerous transmission projects in the U.S., including California. (P-2)

PG&E/MAT indicated that PG&E and MAT's parent company, MidAmerican Energy Holdings Co., have substantial combined total assets. PG&E/MAT provided information regarding net income, assets, liabilities, and ratio of assets compared to the cost of this project. (P-4, P-6, P-7, P-13, P-14)

PG&E/MAT provided credit ratings for PG&E of A3 from Moody's and BBB from S&P and provided credit ratings for MidAmerican Energy Holdings Co. of Baa1 from Moody's and BBB+ from S&P. (P-5)

PG&E/MAT stated that PG&E intends to finance the project at its CPUC authorized capital structure (currently 52% equity and 48% debt). PG&E/MAT stated that MAT's special purpose entity intends to finance its portion/share of the activities and intends to obtain long-term financing to replace the construction debt facility. (P-8, P-11, P-15)

3.7.4 Information Provided by Pattern

Pattern indicated that it has financed four wind projects with smaller transmission facilities than the proposed project. (P-2)

Pattern provided information regarding its net income. (P-4) Pattern also provided assets, liabilities, and ratio of assets compared to the cost of this project. (P-6, P-7, P-13)

Pattern indicated that it does not have a credit rating from an independent rating agency. The City of Pittsburg has a credit rating of AA- from Fitch. (P-5)

Pattern indicated that the specific financing arrangements will be a function of the market prior to receiving a notice to proceed with the project. Typically, the construction financing will convert into term debt with an amortization schedule reflective of the depreciable life of the asset. (P-8, P-11, P-15)

3.7.5 Information Provided by TBC

TBC indicated that it has financed one project, a unique submarine transmission line. (P-2)

TBC provided information regarding its assets, liabilities, and ratio of assets compared to the cost of this project. (P-4, P-6, P-7, P-13, P-14)

TBC provided credit ratings of BBB- from Fitch and Baa2 from Moody's. (P-5)

For debt financing, TBC indicated that it has received five letters of support for the provision or arrangement of debt capital from several financial institutions. For equity financing, TBC indicated that its owner, SteelRiver, believes that a number of institutional investors would be interested in supporting transmission development projects through a SteelRiver-managed vehicle. (P-8, P-11, P-15)

3.7.6 ISO Comparative Analysis

For purposes of the comparative analysis for this criterion, the ISO has considered the representations by the project sponsors regarding their financing experience and their financial situation, including but not limited to their tangible net worth, size relative to this project, financial health, credit rating, and proposed financing structures. All of the project sponsors propose to establish some sort of special purpose entity that will be involved in the construction, ownership, or operation of the project. Because financial information is very limited at this time regarding these special purpose entities and because the applications contain financial information primarily regarding the parent companies, the ISO has chosen to base this analysis on the financial information submitted for the parent companies for each project sponsor. The ISO will undertake further consideration regarding the scope of the comparative analysis for this criterion in future competitive solicitation processes. Also, because of the sensitivity of some of the financial information provided, the ISO has only identified relatively limited and general financial information from the proposals of the project sponsors in this report. However, the ISO's comparative analysis of the proposals is based on the entirety of the substantial financial information provided.

In its analysis, the ISO has identified significant differences in several financial factors, including but not limited to the tangible net worth of the project sponsors and their parent companies, their ratios of assets to the cost of the project, and their recent operating results, including whether they have incurred recent operating losses. The ISO's measure of tangible net worth compares assets to liabilities and eliminates goodwill, restricted assets, and other intangible assets not immediately available to a company. All of the ISO's analysis supported the following conclusions.

The ISO has determined that PG&E/MAT's proposal is better than the proposals of the other project sponsors with regard to most financial factors of the analysis and compares relatively favorably on the remaining factors. PG&E/MAT's tangible net worth and asset ratio relative to the cost of this project exceed those of the other project sponsors. Both PG&E and MAT have significant experience with financing transmission projects with utility financing. Their recent operating results and credit ratings are satisfactory. Based on these factors, in conjunction with all of the other financial factors included in the ISO's analysis for this criterion, the ISO has determined that PG&E/MAT's proposal is overall better than those of the other project sponsors with regard to this criterion.

Although Elecnor does not have a credit rating and did not provide some financial information that would have served to demonstrate its financial resources, the financial information that Elecnor was able to provide demonstrated greater financial health than those of the other three project sponsors (Isolux Infrastructure, Pattern, and TBC). In particular, its tangible net worth is greater than these other three project sponsors. Based on these factors, in conjunction with all of the other financial factors included in the ISO's analysis for this criterion, the ISO has determined that Elecnor's proposal is better than those of Isolux Infrastructure, Pattern, and TBC with regard to this criterion.

PG&E/MAT and Elecnor have a higher tangible net worth and asset ratio than Pattern and they have had better recent operating results than Pattern. As discussed above, based on these and other financial factors, the ISO has determined that the proposals of PG&E/MAT and Elecnor are better than Pattern's proposal with regard to this criterion.

However, Pattern's tangible net worth is greater than that of Isolux Infrastructure and its asset ratio is greater than that of TBC. Based on these factors, in conjunction with all the other financial factors included in the ISO's analysis for this criterion, the ISO has determined that Pattern's proposal is better than those of Isolux Infrastructure and TBC with regard to this criterion.

While Isolux Infrastructure is second in size and financial resources among the project sponsors, Isolux Infrastructure has a tangible net worth significantly below that of PG&E/MAT and below that of Elecnor and Pattern. Moreover, PG&E/MAT and Elecnor have had better recent operating results than Isolux Infrastructure, and Isolux Infrastructure's recent operating results are similar in nature to those of Pattern. With regard to credit ratings, Isolux Infrastructure indicated that some of its subsidiaries have credit ratings that are better than PG&E/MAT's, but it did not provide any specific credit rating information beyond this. Based on these factors, in conjunction with all the other financial factors included in the ISO's analysis for this criterion, the ISO has determined that Isolux Infrastructure's proposal is only better than that of TBC with regard to this criterion, based in significant part on Isolux Infrastructure's overall greater assets than TBC relative to the size of the project and greater project financing experience.

TBC, while having letters for financing, has a lower credit rating and less project financing experience than most of the other project sponsors and is very small relative to this project. Based on these factors, in conjunction with all the other financial factors included in the ISO's analysis for this criterion, the ISO considers the proposals of the other four project sponsors better than TBC's proposal with regard to this criterion.

3.8 Selection Criterion 24.5.2.4(f)

The sixth selection criterion is "the technical and engineering qualifications and experience of the Project Sponsor and its team."

For the purpose of performing the comparative analysis for this criterion, the ISO has initially considered the two components of the criterion separately and then combined them into an overall comparative analysis for this criterion. The two components are: (1) the technical (environmental permitting) qualifications and experience of the project sponsor and its team and (2) the engineering qualifications and experience of the project sponsor and its team.

Technical (Environmental Permitting) Qualifications and Experience

3.8.1 Information Provided by Elecnor

Elecnor indicated that it has constructed thousands of miles of transmission lines in other parts of the world. Elecnor indicated that it has very limited experience permitting transmission projects in the U.S. and California. Elecnor indicated it has selected a consultant to assist with environmental permitting. The consultant provided experience that for California projects was primarily consulting work for regulators. Elecnor indicated that it plans to file an application for a CPCN with the CPUC. Elecnor indicated that it has not received a notice of violation of permit requirements in the last five years. (E-1, E-2, E-3, E-3a, E-3b, E-3c, E-4, E-5, E-6(a-h), E-9a, E-9c, E-9d(i-iv), E-11a-f, E-12)

3.8.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that it has constructed thousands of miles of transmission lines in other parts of the world. Isolux Infrastructure indicated that it has very limited experience permitting transmission projects in the U.S. and California. Isolux Infrastructure indicated it has selected a consultant to assist with environmental permitting. The consultant provided experience that was primarily consulting work for regulators. Isolux Infrastructure provided very little information demonstrating experience in environmental permitting for a project applicant in California. Isolux Infrastructure indicated that it plans to file an application for a CPCN with the CPUC. Isolux Infrastructure indicated that it has not received a notice of violation of permit requirements in the last five years. (E-1, E-2, E-3, E-3a, E-3b, E-3c, E-4, E-5, E-6(a-h), E-9a, E-9c, E-9d(i-iv), E-11a-f, E-12)

3.8.3 Information Provided by PG&E/MAT

PG&E/MAT indicated that PG&E, as a California regulated utility, owns and operates thousands of miles of electric transmission lines in California. PG&E/MAT indicated that PG&E has significant project permitting experience as an entity and the personnel they designated as managing environmental permitting have significant experience. With respect to recent licensing and permitting experience, PG&E/MAT indicated that personnel from MAT and PG&E have recently completed and/or are in various stages of siting and permitting over 2,000 miles of high voltage lines in the following states: California - 575 miles; Idaho – 502 miles; Utah - 603 miles; Wyoming - 640 miles; and 120 miles in other states. PG&E/MAT provided resumes for three potential environmental consultants that may assist them on this project. PG&E/MAT indicated that all of the consultants have assisted PG&E on many transmission line projects in the past. PG&E/MAT indicated that PG&E has filed numerous applications for CPCNs with the CPUC and will do so for this project as required by the CPUC. PG&E/MAT indicated that PG&E has received five notices of violation of permit requirements in the last five years with two related to transmission, specifically transmission vegetation management. For the two notice of violation relating to transmission vegetation management, one involved PG&E's removal of two trees and the other related to PG&E's failure to remove a century plant. (E-1, E-2, E-3, E-3a, E-3b, E-3c, E-4, E-5, E-6(a-h), E-9a, E-9c, E-9d(i-iv), E-11a-f, E-12)

3.8.4 Information Provided by Pattern

Pattern indicated that it has permitting experience with one submarine transmission line project in California and other overhead transmission line projects elsewhere in the U.S. Pattern indicated that its consultants have experience with the siting and permitting of several electric transmission line projects in California, including the Trans Bay Cable Project, Tehachapi Renewable Transmission Project, and Sunrise Powerlink Project. One of Pattern's consultants was responsible for the development of a detailed project description to support the environmental impact report and associated permit applications and for the preparation of the draft and final environmental impact reports for the Trans Bay Cable Project. Pattern indicated that it proposes to have the City of Pittsburg or County of Fresno act as the lead agency for this project pursuant to the California Environmental Quality Act. Pattern indicated that it has not received any notices of violation of permit requirements in the last five years. (E-1, E-2, E-3, E-3b, E-3c, E-4, E-5, E-6(a-h), E-9a, E-9c, E-9d(i-iv), E-11a-f, E-12)

3.8.5 Information Provided by TBC

TBC indicated that it has permitting experience with one submarine cable transmission project and that its consultants have been involved with permitting of several electric transmission line projects in California. However, TBC did not indicate any experience with permitting overhead transmission lines, and its consultant has limited permitting experience as a project applicant in California. TBC indicated that it plans to file an application for a CPCN with the CPUC. TBC indicated that it has not received any notices of violation of permit requirements in the last five years. (E-1, E-2, E-3, E-3a, E-3b, E-3c, E-4, E-5, E-6(a-h), E-9a, E-9c, E-9d(i-iv), E-11a-f, E-12)

Engineering Qualifications and Experience

3.8.6 Information Provided by Elecnor

Elecnor identified a design firm that has substantial experience in the design of transmission lines in the U.S. and California. Elecnor indicated that it has been responsible for the design of 6,000 miles of major transmission lines in South America. (P-1, T-1(a-f), T-4, T-4(a-c), T-5(a-l), T-7, T-8a, T-8b, T-9(a-e))

3.8.7 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that it will design the transmission line with its own personnel. Isolux Infrastructure indicated that it has been responsible for many projects outside the U.S. totaling about 6,000 miles and one 400 mile transmission project in Texas. Isolux Infrastructure did not demonstrate any experience with California overhead line design requirements. (P-1, T-1a-f, T-4, T-4(a-c), T-5(a-l), T-7, T-8a, T-8b, T-9(a-e))

3.8.8 Information Provided by PG&E/MAT

PG&E/MAT provided information on several engineering firms they are considering assisting them in the design of the project. PG&E/MAT indicated that all of the firms identified have experience with the design of transmission lines in the U.S. and

California. PG&E/MAT indicated that both PG&E and MAT have been responsible for the design of thousands of miles of transmission lines with 18,000 miles in California. (P-1, T-1(a-f), T-4, T-4(a-c), T-5(a-l), T-7, T-8a, T-8b, T-9(a-e))

3.8.9 Information Provided by Pattern

Pattern indicated that it has experience with two overhead transmission projects totaling 32 miles of lines outside of California and some experience in California. Pattern identified a company that would be responsible for the design of the transmission line that has substantial design experience in the U.S. and California. (P-1, T-1(a-f), T-4, T-4(a-c), T-5(a-l), T-7, T-8a, T-8b, T-9(a-e))

3.8.10 Information Provided by TBC

TBC indicated that it has no experience with the design of overhead transmission lines. TBC identified a company as their engineering firm that has experience with the design of transmission lines in the U.S. and California. (P-1, T-1(a-f), T-4, T-4(a-c), T-5(a-l), T-7, T-8a, T-8b, T-9(a-e))

3.8.11 ISO Comparative Analysis

Comparative Analysis of Technical (Environmental Permitting) Qualifications and Experience

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the qualifications and experience of both the project sponsor and its team members in obtaining and complying with environmental permits for a transmission project, including but not limited to (1) the permitting experience of the project sponsor for projects it has developed, (2) the permitting experience for similar projects of the project sponsor's team member or members who have been designated as having responsibility for project permitting, and (3) how much of the experience of the project sponsor and its team is in the U.S. and in California. The ISO considers experience in the U.S. and California to be an advantage over experience in environmental permitting in other jurisdictions because the project will be located in California and there are special aspects of environmental regulation and processes in these jurisdictions for which experience is an advantage. U.S. environmental permitting laws, rules, regulations, and processes are unique to the U.S., and California environmental permitting laws, rules, regulations, and processes are unique to the state of California. For example, the process that must be followed in California to comply with the California Environmental Quality Act is particularly unique to the state of California.

The ISO has determined that PG&E/MAT's proposal regarding environmental permitting qualifications and experience is slightly better than those of the other four project sponsors with regard to this component of the criterion because, in addition to the other factors included in the ISO's analysis for this component of the criterion, (1) PG&E and its staff have significantly more experience in developing and operating transmission projects, which has required acquisition of and compliance with environmental permitting that meets U.S. and California environmental laws and regulations, and (2) PG&E/MAT's consultants are as experienced or more experienced with respect to transmission line

environmental permitting activities in the U.S. and California than those of the other four project sponsors. In particular, PG&E has an extensive transmission system in California, for which it handled the siting and permitting requirements and processes. The ISO has determined that the two transmission-related notices of violation of permit requirements that PG&E received were minor (one regarding removal of two trees, and one regarding not removing a century plant) and not a significant issue in view of the number of transmission lines PG&E has developed, operated, and maintained over the past five years.

Both TBC and Pattern were involved with the Trans Bay Cable Project. Neither project sponsor offered any detailed differentiation between their roles in the environmental permitting for that project. However Pattern's consultant prepared and processed the Trans Bay Cable Project's environmental impact report and a portion of its permitting, and Pattern's team has more experience than TBC's team with respect to the siting and permitting of infrastructure projects in the U.S. and California. Consequently, based on these factors, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that Pattern's proposal is better than TBC's proposal regarding environmental permitting qualifications and experience. The ISO has also determined that TBC's proposal is slightly better than those of Elecnor and Isolux Infrastructure and that there is no material difference between the proposals of Elecnor and Isolux Infrastructure with regard to this component of the criterion because, in addition to the other factors included in the ISO's analysis for this component of the criterion, TBC and its consultants have project permitting and California experience and because Elecnor and Isolux Infrastructure have less environmental permitting experience as a transmission project developer and operator in the U.S. and California and because their consultants have limited experience supporting a project developer in California compared to the other three project sponsors.

Comparative Analysis of Engineering Qualifications and Experience

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the qualifications and experience of both the project sponsor and its team members in engineering and designing transmission projects, including but not limited to (1) the engineering experience of the project sponsor for projects it has developed, (2) the engineering experience for similar projects of the project sponsor's team member or members who have been designated as having responsibility for project engineering, and (3) how much of the experience of the project sponsor and its team is in the U.S. and in California. The ISO considers experience in the U.S. and California to be an advantage over transmission engineering experience in other jurisdictions because the project will be located in California and there are special aspects of transmission engineering codes and regulations in these jurisdictions for which experience is an advantage. U.S. engineering codes and regulations are unique to the U.S., and California has a number of laws, regulations, and codes with provisions unique to California that have the potential to apply to the design of electrical equipment depending upon the details of the project. For example, projects developed in the United States must adhere to the National Electrical Safety Code (NESC) published by the Institute of Electrical and Electronics Engineers (IEEE). Requirements unique to California include the CPUC's General Order 95 that applies to the design of overhead transmission lines, California

Office of Safety and Health Administration regulations that also apply to certain aspects of transmission line design, the CPUC's Interim EMF Design Guideline, the California Public Resources Code (including but not limited to sections 4171, 4292 and 4293), Title 24 of the California Code of Regulations, and the General Industry Safety Orders provisions of Title 8 of the California Code of Regulations.

With regard to its analysis of this component of the criterion, the ISO first wants to point out that it considers the engineering contractors identified by the project sponsors as part of their teams to be highly qualified. As a result, the ISO's analysis identifies only the slightest of advantages for any project sponsor over any other with one of these engineering firms on its team. Elecnor and PG&E/MAT have extensive experience with designing transmission lines, the firms they identified as responsible for design have substantial experience, and these two project sponsors, or their design contractors, have overhead transmission line experience in the U.S. and California. Pattern has some overhead transmission experience in the U.S. and California, as well as experience with generation projects and associated generator tie lines, while TBC has no overhead transmission line experience as a developer. However, both Pattern and TBC have identified general contractors that they will utilize for design and engineering that do have experience with designing overhead transmission lines, including experience in the U.S. and California. Based on the extensive experience of PG&E/MAT and Elecnor in overseeing the engineering and design of overhead transmission projects, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that there is no material difference between proposals of PG&E/MAT and Elecnor and that they have a very slight edge over those of Pattern and TBC with regard to this component of the criterion. Similarly, based on the greater experience of Pattern in overseeing the engineering and design of overhead transmission projects in the U.S. and California, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that Pattern's proposal has a very slight edge over that of TBC with regard to this component of the criterion.

Isolux Infrastructure will perform the design in-house and has experience in Texas but has not demonstrated experience with California overhead line design requirements. Based on Isolux Infrastructure's absence of experience in California relative to the other project sponsors and their engineering firms, and in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that the proposals of Elecnor, PG&E/MAT, Pattern, and TBC are better than Isolux Infrastructure's proposal with regard to this component of the criterion.

Overall Comparative Analysis

The ISO considers the two components of this criterion to be of roughly equal importance in the selection process for this project. Based upon this and the comparative analysis for the two components, the ISO has determined that PG&E/MAT's proposal is better than those of the other four project sponsors with regard to this overall criterion because PG&E/MAT's proposal is better with respect to the environmental permitting component, and there is no material difference between the proposals of PG&E/MAT and Elecnor with regard to engineering capabilities and both are better than those of the other three project sponsors with respect to the engineering component of the criterion. The ISO has determined that Pattern's proposal is slightly better than those of Elecnor, Isolux Infrastructure, and TBC because Pattern has more

environmental permitting experience in California and has a better proposal with regard to engineering qualifications and experience, with the exception of Elecnor's only slight edge with regard to the engineering component of the criterion. The ISO has determined that there is effectively no material difference between TBC's proposal and Elecnor's proposal with regard to this criterion, as TBC's proposal is slightly better than Elecnor's proposal regarding environmental permitting qualifications and experience and Elecnor's proposal is slightly better regarding engineering qualifications and experience, which differences effectively offset each other. The ISO has determined that the proposals of Elecnor and TBC are slightly better than that of Isolux Infrastructure, as TBC's proposal is better with regard to both components of this criterion, and Elecnor's proposal is better regarding engineering qualifications and experience and there is no material difference between the proposals of Elecnor and Isolux Infrastructure with regard to the environmental permitting component.

3.9 Selection Criterion 24.5.2.4(g)

The seventh selection criterion is "if applicable, the previous record regarding construction and maintenance of transmission facilities, including facilities outside the ISO Controlled Grid of the Project Sponsor and its team."

For the purpose of performing the comparative analysis for this criterion, the ISO has initially considered the two components of the criterion separately and then combined them into an overall comparative analysis for this criterion. The two components are: (1) the previous record regarding construction including facilities outside the ISO controlled grid of the project sponsor and its team and (2) the previous record regarding maintenance including facilities outside the ISO controlled grid of the project sponsor and its team.

Construction Record

3.9.1 Information Provided by Elecnor

Elecnor provided information on the approximately 5,300 miles of transmission lines it has constructed outside the U.S. and resumes of its key construction personnel, which included substantial construction experience. (P-1, T-4, T-4(a-c), T-8a, T-8b, T-9(a-e))

3.9.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure provided information on the approximately 6,400 miles of transmission lines it has constructed, including one 400 mile transmission line project in the U.S., and resumes of its key construction personnel, which included substantial construction experience. (P-1, T-4, T-4(a-c), T-8a, T-8b, T-9(a-e))

3.9.3 Information Provided by PG&E/MAT

PG&E/MAT identified possible construction firms and indicated that all of these firms have constructed transmission lines in California. PG&E/MAT indicated that PG&E and MAT have significant experience in the ownership or design and construction of transmission lines and that between the two companies they own more than 37,000 miles of transmission lines. (P-1, T-4, T-4(a-c), T-8a, T-8b, T-9(a-e))

3.9.4 Information Provided by Pattern

Pattern identified a firm that has extensive experience in the U.S. and California that would act as its EPC contractor to coordinate construction with other project activities. (T-4a) Pattern did not provide information on potential construction firms or their experience; however, it indicated that it plans to work with its EPC contractor to select a construction firm and identified that action in its project plan. Pattern provided information regarding projects it has developed (including construction) for four transmission lines in the past five years, including three projects totaling approximately 35 miles of 230 kV transmission lines outside the U.S. and 3.5 miles of 230 kV transmission lines in California. (P-1, T-4, T-4(a-c), T-8a, T-8b, T-9(a-e)).

3.9.5 Information Provided by TBC

TBC identified a firm that would serve as its construction contractor that has experience in the construction of transmission lines in the U.S. and in California. TBC did not indicate that it has any experience in the construction of overhead transmission lines as a project developer. (P-1, T-4, T-4(a-c), T-8a, T-8b, T-9(a-e))

Maintenance Record

3.9.6 Information Provided by Elecnor

Elecnor provided organization charts for its operations in Brazil and for the proposed project. Resumes for potential team members included educational background and years of experience. Elecnor described its experience in operating and maintaining transmission projects in Brazil, but the role of the proposed team members in those projects was not clear. (O-1, O-2, O-3)

Elecnor stated that personnel require knowledge of CPUC General Order (GO) 95 and 128 but did not mention NERC requirements. (O-4)

A number of the documents identified by Elecnor as describing procedures and training were not in English. (O-3, O-5)

Elecnor indicated that it has no transmission lines that are subject to NERC regulation. (O-15)

3.9.7 Information Provided by Isolux Infrastructure

Isolux Infrastructure provided a general description of its operations and maintenance (O&M) organization and roles and responsibilities. Isolux Infrastructure indicated that

Isolux Infrastructure currently does not operate any projects in California and performs no maintenance in the state. Isolux Infrastructure indicated that given the Gates-Gregg line's relatively small size, Isolux Infrastructure anticipates contracting with one or more third parties to provide maintenance on the proposed line once it enters service. Isolux Infrastructure indicated that possible contractors have been identified but not yet selected and that the contractors would be overseen by an Isolux Infrastructure maintenance supervisor. (O-1, O-2, O-3)

Isolux Infrastructure stated that it plans to follow its customary procedures for personnel hiring to ensure they possess the required qualifications and experience but did not mention the need to meet regulatory requirements. (O-4)

Isolux Infrastructure indicated that qualification and training requirements are to be developed as appropriate to this project. (O-5)

Isolux Infrastructure indicated that it has no transmission lines that are subject to NERC regulation. (O-15)

3.9.8 Information Provided by PG&E/MAT

PG&E/MAT indicated that PG&E's current organization would be responsible for O&M and compliance for the proposed project, that PG&E already has extensive maintenance and transmission support and would require no organizational changes, and that PG&E's operating organization for this project would be its Substation Maintenance and Construction – South group. PG&E/MAT indicated that PG&E is one of the largest utilities in the U.S., has a service territory of over 70,000 square miles, and has been responsible for every aspect of electric transmission operations including planning, engineering, maintenance, and construction, asset management, business planning, restoration, and emergency response. Further, PG&E/MAT indicated that PG&E is uniquely qualified to respond in an emergency situation because PG&E is the only California utility among the project sponsors, PG&E has significant maintenance and construction departments, and PG&E also maintains a surplus stockpile of towers that would allow it to immediately respond to tower replacement needs. (O-1, O-2, O-3, O-20)

PG&E/MAT stated that PG&E's Operations Support Department is responsible for ensuring compliance with NERC, FERC, and other regulatory requirements. (O-4)

PG&E/MAT described PG&E's training academy, which includes courses on compliance training, and provided an example of its apprenticeship program. (O-5)

3.9.9 Information Provided by Pattern

Pattern indicated that the City of Pittsburg will have responsibility for maintenance of this project and associated compliance standards. Pattern indicated that the City of Pittsburg has experience operating and maintaining Pittsburg Power Company's utility, Island Energy, which includes transmission (115 kV) and distribution (12 kV) facilities. Pattern indicated that it plans to contract for maintenance work and that it will use a consultant who will help with selection of maintenance contractor and development of the detailed O&M framework for the project. Pattern provided resumes from potential maintenance contractors and stated that its project team will fully vet these and other

potential contractors prior to their selection for the project. Pattern stated that several of its project team members have been intimately involved in operating and maintaining the Trans Bay Cable Project and the Cross Sound Cable Project until March 2013. Pattern indicated that since the line will terminate at PG&E substations, PG&E will be responsible for operations and will contact Pittsburgh for maintenance issues. Pattern indicated that under a contract put in place by Babcock and Brown, the then-sponsor of the Trans Bay Cable Project and owner of the Cross Sound Cable Project, which contract is still in place today, Cross Sound Cable Project personnel were responsible for setting up and managing the operations and maintenance of the Trans Bay Cable Project. As a result, two of the key members of Pattern's team were responsible for the management of the oversight of the Trans Bay Cable Project. (O-1, O-2, O-3, O-4, O-5)

Pattern stated that, when developed, its policies and procedures will reference the applicable local, state, and federal requirements for occupational health and safety and well as industry best practices. Pattern stated that the training and qualification program of the transmission line maintenance contractor will be closely examined as part of the evaluation and selection process. (O-1, O-4)

Pattern described the elements it would look for in the training program, as well as current training practices at Pittsburg. (O-5)

3.9.10 Information Provided by TBC

TBC indicated that it plans to add one engineer position to its existing organization to oversee the O&M contract with its designated maintenance contractor for the proposed project. TBC indicated that it will be responsible for compliance once the project goes into commercial operation. TBC indicated that it has experience operating the Trans Bay Cable Project. (O-1, O-2, O-3)

TBC stated that its personnel qualification system includes NERC certification and NERC compliance but that it will need to be expanded to cover overhead transmission lines. (O-4)

TBC indicated that its training and certification programs and training resources for the Trans Bay Cable Project will be modified to cover overhead lines. (O-5)

3.9.11 ISO Comparative Analysis

Comparative Analysis of Construction Record

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the record and experience of both the project sponsor and its team members in constructing transmission projects, particularly including but not limited to overhead transmission lines. Elecnor and Isolux Infrastructure provided information on projects they have constructed and resumes of their key construction personnel, and PG&E/MAT provided information demonstrating their extensive experience in the construction of transmission lines and identified qualified construction firms. Based on the extensive experience of Elecnor, Isolux Infrastructure, and PG&E/MAT and their construction firms in the construction of overhead transmission projects, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has

determined that there is no material difference among the proposals of Elecnor, Isolux Infrastructure, and PG&E/MAT and that their proposals are better than those of the other two project sponsors with regard to this component of the criterion.

TBC's response identified a qualified construction firm but demonstrated no overhead construction experience as a transmission line developer, owner, and operator. Pattern did not identify a possible construction firm, but it has some experience overseeing the construction of overhead transmission lines, and members of Pattern's team, while at Babcock and Brown, developed, and Pattern managed the construction of, the Trans Bay Cable Project. The head of Pattern's engineering and construction team managed construction of the Trans Bay Cable Project and has 35 years of experience. In addition, Pattern's general contractor has extensive transmission experience in California and elsewhere, and will work with Pattern to identify a construction firm. Based on the greater experience of Pattern in overseeing the construction of overhead transmission lines, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that Pattern's proposal is slightly better than TBC's proposal with regard to this component of the criterion.

Comparative Analysis of Maintenance Record

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the record and experience of both the project sponsor and its team members in maintaining transmission projects, including but not limited to experience with compliance with NERC standards. The ISO considers experience maintaining lines in compliance with NERC standards to be an advantage over transmission line maintenance experience in other jurisdictions because the project will be subject to NERC standards and there are special aspects of compliance with NERC standards for which demonstrated experience is an advantage. PG&E has an existing organization that has the capability to manage the O&M of the project with no changes and its organization includes a compliance management function for the operations and maintenance functions. PG&E also has the greatest amount of experience with similar facilities subject to NERC standards. PG&E/MAT identified specific PG&E team members that will be responsible for the project, and they had the greatest depth of experience. PG&E has established training and apprenticeship programs that include compliance training. PG&E also has a permanent and extensive maintenance department and maintains a stock of tower spare parts. Based on these factors, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that PG&E/MAT's proposal is better than those of the other four project sponsors regarding this component of the criterion.

TBC has ongoing responsibility for and experience with a line -- the Trans Bay Cable Project --subject to NERC standards. TBC's proposed organization includes a compliance management function, and TBC has established training and apprenticeship programs that include compliance training. TBC identified some team members with experience operating and maintaining transmission lines that will be responsible for the project, but they had less experience than PG&E or Pattern team members. Also, TBC will need to expand its organization and contract with a maintenance company, which it has selected.

With respect to Pattern's proposal, Pittsburg has a maintenance team that will manage maintenance functions. However, Pittsburg currently has no transmission lines subject to NERC maintenance requirements. Pattern stated that some portion of the maintenance activities will likely be contracted out to qualified entities that have not yet been selected, and Pattern team members have past experience with facilities subject to NERC standards. Pattern's organizational information addressed the need for a compliance management function. Pattern identified some team members with experience operating and maintaining transmission lines that will be responsible for the project, but they had less experience than PG&E team members, although more than TBC team members. Pattern stated that the training and qualification program of the transmission line maintenance contractor will be closely examined as part of the evaluation and selection process. The ISO has determined that TBC's greater experience with NERC compliance and the greater experience of Pattern's team with regard to maintenance of overhead transmission lines effectively offset each other, resulting in no material difference between the proposals of Pattern and TBC with regard to this component of the criterion.

The ISO has determined that TBC's and Pattern's proposals are slightly better than those of the other two project sponsors with regard to this component of the criterion. In addition to the other factors included in the ISO's analysis for this component of the criterion, TBC's proposal is better with respect to NERC compliance capabilities and experience; Pattern's proposal is better with respect to maintenance experience.

Isolux Infrastructure and Elecnor would also need to put in place a new function including one or more management positions and a new contract with a maintenance company, which has not been selected. Neither addressed the need for a compliance management function. Neither Elecnor nor Isolux Infrastructure has experience with facilities subject to NERC standards. Isolux Infrastructure identified the maintenance supervisor only for this project, and Elecnor provided sample resumes of personnel responsible for other projects. Isolux Infrastructure would need to develop a training program and Elecnor would need to adapt its training program to cover U.S. and California requirements. Based on these factors, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that there is no material difference between the proposals of Elecnor and Isolux Infrastructure with regard to this component of the criterion.

Overall Comparative Analysis

The ISO considers the two components of this criterion to be of roughly equal importance in the selection process for this project. Based upon this and the comparative analysis for the two components, the ISO has determined that PG&E/MAT's proposal is better than those of the other four project sponsors with regard to this criterion, as it is better than the others with regard to maintenance experience and is comparable to or better than the others with regard to construction experience. The proposals of Elecnor and Isolux Infrastructure are better than those of Pattern and TBC with respect to construction because of their extensive transmission facilities. TBC's proposal is better than those of Elecnor, Isolux Infrastructure, and Pattern in the area of NERC compliance experience. Pattern's proposal is slightly better than the proposals of TBC, Isolux Infrastructure, and Elecnor with respect to maintenance experience in the U.S. Based on these factors, in conjunction with all the other factors included in the ISO's analysis for this criterion, the ISO has determined that the differences with regard

to construction experience and aspects of maintenance experience all effectively offset each other and that consequently there is effectively no material difference among the proposals of Elecnor, Isolux Infrastructure, and Pattern with respect to this criterion. As all of the other proposals are better than TBC's proposal with respect to construction experience, the ISO has determined that this outweighs TBC's advantage over Elecnor and Isolux Infrastructure with regard to maintenance experience. As a result, the ISO has determined that the proposals of Elecnor, Isolux Infrastructure, and Pattern are overall slightly better than TBC's proposal with respect to this criterion.

3.10 Selection Criterion 24.5.2.4(h)

The eighth selection criterion is "demonstrated capability to adhere to standardized construction, maintenance and operating practices."

For the purpose of performing the comparative analysis for this criterion, the ISO has initially considered the three components of this criterion separately and then combined them into an overall comparative analysis for this criterion. The three components are: (1) demonstrated capability to adhere to standardized construction practices, (2) demonstrated capability to adhere to standardized maintenance practices, and (3) demonstrated capability to adhere to standardized operating practices.

Construction Practices

3.10.1 Information Provided by Elecnor

Elecnor provided a detailed design criteria and constructability review process including special clearing in agricultural areas and assembly of tower components offsite. (T-5c, T-5d, T-5l, T-7)

3.10.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure provided a detailed design criteria and constructability review process that included IEEE Guides and Standards for the construction of transmission lines. (T-5c, T-5d, T-5l, T-7)

3.10.3 Information Provided by PG&E/MAT

PG&E/MAT provided a detailed design criteria and constructability review process including special clearing in agricultural areas and guides and standards for the construction of transmission lines. (T-5c, T-5d, T-5l, T-7)

3.10.4 Information Provided by Pattern

Pattern provided a detailed design criteria and constructability review process including the use of helicopters for wire stringing and the use of existing roads whenever possible and special access in wetlands. (T-5c, T-5d, T-5l, T-7)

3.10.5 Information Provided by TBC

TBC provided a detailed design criteria and constructability review process including minimizing clearing in agricultural areas, avoiding crop damage and the use of standard industry accepted construction techniques. (T-5c, T-5d, T-5l, T-7)

Maintenance Practices

3.10.6 Information Provided by Elecnor

Elecnor indicated that it has not yet developed its compliance program for requirements applicable to a transmission owner, including a maintenance compliance program, and may require temporary waivers. (O-9)

Elecnor stated that it is acquainted with the requirements of the TCA and that it has proven its capability to operate and maintain more complex lines than the object of this solicitation, with currently having ownership of more than 2,500 miles of 500 kV and 230 kV lines and more than 9,000 MVA in energy transformation (substations). Elecnor stated that it will prepare its maintenance practices consistent with the requirements of the ISO transmission maintenance standards and good utility practice. (O-19, O-20, O-21, O-22, O-25)

Elecnor provided a vegetation management plan that described activities in general terms but did not include specific clearance requirements or refer to either California or NERC requirements. (E-7f, O-23)

Elecnor provided a statement from the ISO equivalent in Brazil certifying that it was complying with that entity's standards. (O-24)

3.10.7 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that it has not yet developed its compliance program for transmission owner requirements. (O-9)

Isolux Infrastructure stated that the TCA's requirements are functionally equivalent to those of a number of other jurisdictions in which Isolux Infrastructure has built and is building projects, including ERCOT's requirements. Isolux Infrastructure also stated that it will adapt its standards for maintenance to meet the requirements of TCA Appendix C. (O-19, O-20, O-21, O-22, O-25)

Isolux Infrastructure stated that it has developed procedures and practices for managing rights-of-way for transmission projects around the world, but has not yet developed specific procedures or practices for managing rights-of-way for this project. Isolux Infrastructure included a sample plan for Texas, but included no mention of applicable NERC standards. (E-7f, O-23)

Isolux Infrastructure provided sample procedures from Texas and Brazil that included some blank reporting forms but no reports demonstrating compliance. (O-24)

3.10.8 Information Provided by PG&E/MAT

PG&E/MAT indicated that PG&E has a compliance program that addresses NERC requirements applicable to a transmission owner (NERC TO requirements). (O-9)

PG&E/MAT stated that PG&E, as a signatory to the TCA since 1997, has been subject to all of the terms and conditions of that agreement and has demonstrated itself capable to comply with the activities required by a Transmission Operator. PG&E/MAT also indicated that PG&E has an established and adopted compliance management plan that includes NERC and ISO requirements. (O-19, O-20, O-21, O-22, O-24, O-25)

PG&E/MAT provided a high level overview of PG&E's vegetation management plan and listed applicable state regulations but included no mention of applicable NERC standards. (E-7f, O-23)

PG&E/MAT provided a transmission availability report from the ISO that shows the specific control charts that are used to document availability for each of four voltage classes of circuits. The report concludes that for 230 kV class transmission lines: "It appears from the results of these charts that PG&E's maintenance practices are adequate in this class." (O-25 attachment O.25 Annual Availability Report 2011)

3.10.9 Information Provided by Pattern

Pattern indicated that it has not yet developed its compliance program for transmission owner requirements. (O-9)

Pattern stated that prior to energization, all appropriate protocols will be developed with expertise from its consultant to ensure that Pittsburg and Pattern can comply with all appropriate requirements and that Pattern's team will develop transmission line circuit maintenance practices compliant with the requirements of the ISO transmission maintenance standards. (O-19, O-20, O-21, O-22, O-24)

Pattern stated that its team will implement a transmission vegetation management program in compliance with NERC reliability standard FAC-003-1 (or approved revision) as part of the requirements of a transmission owner. (E-7f, O-23)

Patten indicated that it was unable to provide evidence of compliance with its availability measures. (O-25)

3.10.10 Information Provided by TBC

TBC indicated that it has a compliance program that addresses NERC TO requirements. (O-9)

TBC stated that it is currently in compliance with the provisions of the TCA and that its maintenance standards have been approved by the ISO. (O-19, O-20, O-21, O-22, O-25)

TBC stated that it will establish a vegetation management plan following best industry practices and in compliance with NERC Reliability Standard FAC-003-2 for vegetation management. (E-7f, O-23)

TBC provided four documents to demonstrate TBC's experience with implementation and compliance with its standards for inspection, maintenance, repair, and replacement. (O-24)

Operating Practices

3.10.11 Information Provided by Elecnor

Elecnor indicated that it plans to register with NERC as a transmission owner (TO) and transmission operator (TOP). Elecnor indicated that it currently does not have any transmission facilities in North America so could provide no evidence of compliance with NERC standards. Elecnor indicated that it would consider executing a mutual assistance agreement with other participating transmission owners (PTOs) to provide capability to respond to emergencies. (O-6, O-7, O-10, O-11, O-12, O-13, O-14, O-15, O-16, O-17, O-18, O-20, O-26)

3.10.12 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that it plans to register with NERC as a TO and transmission planner (TP) and states that TOP registration is not necessary for this project. Isolux Infrastructure indicated that it has no facilities subject to NERC in operation so could provide no evidence of compliance with NERC standards. Isolux Infrastructure indicated that it will secure emergency response resources with its own local personnel, outsourced local resources, or through mutual assistance agreements, as appropriate. Isolux Infrastructure provided a copy of an emergency plan from ERCOT. (O-6, O-7, O-10, O-11, O-12, O-13, O-14, O-15, O-16, O-17, O-18, O-20, O-26)

3.10.13 Information Provided by PG&E/MAT

PG&E/MAT stated that PG&E is currently registered with NERC for a number of functions including TO and TOP; none of which will be contracted. PG&E/MAT provided a document entitled "WECC Operations and Planning Compliance Audit Closing Presentation," which indicated that the WECC did not identify any possible violations by PG&E. PG&E/MAT indicated that PG&E has a complete functional electric emergency plan in place and has the capability to source and immediately dispatch considerable resources in the response to an emergency event. PG&E/MAT provided copies of PG&E's emergency plans. (O-6, O-7, O-10, O-11, O-12, O-13, O-14, O-15, O-16, O-17, O-18, O-20, O-26)

3.10.14 Information Provided by Pattern

Pattern indicated that it is registered with NERC as a GO and GOP and indicates that Pittsburg will register as a TO and TOP. Pattern indicated that it does not own any distinct transmission facilities that are subject to NERC compliance so could provide no evidence of compliance with NERC standards. Pattern indicated that Pittsburg's maintenance contractor would be dispatched via the Pittsburg 24/7 call center for emergency response. Pattern provided an outline of an emergency plan for the

proposed project and a copy of an emergency plan for Island Energy as an example. (O-6, O-7, O-10, O-11, O-12, O-13, O-14, O-15, O-16, O-17, O-18, O-20, O-26)

3.10.15 Information Provided by TBC

TBC stated that it will add this new asset to its existing assets for which TBC is currently registered as a TO and TOP. TBC provided a document entitled "WECC Audit Final Report (Public)" that indicated no findings of non-compliance or notices of violation. TBC indicated that it has an O&M agreement with the original equipment manufacturer to ensure emergency technical repair assistance is available at all times. TBC also indicated that it is evaluating long-term agreements with aerial service providers to support line surveys to determine required repairs within hours of an event occurring. TBC provided an emergency operating plan for the Trans Bay Cable Project as an example. (O-6, O-7, O-10, O-11, O-12, O-13, O-14, O-15, O-16, O-17, O-18, O-20, O-26)

3.10.16 ISO Comparative Analysis

Comparative Analysis of Construction Practices

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the construction practices they propose for this project, including but not limited to their proposed design criteria and constructability review process. All of the project sponsors provided a detailed design criteria and constructability review that demonstrates that the transmission line would adhere to standardized construction standards. Based on these considerations, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that there is no material difference among the proposals of the five project sponsors with respect to this component of the criterion.

Comparative Analysis of Maintenance Practices

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the maintenance practices they propose for this project, including but not limited to their proposed plans for compliance with NERC TO requirements, the TCA, and the ISO's transmission maintenance standards. All project sponsors are likely capable of complying with the provisions of the TCA, but the ISO considers proposals showing that they are currently complying to be slightly better due to their more relevant experience. The ISO also considers proposals showing compliance with standards that meet U.S. requirements to be slightly better than those that do not. The ISO is not familiar with the degree of similarity of the requirements in other jurisdictions, so there is some potential risk that it might take longer to achieve compliance with transmission maintenance standards that do meet U.S. requirements.

PG&E has an extensive transmission system and a compliance program that addresses NERC TO requirements. PG&E is currently complying with the TCA and has transmission maintenance standards that include the elements required by the TCA. PG&E/MAT provided an overview of PG&E's rights-of-way management plan but did not

mention any of the NERC requirements. PG&E/MAT provided evidence from the ISO of PG&E's compliance with ISO transmission maintenance standards.

TBC has a compliance program that addresses NERC TO requirements. TBC is currently complying with the TCA and has transmission maintenance standards that include the elements required by the TCA. TBC stated that it will develop rights-of-way management plans that meet requirements, including the mandatory NERC requirements. TBC provided evidence from the ISO of compliance with ISO transmission maintenance standards.

Isolux Infrastructure would need to develop a compliance program for U.S. and California requirements. Isolux Infrastructure has experience in other jurisdictions with requirements similar to those of the TCA and would need to adapt its standards to meet ISO requirements. Isolux Infrastructure did not provide evidence of compliance with transmission maintenance standards. Isolux Infrastructure described a rights-of-way management plan for other parts of the world but did not mention compliance with the NERC requirements.

Elecnor would need to develop a compliance program for U.S. and California requirements and may require temporary waivers for compliance with NERC TO requirements. Elecnor has experience in other jurisdictions with requirements similar to those of the TCA and would need to adapt its standards to meet ISO requirements. Elecnor described a rights-of-way management plan for other parts of the world but did not mention compliance with the NERC requirements. Elecnor provided evidence from other jurisdictions of compliance with their transmission maintenance standards.

Pattern would need to develop a compliance program. Pattern's application indicates it has less experience and would need to develop transmission maintenance standards to meet TCA requirements and a rights-of-way management plan. Pattern did not provide evidence of compliance with transmission maintenance standards.

Based on their compliance plans and demonstrations of current compliance with NERC and ISO transmission maintenance requirements, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that there is no material difference between PG&E's and TBC's proposals and that they are slightly better than those of the three other project sponsors with regard to this component of the criterion. The ISO has not been able to identify any material difference among the compliance plans and experience of Elecnor, Isolux Infrastructure, and Pattern with regard to compliance with NERC and ISO transmission maintenance requirements; consequently the ISO has determined that there is no material difference among their proposals with regard to this component of the criterion.

Comparative Analysis of Operating Practices

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the operating practices they propose for this project, including but not limited to their proposed emergency plans and other plans for compliance with NERC TO requirements and the ISO's standards.

PG&E is registered with NERC as a TO and therefore has experience with the applicable reliability criteria and provided evidence of compliance with those standards.

PG&E operates an extensive transmission system subject to NERC compliance requirements. PG&E has an established emergency response plan and considerable existing resources to respond to emergencies. Based on these factors, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that PG&E/MAT's proposal is slightly better than that of TBC and better than those of the other project sponsors with regard to this component of the criterion.

TBC operates the Trans Bay Cable Project and is currently registered with NERC as a TO and therefore has experience with the applicable reliability criteria and provided evidence of compliance with those standards. TBC has an emergency response plan that will rely on contractors for emergency repairs. The terms of the emergency response contract and the amount of resources available to respond have not yet been determined. Based on TBC's experience with compliance with NERC and ISO standards and criteria, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that TBC's proposal is better than those of the other three project sponsors with regard to this component of the criterion.

Although Pittsburg has operational experience, Pattern and Pittsburg have no existing transmission facilities subject to NERC compliance requirements and provided no evidence of compliance for facilities in other jurisdictions. Pattern, through its arrangement with Pittsburg, has an emergency response plan and will rely on contractors for emergency repairs.
Elecnor and Isolux Infrastructure have no existing facilities subject to NERC compliance requirements and provided no evidence of compliance for facilities in other jurisdictions. Elecnor and Isolux Infrastructure have operating experience outside of the U.S. Elecnor and Isolux Infrastructure will make arrangements for emergency response for this project. The ISO has not been able to identify any material difference among the emergency plans and experience of Elecnor, Isolux Infrastructure, and Pattern with regard to compliance with NERC and ISO operating requirements; consequently the ISO has determined that there is no material difference among their proposals with regard to this component of the criterion.

Overall Comparative Analysis

The ISO considers the three components of this criterion to be of similar importance in the selection process for this project. Based upon this and the comparative analysis for the three components, the ISO has determined that PG&E/MAT's proposal is slightly better than TBC's proposal, which is better than those of the other three project sponsors with regard to this criterion. PG&E's proposal is better than those of the others with regard to capability to adhere to operating practices and at least as good as others with regard to the other components. The ISO has determined that TBC's proposal is slightly better than those of the three other project sponsors (Elecnor, Isolux Infrastructure, and Pattern) with regard to this criterion, as it is better with regard to two of the components and comparable with regard to the other. As the ISO has not been able to identify any material differences in the proposals of the other three project sponsors with regard to any of the three components of this criterion, the ISO has determined that overall there is no material difference among the proposals of these remaining three project sponsors with regard to this criterion.

3.11 Selection Criterion 24.5.2.4(i)

The ninth selection criterion is "demonstrated ability to assume liability for major losses resulting from failure of facilities."

3.11.1 Information Provided by Elecnor

Elecnor indicated that it has an excellent balance sheet and could finance emergency repairs through the Elecnor Group's resources. Elecnor did not provide further details specifically for financing emergency repairs. (P-11, P-18, P-19)

3.11.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that at the appropriate time Isolux Infrastructure can provide any reasonable financial assurances necessary to establish its ability to operate this project going forward. Isolux Infrastructure stated that after construction is completed, it intends either to procure reasonable available insurance to cover significant unexpected equipment or asset losses, or to establish a self-insurance reserve for the same purpose. (P-11, P-18, P-19)

3.11.3 Information Provided by PG&E/MAT

PG&E/MAT stated that PG&E has substantial financial resources with which to finance unexpected maintenance or repairs. PG&E/MAT indicated that PG&E has credit facilities of $3 billion that, in addition to its use for everyday working capital, are a source of liquidity for unforeseen events that require quick access to substantial amounts of cash. PG&E/MAT indicated that the MAT special purpose entity may consider supplementing its long-term debt facility with a short-term revolving facility to finance unexpected repair or replacement costs. (P-11, P-18, P-19)

3.11.4 Information Provided by Pattern

Pattern indicated that the costs of operating, maintaining, and repairs for the project will be reimbursable to Pittsburg from the Pattern special purpose entity. Pattern indicated that the Pattern special purpose entity will prefund six months of O&M costs with the City of Pittsburg and maintain that reserve with the city. Pattern also indicated that, in the event of unexpected O&M costs or repairs, Pittsburg maintains capital reserves and will maintain a separate reserve account and/or letters of credit to cover O&M and insurance deductible payments. (P-11, P-18, P-19)

3.11.5 Information Provided by TBC

TBC described a multi-pronged approach to this issue, including EPC warranties, storage of spare parts, cash flow, and working capital. TBC provided no plans for financing emergency repairs. (P-11, P-18, P-19)

3.11.6 ISO Comparative Analysis

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding their resources and

plans for assuming responsibility for losses resulting from failure of project facilities, including but not limited to their financial resources, proposed insurance, and other plans for financing emergency repairs. The financial resources of the project sponsors, and their parent companies, vary widely. And the proposals of the project sponsors as to how they will finance emergency repairs vary, including use of warranties, spare parts, cash reserves, support from the parent, insurance, letters of credit, etc. However, all the project sponsors have identified reasonable levels of insurance, including during the operations of the project.

Failures of facilities would likely represent a portion of the investment in the facility – e.g., a number of towers, a limited number of spans of wire, damaged insulators, etc. The ISO considers all of the project sponsors to have sufficient financial resources and the operational incentives to make the repairs and return the line to service in a reasonable period of time.

Based on the foregoing factors, in conjunction with all the other factors included in the ISO's analysis for this criterion, the ISO has determined that there is no material difference among the proposals of the five project sponsors with regard to this criterion.

3.12 Selection Criterion 24.5.2.4(j)

The tenth selection criterion is "demonstrated cost containment capability and other advantages the Project Sponsor and its team may have to build the specific project, including any binding agreement by the Project Sponsor and its team to accept a cost cap that would preclude project costs above the cap from being recovered through the ISO's Transmission Access Charge."

For the purpose of performing the comparative analysis for this criterion, the ISO has initially considered the three components of the criterion separately and then combined them into an overall comparative analysis for this criterion. The three components are: (1) demonstrated cost containment capability of the project sponsor and its team, (2) other advantages the project sponsor and its team may have to build the specific project, and (3) any binding agreement by the project sponsor and its team to accept a cost cap that would preclude project costs above the cap from being recovered through the ISO's transmission access charge.

Cost Containment

3.12.1 Information Provided by Elecnor

Elecnor provided details for several projects that were completed within 3% of the estimated costs. (P-3, P-20)

Elecnor provided several organizations charts depicting the project organization and the resume for the project manager. The project manager will report to a project committee formed by members of the company's upper management. (P-22)

Elecnor identified one major risk – opposition from the public in the siting process. Elecnor indicated that its capital cost estimate assumes a measure of contingency to partially accommodate this. (P-25)

Elecnor stated it has fifty-five years of experience with transmission line projects and that its designated engineering contractor has comparable experience. Elecnor described the details of how its engineering contractor controls budget and schedules to contain costs on a project. Elecnor did not describe any of their specific cost control expertise. (P-9, P-12, P-16, P-17, P-21, P-23, P-26, P-27)

3.12.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure provided information on three example projects, including two transmission projects in Brazil (for which it was the EPC contractor and had fixed prices) and a wind related project in Texas involving new transmission lines and substations that is still in progress. Isolux Infrastructure indicated that this project is expected to be over budget due to an expansion in scope and design changes. (P-3, P-20)

Isolux Infrastructure provided a simple high level project organization chart and a more detailed EPC project organization chart. Isolux Infrastructure did not identify specific individuals in either chart and provided no statements of experience or capabilities. (P-22)

Isolux Infrastructure identified 18 project risks along with the risk likelihood, severity, and potential mitigation/minimization measures. (P-25)

Isolux Infrastructure provided a brief and very general response related to its approach to cost containment, with nothing specifically directed at this project. (P-9, P-12, P-16, P-17, P-21, P-23, P-26, P-27)

3.12.3 Information Provided by PG&E/MAT

PG&E/MAT provided a thorough review of 5 example projects that they have completed at or below the budget, except for one project that had significant changes due to the CPCN process. (P-3, P-20)

PG&E/MAT described their “Executive Leadership Team.” They also provided similar information for their “Project Delivery Team.” These teams bring together the executives and implementation team members of PG&E and MAT to lead and manage all phases of the development of the project. The proposed project manager has 25 years of utility experience and 10 years in project management. (P-22)

PG&E/MAT developed a risk register listing 26 potential risks for this project. They evaluated these risks as to their potential cost impacts and probability of occurrence. They also summarized mitigation plans for each risk. (P-25)

PG&E/MAT provided a detailed and specific discussion of relevant cost containment plans, including their cost containment strategies, in a 14 point list. PG&E/MAT’s cost containment list included the following cost containment items (among others):

- PG&E/MAT’s ability to coordinate the design and construction of the project as well as the interconnected substation assets that are owned by PG&E to result in scheduling and cost efficiencies,
- PG&E/MAT’s ability to provide operations and maintenance by PG&E at cost using existing infrastructure (including two established control centers) and

operations support and to rely on existing spare parts inventories for same or similar equipment,
- PG&E/MAT's ability to rely on significant environmental and permitting work completed by PG&E for this specific project in advance of this competitive selection process, and
- PG&E/MAT's commitment that they will not seek return on equity incentives for this project.

(P-9, P-12, P-16, P-17, P-21, P-23, P-26, P-27)

3.12.4 Information Provided by Pattern

Pattern provided a detailed review of the TBC project and 3 wind turbine projects. Pattern indicated that the wind projects were completed at or near the budget. Pattern noted that the majority of the projects that it has completed at or near budget are fixed revenue projects (usually tied to a fixed price power purchase agreement). (P-3, P-20)

Pattern stated that it will manage and lead the development and construction of the project. Pattern provided a clear organization chart showing the relationships among key aspects of the project, including the relationship with its EPC contractor. The resumes showed power industry experience of 8 to 35 years for these individuals. (P-22)

Pattern discussed numerous major risks and obstacles for successful project completion. Pattern indicated that it and its consultant will develop a Risk Management and Mitigation Plan prior to the close of construction financing. (P-25)

Pattern indicated that construction cost and schedule are closely connected. One of the main cost control techniques described by Pattern is schedule control. (P-9, P-12, P-16, P-17, P-21, P-23, P-26, P-27)

3.12.5 Information Provided by TBC

TBC provided a review of one project, the TBC project. TBC indicated that the project encountered some significant technical and budget problems, which resulted in a significant settlement from the equipment supplier. (P-3, P-20)

TBC provided its proposed management structure for the project. TBC indicated that its development adviser and eventual project manager (who will be the same person) has over 35 years of utility and construction experience and provided a "Statement of Qualifications." (P- 22)

TBC identified four risk areas and related mitigations: permitting risk, construction risk, commodity risk, and exchange risk. (P-25)

TBC stated that its proposed cost estimates to permit, construct, and operate the project were created through a bottom-up analysis. TBC indicated that it will focus on project controls to contain costs. (P-9, P-12, P-16, P-17, P-21, P-23, P-26, P-27)

Other Sponsor or Team Advantages

3.12.6 Information Provided by Elecnor

Elecnor stated that it brings a strong balance sheet and a wealth of global transmission experience to this project. It indicated that it will deploy the strongest possible project team, comprised of individuals with both California and/or international experience and strive to apply best practice to execution of this project. Elecnor indicated that it is committed to a long term presence in California and aims to be a long term owner of this asset and to demonstrate that it can be a good partner to all the key stakeholders in California. (M-1)

3.12.7 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that evidence of its extensive relevant experience is provided elsewhere in its application to support its belief that it is highly qualified to be the project sponsor. (M-1)

3.12.8 Information Provided by PG&E/MAT

PG&E/MAT indicated that the consortium of PG&E, MAT, and Citizens Energy Corporation would leverage the combined strengths of a local utility with two independent transmission companies and stand ready to undertake the development and construction of the project in a timely and cost effective fashion. They specifically noted the team would provide the following:

- Deep knowledge of permitting requirements and the local communities;
- Permitting, regulatory, and stakeholder outreach led by PG&E utilizing significant experience and knowledge of CPUC, federal, state, and local regulators and deep knowledge of the local communities;
- Design, engineering, and project delivery led by MAT, which brings recent, relevant experience in successfully delivering large high voltage electric transmission projects into service on-schedule and within budgetary commitments; and
- The PG&E/MAT team would be well positioned to immediately begin the next phase of project delivery in fall of 2013 based on a significant amount of preliminary engineering, siting, and planning work completed in 2012 and 2013 under the direction of PG&E.

PG&E/MAT also stated that Citizens Energy would provide substantial local benefits to the community through its participation in the transmission project by allocating 50% of its subsidiary's after tax net income to charitable programs that assist low-income residents in the project area. PG&E/MAT indicated that Citizens Energy has committed to use 50% of its profits to provide energy assistance over 30 years to directly benefit the low-income ratepayers and residents who live and work in the project area. (M-1)

In addition, as discussed in Section 3.12.3, the cost containment list that PG&E/MAT provided included the following special cost containment items (among others):

- PG&E/MAT's ability to coordinate the design and construction of the project as well as the interconnected substation assets that are owned by PG&E to result in scheduling and cost efficiencies,
- PG&E/MAT's ability to provide operations and maintenance by PG&E at cost using existing infrastructure (including two established control centers) and operations support and to rely on existing spare parts inventories for same or similar equipment,
- PG&E/MAT's ability to rely on significant environmental and permitting work completed by PG&E for this specific project in advance of this competitive selection process, and
- PG&E/MAT's commitment that they will not seek additional return on equity incentives for this project beyond the 50 basis point return on equity adder for ISO/RTO participation. (P-26)

3.12.9 Information Provided by Pattern

According to Pattern, its Route B would support the future addition of a 230 kV switchyard near Raisin City junction as described in the Gates-Gregg Functional Specifications. The configuration contemplated would have the ability to tie in the existing 4 lines near Raisin City junction as well as the new Gregg-Gates line, as described in its application.

Pattern indicated that its project team has taken the future switchyard into consideration and proposed that this station should be placed near the existing McMullin substation. This would be adjacent to the existing Helm-McCall and McMullin-Kearney lines as well as the new Gates-Gregg line, as proposed in Pattern's application. Pattern provided a one-line diagram. (M-1)

3.12.10 Information Provided by TBC

TBC indicated that, if chosen as the approved project sponsor, TBC would expect to deliver savings to ratepayers of greater than 10% over the life the project when compared to the "traditional utility cost of service" model. As detailed in its application, TBC expects to attract competitively priced equity capital for this opportunity, which would result in long-term benefit to California and its ratepayers. Furthermore, TBC indicated that it believes that it possesses a unique ability to produce significant reduction in initial costs to ratepayers by shaping recovery of the investment through a non-traditional transmission revenue requirement. TBC indicated that it could offer a levelized transmission revenue requirement, which would result in a first-year cost to ratepayers significantly less than the traditional utility cost of service model. Finally, TBC indicated that another aspect of its proposed levelized transmission revenue requirement would produce significant savings on an annual basis and asserted that the latter approach would provide optimal benefits to ratepayers by addressing the problem of "intergenerational equity." TBC committed to work with the ISO to develop an approach to its transmission revenue requirement that best meets the objectives established by the ISO. (M-1)

Cost Cap Agreement

3.12.11 Information Provided by Elecnor

Elecnor indicated that it has experience with cost caps and believes it may be possible to convert to a fixed capital cost sum at some stage in the development. However, Elecnor did not commit to a cost cap at this time. (P-28)

3.12.12 Information Provided by Isolux Infrastructure

Isolux Infrastructure stated that it may consider an adjustable cap with appropriate terms later in the project. However, Isolux Infrastructure did not commit to a cost cap at this time. (P-28)

3.12.13 Information Provided by PG&E/MAT

PG&E/MAT did not include a binding cost cap as part of their proposal. (P-28)

3.12.14 Information Provided by Pattern

Pattern stated that it is willing to discuss further cost caps and suggested a mechanism that would specify adjustments to its return on equity to provide incentives and measures that penalize Pattern for cost overruns. However, in its application, Pattern did not agree to any binding cost caps or cost containment measures at this time. (P-28)

3.12.15 Information Provided by TBC

TBC indicated that it is willing to discuss and accept a binding cost cap, later in the process. However, TBC did not commit to a cost cap at this time. (P-28)

3.12.16 ISO Comparative Analysis

Comparative Analysis of Cost Containment

For purposes of the comparative analysis for this component of the criterion, the ISO has considered the representations by the project sponsors regarding the expected effectiveness of a project sponsor's overall cost containment abilities, including but not limited to experience of cost containment performance on previous projects, project management and scheduling organizations and capabilities, experience of key individuals, the project risks and mitigation that each identified, and proposed cost containment plans. This component of the criterion is not as important as the component pertaining to agreement to a specific, binding cost cap in the project sponsor's application because it does not "lock-in" any specific tangible cost containment caps or measures.

As described above, PG&E/MAT provided the most thorough and comprehensive approaches to cost containment, including their proposed project organization, ability to deliver several similar previous transmission projects within the budget, approach to risk management, and specific cost containment actions. In particular, PG&E/MAT's risk register listing 26 potential risks for this project with potential cost and schedule impacts

and probability of occurrence and detailed mitigation plans for each risk, along with their detailed discussion of cost containment plans, including their cost containment strategies, in a 14 point list provided a more thorough approach to cost containment than the proposals of the other project sponsors. PG&E/MAT listed a number of cost containment items that are summarized in Section 3.12.3 above. While the ISO believes these are valid factors that have the real potential to impact the ultimate cost to ratepayers, the ISO considers these factors to be inherent in the makeup of the project and the fact that PG&E is a utility providing service to the project area rather than incremental cost containment measures; consequently the ISO did not attribute any advantage to PG&E/MAT based on these factors in its analysis of this component of the criterion. However, based on PG&E/MAT's overall more thorough and comprehensive approach to cost containment, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that PG&E/MAT's proposal is slightly better than those of the four other project sponsors with regard to this component of the criterion.

TBC and Pattern provided thorough responses regarding project management, risk management, and cost containment strategies. Pattern has completed several projects in California and the U.S. as a developer that were on or near budget with many being fixed revenue projects that by their nature incent a strong focus on cost containment. TBC has limited experience as a project developer consisting of one previous project that encountered budget problems; however, the budget problems were associated with equipment issues for which it obtained a significant settlement from its equipment supplier. Pattern also had an early role in the development of this same project. Based on Pattern's greater experience as a developer of projects that have been completed on or near budget, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that Pattern's proposal is slightly better than TBC's proposal with regard to this component of the criterion.

Isolux Infrastructure provided less detail than PG&E/MAT, Pattern, and TBC on what was covered in its O&M cost estimate. Isolux Infrastructure's approach to project management was generic, and it did not include the requested resumes to demonstrate its and its team's capabilities. Isolux Infrastructure was thorough in evaluating risks but provided little detail on its cost containment plans.

Elecnor also provided less detail than PG&E, Pattern, and TBC on what was covered in its O&M cost estimate. Elecnor was less sophisticated than the other project sponsors in discussing risk management and provided little detail regarding its stated cost containment actions. Elecnor provided adequate project management information, including the organization and a resume for the project manager.

Based on the greater level of detail in their proposals, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that the proposals of Pattern and TBC are both better than those of Elecnor and Isolux Infrastructure with regard to this component of the criterion. Based on Isolux Infrastructure's more substantial analysis of risk compared to Elecnor, in conjunction with all the other factors included in the ISO's analysis for this component of the criterion, the ISO has determined that Isolux Infrastructure's proposal is slightly better than that of Elecnor with regard to this component of the criterion.

Comparative Analysis of Other Sponsor or Team Advantages

For purposes of the comparative analysis for this component of the criterion, the ISO reviewed the proposals of the five project sponsors to determine if they identified other advantages the project sponsor or its team have for building the project that were not addressed in other parts of the selection process. Based on this review, the ISO has determined that none of the project sponsors identified any additional material advantages in their proposals that the ISO has not already considered directly or indirectly in the selection comparative analysis process. Moreover, as with the first component of the criterion, this component is not as important as the component pertaining to agreement to a specific, binding cost cap in the project sponsor's application because it does not "lock-in" any specific tangible cost containment caps or measures.

PG&E/MAT point out many advantages that their team brings to the project as listed in Section 3.12.8 above. While many of these factors are positive elements of their proposal, the ISO has considered them directly or indirectly in its analysis of other components of the selection criteria. The one exception is PG&E/MAT's proposal that Citizens Energy would provide benefits to the community through its participation in the project by allocating 50% of its subsidiary's after tax net income to charitable programs that assist low-income residents in the project area. While this factor would generally impact communities in the project area, the ISO has not attributed any advantages in the comparative analysis for this report because the ISO does not consider it germane to whether the approved project sponsor is best qualified to finance, own, construct, operate, and maintain the Gates-Gregg project in the best interests of the ISO's ratepayers and customers.

TBC offered the potential for flexible transmission revenue requirement pricing and the potential for customer savings by using a non-traditional transmission revenue requirement accounting method, thus potentially decreasing the cost to customers when compared to traditional transmission revenue requirement accounting. The ISO has determined that while TBC's proposal has the potential to reduce costs, TBC did not offer to enter into a binding agreement to effectuate these cost reductions in its proposal.

Pattern pointed out that its Route B was laid out to come close to Raisin City junction as requested in the Gates-Gregg Functional Specifications. However, all the other project sponsors also laid out their routes to come close to the Raisin City junction, so this is not a significant additional advantage for Pattern.

As discussed above, the ISO has determined that there is no material difference among the proposals of the five project sponsors with regard to this component of the criterion because the ISO has not identified any additional material advantages provided by their proposals not already addressed in other parts of the selection comparative analysis process.

Comparative Analysis of Cost Cap Agreement

None of the project sponsors committed to a specific binding cost cap. As a result, the ISO has determined that there is no material difference among the project sponsors with regard to this component of the criterion.

Overall Comparative Analysis

The most important factor in satisfying this overall criterion is a project sponsor's agreement to a specific, binding cost cap, or at least to some type of binding cost containment measures in its application. However, because no project sponsor agreed to a binding cost cap (or binding cost containment measures) in its application, the ISO must rely on project sponsors' satisfaction of the other two components (cost containment and other advantages) in its comparative analysis whether there is any material difference among the proposals of the project sponsors.[3] As the ISO also did not identify any material difference among the proposals with regard to the "other advantages" component of this criterion, the ISO has based its overall analysis for this criterion on the cost containment component. On this basis, the ISO has determined that PG&E/MAT's proposal is slightly better than the other four proposals, Pattern's proposal is slightly better than the other three proposals, TBC's proposal is slightly better than the other two proposals, and Isolux Infrastructure's proposal is slightly better than Elecnor's proposal with regard to this criterion.

In any event, given that no project sponsor agreed to a binding cost cap (or binding cost containment measures) in its application, the ISO places less importance on this criterion with respect to this particular project than it otherwise would for purposes of selecting a project sponsor.

3.13 Selection Criterion 24.5.2.4(a)

In this section the ISO provides the comparative analysis of this selection criterion, as discussed in Section 3.3 of this report. This selection criterion is "the current and expected capabilities of the Project Sponsor and its team to finance, license, and construct the facility and operate and maintain it for the life of the project." As noted in Section 3.3, this criterion encompasses a number of the more specific selection criteria discussed in this report. What follows is an overall comparative analysis for this criterion based upon the discussion of the other criteria encompassed by this criterion. As stated in Section 3.3, the ISO will not repeat all of the information provided by the project sponsors for these more specific selection criteria and the comparative analysis for each. What follows is a comparative analysis for this selection criterion.

[3] The ISO notes that under the California Public Utilities Code, the CPUC imposes caps on the costs recoverable from ratepayers for transmission projects for which it grants a certificate of public convenience and necessity. Elecnor, Isolux Infrastructure, PG&E/MAT, and TBC would be subject to such CPUC-imposed cost caps.

The other selection criteria (or components of a criterion) considered in the comparative analysis for this criterion are as follows:

- 24.5.2.4(e): the financial resources of the project sponsor and its team;
- 24.5.2.4(f): the technical (environmental permitting) qualifications and experience of the project sponsor and its team (component);
- 24.5.2.4(g): the previous record regarding construction and maintenance of transmission facilities, including facilities outside the ISO controlled grid, of the project sponsor and its team; and
- 24.5.2.4(h): demonstrated capability to adhere to standardized construction, maintenance, and operating practices.

3.13.1 ISO Comparative Analysis

The ISO's comparative analysis has considered the results of the analysis of the four criteria or criterion components listed above. The ISO has determined that the PG&E/MAT proposal is better than the other four proposals with respect to this general criterion because it is better than the other four proposals in the analysis of all four of the criteria or criterion components.

With respect to the other four project sponsors, Elecnor's proposal is better than that of Pattern, which is better than that of Isolux Infrastructure, which is better than that of TBC with respect to financial resources. With respect to environmental permitting qualifications and experience, Pattern's proposal is better than that of TBC, which is better than those of Elecnor and Isolux Infrastructure. With respect to selection criterion 24.5.2.4(g), there is overall no material difference among the proposals of Elecnor, Isolux Infrastructure, and Pattern with respect to previous record regarding construction and maintenance of transmission facilities and all are slightly better than TBC's proposal with regard to that criterion. With respect to demonstrated capability to adhere to standardized construction, maintenance, and operating practices, TBC's proposal is better than the proposals of Elecnor, Isolux Infrastructure, and Pattern, which are all comparable with regard to that criterion. Based on these findings regarding satisfaction of the individual criteria and criterion components, the ISO has determined that there is effectively no material difference between Elecnor's and Pattern's proposals with respect to satisfaction of this general criterion, both of which are slightly better than Isolux Infrastructure's and TBC's proposals, between which there is no material difference, with respect to this criterion.

3.14 Qualification Criterion 24.5.2.1(a)

The first qualification criterion is "whether the proposed project is consistent with needed transmission elements identified in the comprehensive Transmission Plan

3.14.1 Information Provided by Elecnor

Elecnor indicated that it has reviewed the ISO's Gates-Gregg Functional Specifications and is confident that the proposed project is consistent with the needed transmission elements identified in the ISO's comprehensive transmission plan.

Elecnor indicated that projects eligible for competitive solicitation are category 1 policy driven or economically driven elements, or reliability projects that have additional policy or economic benefits, excluding projects that are modifications to existing facilities or utilizing existing rights-of-way owned by incumbent transmission owners. (Q-1,T-2)

3.14.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure indicated that the proposed project is consistent with needed transmission elements identified in the ISO's comprehensive transmission plan because the plan calls for the construction of a 230 kV single circuit, double circuit capable, transmission line between PG&E-owned Gates and Gregg 230 kV substations, and that is what it proposes to do. Isolux Infrastructure proposes to build an overhead transmission line with a minimum continuous summer ampacity of 1,893 A, a minimum continuous winter ampacity of 2,069 A, a minimum 4 hour emergency summer rating of 1,893 A, a minimum 4 hour winter emergency rating of 2,069 A, and an approximate line length of 59 miles. Failure containment load mitigation will be per applicable codes. Vibration dampers will be installed on all overhead conductors and shield wires, with the exception of slack spans. Minimum BIL will be 1,050 kV (900 kV for solidly grounded systems). Isolux Infrastructure will try to secure routing for rights-of-way close to Raisin City junction. Optical ground wire (minimum 6 pair fiber) will be installed as the shield wire. (Q-1,T-2)

3.14.3 Information Provided by PG&E/MAT

PG&E/MAT stated that their proposal is consistent with the project description and meets all of the performance requirement defined by the ISO in the 2012/13 transmission plan and its Appendix G. The project will be designed for a double circuit 230 kV line. Initially one circuit will be constructed. The line will terminate at Gates and Gregg substations, passing through the vicinity of the Raisin City junction area. The proposed in service date is March 31, 2020.

PG&E/MAT indicated that the proposed project will meet all applicable NERC and WECC criteria as well as CPUC General Order 95, General Order 128, and any applicable municipal codes. (Q-1,T-2)

3.14.4 Information Provided by Pattern

Pattern indicated that the line, as designed and proposed by Pattern, is consistent with the needed transmission elements identified in the ISO's 2012-2013 transmission plan. The project will run from a planned dead end structure adjacent to the Gates substation north to a dead end structure adjacent to the Gregg substation. PG&E will own the drop in ties and facilities within the respective substations. Pattern will adhere to the technical requirements outlined in the ISO's Gates-Gregg Functional Specifications. Pattern stated that its proposed in service date of January 31, 2018 is achievable. (Q-1,T-2)

3.14.5 Information Provided by TBC

TBC indicated that the proposed project is consistent with the ISO's Gates-Gregg Functional Specifications issued on April 1, 2013, and thus is consistent with needed transmission elements identified in the ISO's comprehensive transmission plan. The preliminary conceptual route takes the line in the vicinity of the area identified as Raisin

City junction. TBC proposed an in service date of May 2017 but indicated that it is flexible to change the schedule as recommended by the ISO. (Q-1,T-2)

3.14.6 ISO Comparative Analysis

The ISO previously determined and posted notice on its website that all five project sponsors submitted proposals that meet the minimum requirements to qualify for evaluation in the selection process. Pursuant to tariff section 24.5.2.4, the ISO has further reviewed the proposals in its comparative analysis for purposes of selection of the approved project sponsor. Based on a detailed review of the proposals of all five project sponsors, the ISO is satisfied that all proposals are consistent with the needed transmission elements identified in the ISO's transmission plan. Because all five proposals are consistent with the needed transmission elements, the ISO has determined that there is no material difference among these proposals with respect to this criterion.

3.15 Qualification Criterion 24.5.2.1(b)

The second qualification criterion is "whether the proposed project satisfies Applicable Reliability Criteria and ISO Planning Standards."

3.15.1 Information Provided by Elecnor

Elecnor indicated that it is familiar with the WECC and ISO reliability criteria and planning standards and is confident that the project will satisfy applicable reliability criteria and ISO planning standards. This project was selected for competitive solicitation and was identified to ensure compliance with NERC standards, WECC regional criteria, and ISO planning standards across the 2013-2022 planning horizon. ISO planning standards specify the grid planning criteria to be used in the planning of ISO transmission facilities, addressing specifics not covered in NERC and WECC reliability standards and identifying criteria to be adopted that are more stringent than NERC and WECC regional criteria. (Q-2,T-3)

3.15.2 Information Provided by Isolux Infrastructure

Isolux Infrastructure confirmed that it will comply with the ISO applicable reliability criteria, ISO planning standards, applicable NERC and WECC requirements, and any other applicable rule or law. (Q-2,T-3)

3.15.3 Information Provided by PG&E/MAT

PG&E/MAT indicated that, in accordance with ISO planning standards, it modeled the proposed project in the 2022 base case (2012/2013 TPP) and determined that system performance was compliant with the planning standards and criteria that are included in the applicable reliability criteria. The system was tested using power flow and transient stability programs and considering category A (normal), B (single contingency), and C (double contingency) conditions. PG&E/MAT stated that the proposed project satisfies all of the above criteria. (Q-2,T-3)

3.15.4 Information Provided by Pattern

Pattern indicated that the project was identified by the ISO in its 2012-2013 transmission plan as a reliability project with both policy and economic benefits. As a part of its reliability assessment, the ISO analyzes the transmission system to ensure that all applicable reliability criteria and ISO planning standards are met. Pattern indicated that its project team designed the Gates to Gregg project consistent with the ISO 2012-2013 transmission plan, and it therefore satisfies applicable reliability criteria and ISO planning standards. (Q-2,T-3)

3.15.5 Information Provided by TBC

TBC indicated that the ISO identified the need for this reliability project with additional policy and economic benefits. TBC indicated that it performed limited power flow simulations by adding the project with parameters as submitted by TBC in the 2017 and 2022 power flow cases. TBC reviewed the results of contingency simulations, resulting overloads, and voltage violations and determined that the results of preliminary analyses demonstrate that this project satisfies all the NERC planning and reliability standards (TPL-001, TPL-002, TPL-003 and TPL-004), WECC reliability criteria and the ISO planning standards. (Q-2,T-3)

3.15.6 ISO Comparative Analysis

The ISO previously determined and posted notice on its website that all five project sponsors submitted proposals that meet the minimum requirements to qualify for evaluation in the selection process. Pursuant to tariff section 24.5.2.4, the ISO has further reviewed the proposals in its comparative analysis for purposes of selection of the approved project sponsor. Based on a detailed review of the design detail provided in in the proposals of the five project sponsors, the ISO is satisfied that all of the proposals would satisfy applicable reliability criteria and ISO planning standards. Because all proposals would satisfy applicable reliability criteria and ISO planning standards, the ISO has determined that there is no material difference among the proposals with respect to this criterion.

3.16 Qualification Criterion 24.5.2.1(c)

The third qualification criterion is “whether the Project Sponsor is physically, technically, and financially capable of (i) completing the project in a timely and competent manner; and (ii) operating and maintaining the facilities consistent with Good Utility Practice and applicable reliability criteria for the life of the project.”

The third qualification criterion is a broad criterion that encompasses several specific selection criteria that are discussed in other sections of this report. The ISO will not repeat here the information provided by the project sponsors for these more specific selection criteria or the comparative analysis for each. What follows is an overall comparative analysis for this criterion based upon the comparative analyses for the criteria encompassed by this criterion.

The selection criteria considered in the comparative analysis for this criterion are as follows:

- 24.5.2.4(d): the proposed schedule for development and completion of the project and demonstrated ability to meet that schedule of the project sponsor and its team;
- 24.5.2.4(e): the financial resources of the project sponsor and its team;
- 24.5.2.4(f): the technical (environmental permitting) and engineering qualifications and experience of the project sponsor and its team; and
- 24.5.2.4(h): demonstrated capability to adhere to standardized construction, maintenance, and operating practices; and
- 24.5.2.4(i): demonstrated ability to assume liability for major losses resulting from failure of facilities.

3.16.1 ISO Comparative Analysis

The ISO's comparative analysis has considered the results of the comparative analysis of the five selection criteria, as well as qualification criterion 24.5.2.1(b) above. The ISO has determined that the PG&E/MAT proposal is better than the other four proposals with respect to this general criterion because the PG&E/MAT proposal is better than or comparable to the other four proposals in the analysis of all six of the applicable selection and qualification criteria.

With regard to the analysis of the proposals of the other four project sponsors for this general criterion, the analysis is similar to the ISO's analysis with respect to selection criterion 24.5.2.4(a), which includes several of the factors applicable to this criterion. There is no material difference among the proposals of Elecnor, Isolux Infrastructure, and Pattern with regard to the proposed schedule for the project and ability to meet that schedule, and they are slightly better than TBC's proposal in this regard. With respect to financial resources, Elecnor's proposal is better than that of Pattern, which is better than that of Isolux Infrastructure, which is better than that of TBC. With respect to environmental permitting and engineering qualifications and experience, Pattern's proposal is better than that of Elecnor and TBC, which are comparable and better than that of Isolux Infrastructure. With respect to demonstrated capability to adhere to standardized construction, maintenance, and operating practices, TBC's proposal is better than the proposals of Elecnor, Isolux Infrastructure, and Pattern, which are all comparable with regard to that criterion. There is no material difference among the proposals with regard to the other components of this criterion. Based on these findings regarding satisfaction of the individual criteria, and given that the other four project sponsors proposed an in-service date that meets the Gates-Gregg Functional Specifications, the ISO has determined that there is effectively no material difference between Elecnor's and Pattern's proposals with respect to satisfaction of this general criterion, both of which are slightly better than Isolux Infrastructure's and TBC's proposals, between which there is no material difference, with respect to this criterion.

3.17 ISO Overall Comparative Analysis for Approved Project Sponsor Selection

As described above, the ISO has performed a comparative analysis of the proposals of the five project sponsors with regard to each of the applicable tariff criteria. The ISO has determined that PG&E/MAT's proposal is better than the other four proposals based on this comparative analysis with regard to all of the selection and qualification criteria because PG&E/MAT's proposal is better than the other proposals with regard to most of the tariff criteria and is comparable to the other proposals with respect to the other criteria.

Of particular note, PG&E/MAT's proposal was better with respect to the following key selection factors, including the factors in the ISO's April 15, 2013 presentation to stakeholders, entitled Transmission Planning Process Phase 3 Competitive Solicitation: (1) possession of existing rights-of-way that could contribute to the project and experience in acquiring rights-of-way to facilitate approval and construction of the project, (2) financial capabilities, and (3) overall licensing, construction, operation, and maintenance capabilities, as well as extensive and NERC compliance experience and capabilities as the result of their ownership of extensive transmission systems, including an extensive system in California. Finally, it is important to note that no project sponsor agreed to a specific, binding cost cap in its application.

As a result, the ISO selects the PG&E/MAT team to develop the Gates to Gregg transmission line project pursuant to the proposal set forth in their project application.

Attachment 1

Competitive Solicitation Transmission Project Sponsor Application (Version used for the Gates–Gregg project)

Transmission Project Sponsor Proposal - Application

1. INTRODUCTION

According to the schedule set forth in the Business Practice Manual for the Transmission Planning Process (BPM-TPP) sections 5.1 and 5.8, the ISO will initiate a period of two (2) months that will provide an opportunity for Project Sponsors to submit specific transmission project proposals to finance, own, construct, maintain and operate certain transmission elements identified in the comprehensive Transmission Plan, or those approved by ISO management if the capital cost of the project is less than or equal to $50 million. Such project proposals must include plan of service details and supporting information as set forth in the BPM-TPP sufficient to enable the ISO to determine whether the proposal meets the criteria specified in ISO Tariff sections 24.5.2.1 and 24.5.2.4. This application describes the details that must be provided regarding Project Sponsor proposals.

Projects included in this process will become part of the ISO controlled grid and selected Project Sponsors will become Participating Transmission Owners (PTO) and will sign the Transmission Control Agreement (TCA) and a Reliability Standards Agreement (RSA). It has been assumed that the Project Sponsor or its contracted representative(s) will be registered with NERC as a Transmission Owner, Transmission Operator, and other functions as applicable.

2. GENERAL INSTRUCTIONS

The information to be included in this application will be used by the ISO to determine if the proposal is qualified per BPM-TPP Section 5.4.1 and related ISO Tariff sections, and if so to compare each Project Sponsor and its proposal with other Project Sponsors and proposals for the same approved transmission element. To facilitate this assessment and comparison, Project Sponsors should provide information that reflects a thorough understanding of the requirements, processes and activities needed to accomplish project completion and continuing operation and maintenance.

This application is separated into specific sections. Each section requests information to be provided and is assigned a unique identifier for each item, such as Q - 1 for Qualifications, E - 1 for Environmental and Public Process items and S - 1 for Substation related items. Project Sponsors must provide responses to each of the items in the space provided after the request and clearly note in the response the unique identifiers in each part of their responses. If attachments are provided as part of the response, the file name of the attachment should be specified in the space provided. In addition, the files should be named using the following

naming convention – file name should include the unique identifier that the information is in response to (e.g. E-1.a) and a description of the contents (e.g. E-1.a Resumes of Key Individuals). All responses must be in readable electronic format and include the name of the Project Sponsor and description of the project. In addition, the application should include a table or index in Word format that contains a list of documents provided. The table or index must include the file name, contents and a description of the section(s) that it responds to.

All responses and attached material shall be in English.

If supporting documentation is provided along with specific responses, the Project Sponsor must include the item number and specific references to the pages and paragraphs of the supporting documentation that are responsive along with a brief explanation of how the referenced material is responsive. If the Project Sponsor believes that any item is not applicable to their proposed project it may indicate "N/A" but should provide a brief reason why it believes it is not applicable.

If the Project Sponsor proposes to contract with others to perform duties related to the application below, responses shall reflect the roles, responsibilities, processes and procedures to be used by the organization that will perform those duties, and the management controls that will be used by the Project Sponsor to assure that the work is done in accordance with applicable agreements, contracts, regulatory and reliability requirements.

For each item, if the Project Sponsor is proposing to own, finance, construct, operate and maintain multiple transmission elements, the Project Sponsor should also indicate how its response would change depending on how many of its proposals are approved. For example, the Project Sponsor should describe how the projected in-service date of a project would be affected if two or more of the Project Sponsor's proposals are approved.

To the extent a Project Sponsor considers any of the information submitted with its application to be confidential or proprietary; such information must be clearly identified and must include an explanation as to why the information should be handled by the ISO as confidential. The identity of Project Sponsors and basic information about proposed projects is not confidential information.4

Applicant Project Sponsors should note that the maximum size of E mail submitted to the CAISO should not exceed 5 MB. Files or attachments larger than 5 MB must be compressed. Applicants may also submit their information via CD or DVD medium. If this option is selected, please provide 3 complete sets of CDs or DVDs.

If the applicant wishes to apply for more than one project, a separate Application must be submitted for each project.

[4] BPM-TPP 5.2.1

The applicant Project Sponsor may submit questions to the CAISO for clarification. The CAISO will attempt to answer these questions in a timely manner. The answers will be made available in a table which will be posted to the CAISO web site on the Transmission Planning page. Note: the identity of the applicant posing the question will not be included in the table. In general, the CAISO will update this table on a weekly basis or as needed.

3. PROJECT SPONSOR, NAME AND QUALIFICATIONS

Project Sponsor Name:

Response: (Enter Project Sponsor Company Name)

Project Description:

Response: (Enter Project Description)

Submittal Date:

Response: (Enter Submittal Date)

Project Sponsor Qualifications:

The ISO will review each Project Sponsor's proposal to assess its qualifications based on the qualification criteria set forth in ISO Tariff section 24.5.2.1 and BPM-TPP section 5.4.1. The ISO will use the following criteria to determine whether the Project Sponsor's proposal is qualified to engineer, finance, construct, own, operate and maintain a transmission element:

The proposed project must be consistent with needed transmission elements identified in the comprehensive Transmission Plan, or approved by ISO management if the capital costs of the project are $50 million or less.

The proposed project must satisfy Applicable Reliability Criteria and ISO Planning Standards.

The Project Sponsor must be physically, technically, and financially capable of (i) completing the project in a timely and competent manner; and (ii) operating and maintaining the facilities consistent with Good Utility Practice and applicable reliability criteria for the life of the project.

Please demonstrate that you meet the qualification criteria for the needed transmission element by providing responses to the following three items. Note: when providing these responses, the applicant may refer to information that has been provided in other sections of this application for additional information and support. However, the following three responses should provide a complete demonstration or qualification – either through the three responses directly or by including references to responses to other items in this application.

Describe how:

Q-1. The proposed project is consistent with needed transmission elements identified in the comprehensive Transmission Plan, or approved by ISO management if the capital costs of the project are $50 million or less:

Response:

Q-2. The proposed project satisfies Applicable Reliability Criteria and ISO Planning Standards:

Response:

Q-3. The Project Sponsor is physically, technically, and financially capable of (i) completing the project in a timely and competent manner; and (ii) operating and maintaining the facilities consistent with Good Utility Practice and applicable reliability criteria for the life of the project.

Response:

4. PROJECT FINANCE, PROJECT MANAGEMENT AND COST CONTAINMENT

Project Financing, Historical Performance Related, Project Sponsor's Past Project Information

P - 1. Provide a list of transmission lines and/or substations which the Project Sponsor or the Project Sponsor's team has constructed, financed, owned, operated and/or maintained within the last five years.

Response:

P - 2. Describe the financing used on up to five projects listed in the P-1 Response, that are as similar in type and size to (or larger than) the transmission element or substation proposed in this application : e.g. structure (LLC vs. corporate) equity contribution, debt contribution, debt sources, bank(s) involved, etc.

Response:

P - 3. For the same projects addressed in P-2, provide a breakdown of the total capital costs of the project up to and including the point where the project was completed and initially receiving cost recovery.

Response:

Project Financing, Historical Performance Related, Project Sponsor Information

P - 4. Provide the Project Sponsor's audited financial statements (Balance Sheet, Income Statement, Statement of Cash Flows) or equivalent, for the most recent year and previous four years, including:

a. Asset value (excluding transition bonds of subsidiaries), including current assets and fixed assets
b. Liabilities (current liabilities plus long-term debt)
c. Net income before taxes (but after interest payments)
d. Debt service – include interest and principal repayment and by project if special purpose entities (e.g. project financed LLC, etc.) were created solely for that specific project

Response:

P - 5. Provide the Project Sponsor's credit rating from Moody's Investor Services and Standard & Poor's for the previous five years or an equivalent demonstration of sound financial health. Also provide an affirmative statement that indicates that completing this project will not have a negative impact on the Project Sponsor's creditworthiness.

Response:

P - 6. Provide a report of any failure by the Project Sponsor to make debt service payments on time during the previous five years. If the Project Sponsor is a Special Purpose Entity (SPE), report any such failures by its predecessor or supporting organizations.

Response:

P - 7. Provide a summary of any history of bankruptcy, dissolution, merger, or acquisition of the Project Sponsor for the current calendar year and the five prior calendar years. If the Project Sponsor is an SPE, report any such events by its predecessor or supporting organizations.

Response:

P - 8. Describe the financial structure of the Project Sponsor, including type of corporation if a corporation, or type of entity if it is a special purpose entity (e.g. project financed LLC) created explicitly for the proposed project. Provide a list of equity holders, equity contribution by each investor, and the amount of debt.

Response:

Project Financing, Project Related

P - 9. Provide a capital cost estimate presented as a buildup of costs by category, such as environmental, engineering, civil works, materials, equipment, construction, construction management, physical and price contingencies, allowance for funds used during construction (AFUDC), and all other categories for which the proposing Project Sponsor plans to seek FERC approval to recover. See P-10 for suggested cost categories. These categories are illustrative; the Project Sponsor should aggregate costs into the categories most relevant to its development of the proposed project. For projects with transmission and substation components, separate the costs into two rows (e.g. use one row for substation construction and a second for transmission line construction).

Response:

P - 10. Describe the detailed financial plan on a monthly basis during the construction period, e.g., for 3 years or as long as necessary. The plan should present the costs and financial outlays in each month of the construction period, and the corresponding sources of financing (equity contribution and debt drawdown), as in the following illustrative table. Data should include an estimate of the cost of both physical and price contingencies during the construction period. The Project Sponsor should use the same cost categories and amounts as used in P – 9. The financing plan should indicate the ability to finance the construction of the proposed project under base case and contingency scenarios.

		Year 1												Year 2												
Item	Cost Categories Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Total
1	Environmental and Related																									
2	Engineering																									
3	Civil Works																									
4	Materials																									
5	Equipment																									
6	Construction																									
7	Construction Management																									
8	Other																									
9	Subtotal - Base Cost																									
10	Physical Contingencies																									
11	Price Contingencies																									
12	Subtotal - Installed Cost																									
13	Working Capital																									
14	AFUDC																									
15	Total Cost = Total Financing Req'd																									
16	Finance Drawdowns																									
17	Debt																									
18	Equity																									
19	Total Finance Drawdowns																									

Response:

P - 11. Describe the Project Sponsor's proposed financing sources and instruments:
-Sources of funds for construction and working capital - include name of entity providing debt financing, loan amounts, interest rates, repayment period, grace period during construction; and equity provided by Project Sponsor,
-Project Sponsor should also indicate how it would be able to finance unexpected repairs or replacement construction during the operating period, e.g., replacement of tower. Note: the operating period is the applicant's estimate of the useful life or accounting life of the transmission element(s).

Response:

P - 12. Provide the Project Sponsor's annual revenue forecasts for the project – including assumptions. The Project Sponsor should provide a draft version of the revenue requirement calculation in a format that is similar to what would be included in their

tariff application to FERC, indicating the requested tariff level and all assumptions used in the calculations. This should include but not be limited to the assumptions regarding rate of return, depreciation life, split between debt and capital, AFUDC and weighted cost of capital.

Response:

P - 13. Provide a Ratio of the Project Sponsor's or SPE's total Assets to the total projected capital costs of the project, based upon the most recent audited financial statements.

Response:

P - 14. Provide the following financial ratios for the most recent year adjusted to exclude transition bonds of subsidiaries, obtained from the Project Sponsor's most recent audited financial statements:

a. Funds from operations to interest coverage
b. Funds from operations to total debt
c. Total debt to total capital
d. Levels of the above ratios the Project Sponsor will maintain throughout the construction period of the proposed project

Response:

P - 15. If the Project Sponsor relies or will rely on an affiliate for credit, investment or financing arrangements, please demonstrate how these arrangements comply with all legal and regulatory requirements related to affiliate transactions.

Response:

P - 16. Provide a detailed estimate of the anticipated average annual operating and maintenance cost if a stand-alone project company, or the current direct operating and maintenance cost if the Project Sponsor is an incumbent PTO.

Response:

P - 17. Provide the Project Sponsor's assumptions for the cost estimate and the sensitivity analyses. (Note: all assumptions and sensitivities need to be documented).
- Cost sensitivities – specify the cost sensitivities included in the financing plan analysis. Project Sponsor should include a sensitivity that assumes at least a 30% cost overrun during the construction period and a 25% longer schedule;
- Interest rate sensitivities included in the financing plan analysis.

Response:

P - 18. Document the Project Sponsor's ability to cover increased costs associated with equipment failure after the project enters commercial operation – either additional maintenance or construction costs or incentives/penalties under the TCA with the ISO with respect to availability performance targets. Examples of incentives/penalties provisions in the TCA are included in Sections 12.3, 14.4 and Appendix C, Section 9.0 of the TCA filed with FERC on December 3, 2010.

Response:

P - 19. Provide the Project Sponsor's planned insurance coverage, including but not limited to covering negligent performance.

Response:

Project Management, Historical Performance Related

P - 20. For the transmission projects included in the response to P-2, provide the following:
- Overall project description;
- Initial schedule **and** final project in-service date;
- Overall cost summary, including initial budget forecast **and** final project cost;
- Major issues confronted and resolved during project;
- Typical management progress reports for the project;
- Other specific materials that reflect project management skills for an actual project.

Response:

Project Management, Project Related

P - 21. Provide a general description of the proposed approach to project management and scheduling (PM&S) for the transmission element.

Response:

P - 22. Provide the proposed management structure, organization, authority levels and resources committed to PM&S for the transmission element, including relevant experience and capability for proposed Project Manager (PM) and other relevant decision-makers for the project.

Response:

P - 23. Provide the systems proposed for use in tracking and reporting PM&S; include a proposed project progress report schedule, including cost tracking and forecasts, that the Project Sponsor proposes to provide to the ISO.

Response:

P - 24. Provide a proposed schedule for project development through release for operation that includes, as a minimum, key critical path items such as:
- Develop contracts for project work;
- Permitting; R/W and land acquisition;
- Engineering and design;
- Material and equipment procurement;
- Facility construction;
- Agreements (interconnection, operating, scheduling, etc.) with other entities;
- Pre-operations testing;
- Project in-service date;
- Other items identified by the Project Sponsor.

Response:

P - 25. For proposed project, identify the major risks and obstacles to a successful project completion on schedule and within cost budget and proposed mitigations to minimize the risks. Cover actions that the Project Sponsor will take to keep the project on schedule and describe schedule contingencies included in the overall schedule.

Response:

Cost Containment, Overall Process

P - 26. Describe the Project Sponsor's cost containment approach and capabilities and how these will be applied to the proposed project.

Response:

Process Used to Develop the Cost Estimate

P - 27. For the cost estimate for the Project Sponsor's proposed project described in P-12, provide the following information:
- Provide a description of overall process;
- Describe the specific steps in process;
- Describe the use of and development of a cost contingency;
- Specify the sources of data for the estimate and any key assumptions;
- Describe the relevant experience of the staff preparing the estimate;
- Describe the review process by senior staff for the estimate.

Response:

Cost Containment, Cost Cap

P - 28. Indicate the Project Sponsor's willingness (or not) to accept a binding cost cap (or some other binding cost containment measures) and if so, the amount of the cost cap. The

Project Sponsor may specify that the cost cap will be adjusted for certain increases in costs above the estimated amount.

Response:

5. ENVIRONMENT AND PUBLIC PROCESSES

E - 1. Provide a general overview of the various project activities needed to achieve siting approval, obtain rights of way (ROW) or other land acquisition for the project, and any other necessary public processes required to construct the project. List the steps and describe their purpose.

Response:

E - 2. Describe in general the proposed regulatory strategy that is planned to be used for the proposed project and which agencies and permits may be required and why. Base this on a review of the proposed project ROW and/or substation lands to be acquired. Provide a description of the business practices that will be followed (e.g. list of steps or flow chart).

Response:

E - 3. Provide a description of the firm or group who will be responsible for the siting, land acquisition and permitting aspects of the project. Specify the relationship between the Project Sponsor and these firms or groups (e.g. owned by the Project Sponsor, under contract to Project Sponsor, etc.)

Response:

a. For each of the firms or groups listed, indicate their individual responsibilities and provide a resume for each lead individual.

Response:

b. For each of these firms, provide a list of all transmission projects that have been completed (preferably in California or in the state where the work will be completed) in the last five years, and a reference for each – references should include a description of the work, the name of the client for whom the work was performed, and a client contact person, phone number and email.

Response:

c. For each firm or group listed, indicate what work the Project Sponsor has completed using these firms for similar areas of responsibilities.

Response:

E - 4. Using your best estimate and available resources, indicate whether any Federal discretionary permit(s) will be required, which agency and under which governing rule or statute. Describe these in detail e.g. EPA Clean Water Act, USACOE Section 401- 404, USFWS Biological Opinion required, etc.

Response:

E - 5. Indicate if any federal, Forest Service or BLM land is crossed and how the Project Sponsor will comply with the NEPA (National Environmental Policy Act) environmental process.

Response:

E - 6. For projects within the State of California:

a. Indicate which Agency is the expected California Environmental Quality Act (CEQA) Lead Agency. Explain why that agency was chosen and indicate whether that agency has agreed to be the lead agency for this project. Note: The ISO will require copies of all submitted permit applications (the CAISO anticipates that this will occur after the successful applicant Project Sponsor is identified). The Project Sponsor shall include the ISO on the recommended service list.

Response:

b. Indicate if the applicant will file with the CPUC for financial / environmental review and under what section of the pertinent General Order.

Response:

c. Explain what other Resource Agency permits will be required and the kind of permit to be filed (e.g. CDF&G California Endangered Species Act (CESA), Lake and Streambed Alteration (LSA), State Water Resources Control Board (SWRCB), etc.)

Response:

d. Explain why each permit is necessary. Identify if the construction impact or potential impact to protected species will generate the need for a discretionary permit. Provide a California Natural Diversity Data Base (CNDDB) map of the

project area, showing proposed transmission element(s) locations and potential alignments.

Response:

e. Provide a list of Best Management Practices[5] (BMPs) and Applicant Proposed Measures[6] (APMs) that would be applicable for the proposed project.

Response:

i. BMPs – provide Project Sponsor standing policies, related to siting and permit processes, that all employees are required to observe, how are they implemented, how are they reported.

Response:

ii. APMs –provide Project Sponsor mitigation measures that would be applied to reduce the potential environmental impact for a particular construction activity to ensure the impact is reduced below the level of a significant unavoidable impact. These are normally related to the CEQA checklist.

Response:

[5] BMPs, which are environmental industry standard terminology, are the applicant's standards that would be common to all projects, i.e. not specific to any particular project. For example, this could consist of company training policies that relate to required safety training, environmental sensitivity training, accident/injury reporting, community involvement programs involving both the local elected officials and the immediate community that will be impacted by the proposed project.

[6] An environmental consultant industry standard generic term found in any environmental application, that the project proponent would offer in their application submitted to their Lead Agency as initial mitigation for potential environmental impact that the applicant has identified. Normally APMs are fully accepted by the Lead Agency which would then build upon the offered measures based upon the Lead Agencies further assessment of construction impacts to the environment. For example, an applicant's APMs could be a commitment to limit project construction speed limits to 10 mph in order to limit fugitive dust and to re-fuel motor vehicles at least 100 feet from any body of water.

f. Provide a list of any ministerial[7] permits required, which agency the applicant will need to contact, and expected time frames for issuance.

Response:

g. Indicate if you expect to perform any public outreach (e.g. open houses, project hotline number, project update mailings etc) and describe the planned program in general.

Response:

h. Provide a generalized schedule of the permit activities anticipated and their dependencies and timelines.

Response:

E - 7. The following are related to transmission line ROW or substation land acquisition for the proposed project. Provide:

a. A general description of the land siting and acquisition needed for the proposed project and a map of the proposed project alignment and/or substation site on a suitable map base and scale - USGS quadrangle 1:24000 at a minimum. The map should show the study area for routing the project as well as any alternate routes, existing transmission lines, and avoidance areas (such as parks, airports, military installations, and areas of local, state or national interest and any other major exclusion areas). Show alternatives evaluated, dismissed and justification for preferred.

Response:

b. A basic key map of property ownerships anticipated to be acquired. Provide estimated acreages required. Include construction access, permanent access roads, laydown yards and landing zones if required.

Response:

[7] Ministerial permitting as opposed to discretionary permitting refers to permits that a local jurisdiction, city or county, would issue such as a street opening permit, traffic control permit, i.e. a permit that is obtained by completing a local application, paying the permit fee then proceeding and usually cannot be refused and is issued in the normal course of construction business. Discretionary permitting authority carries the police power to significantly condition a project, including denial, where the applicant would only have recourse in the courts to challenge work restrictions/conditions. Typically the proponent's application to the Lead Agency for environmental review is considered a discretionary permit. A Lead Agency in California has the discretion to approve, modify or deny an application.

c. A copy of the standard grant of easement anticipated and any temporary construction easement documents necessary for the project construction.

Response:

d. A description of your proposed strategy for crop loss and or business loss compensation.

Response:

e. An indication whether the Project Sponsor has eminent domain authority. Describe the negotiation strategy in general up to the necessity to file eminent domain. If applicant does not have eminent domain authority, describe strategy for acquisition of necessary land rights.

Response:

f. Describe long term ROW management requirements.

Response:

E - 8. Indicate whether the Project Sponsor has any existing ROW or substations or plans to acquire existing ROWs or substation property from another party on which all or a portion of the transmission element can be built.

Response:

E - 9. Provide information describing all transmission lines that were constructed in the last 5 years where the Project Sponsor or its contractor (designated to complete the environmental and public processes for this proposed project) completed the environmental and public processes. The information provided should include:

a. Transmission line routing

Response:

b. Rights of way acquired

Response:

c. All permits acquired to construct the project

Response:

d. The approach taken and business practices used to obtain the necessary permits to construct, operate and maintain the facilities

Response:

i. Federal National Environmental Policy Act (NEPA) or Cal State CEQA filing history and hardcopy of the final adjudication or Cal State Clearinghouse number;

Response:

ii. list of any discretionary Resource Agency permits acquired;

Response:

iii. copies of post project mitigation agreements for endangered species impact mitigation; and

Response:

iv. any management plans instituted to comply with Fed/State permits authorizing construction.

Response:

E - 10. Provide information describing all transmission substation projects that were constructed in the last 5 years in which the Project Sponsor or its contractor (designated to complete the environmental and public processes for this proposed project) completed the environmental and public processes. The information provided should include (for multiple projects, duplicate the headings (a-d) and Response boxes for each project):

a. Substation location

Response:

b. Land acquired

Response:

c. All permits acquired to construct the project

Response:

d. The approach taken and business practices used to obtain the necessary permits to construct, operate and maintain the facilities

Response:

i. Federal NEPA or Cal State CEQA filing history and hardcopy of the final adjudication or Cal State Clearinghouse number;

Response:

ii. list of any discretionary Resource Agency permits acquired;

Response:

iii. copies of post project mitigation agreements for endangered species impact mitigation; and

Response:

iv. any management plans instituted to comply with Fed/State permits authorizing construction.

Response:

E - 11. Provide information related only to transmission line and substation siting, permits, rights of way and land acquisition in the last 5 years. Provide:

a. A description of any project Notice of Violation (NOV) in the last 5 years

Response:

b. Fines levied by the Project approval authority and any other discretionary/ministerial authority

Response:

c. Remediation actions taken to avoid future violations

Response:

d. A summary of law violations by the Project Sponsor found by federal or state courts, federal regulatory agencies, state public utility commissions, other regulatory agencies, or attorneys general

Response:

e. Any notice of violations that were remediated to the satisfaction of the issuing agency or authority

Response:

f. A summary of any instances in which the Project Sponsor is currently under investigation or is a defendant in a proceeding involving an attorney general or any state or federal regulatory agency, for violation of any laws

Response:

E - 12. Provide any other relevant information, not listed above, that pertains to the Environmental and Public Processes that the Project Sponsor believes is relevant to the review of its project.

Response:

6. SUBSTATION

S - 1. With respect to each substation that will be required provide the location, interconnection with new or existing transmission facilities, bus and breaker arrangement, typical structure types and materials that will be used and any other unique aspects of the substation that the Project Sponsor proposes.

Response:

S - 2. Describe how your proposed project is consistent with the transmission elements in the ISO comprehensive Transmission Plan. Describe any technical differences (transmission configurations, substation configurations, voltages, etc.) in your project compared to the ISO plan.

Response:

S - 3. Describe the Applicable Reliability Standards and ISO Planning Standards that your project satisfies as they are defined in the ISO Tariff.

Response:

S - 4. Provide a list and a description of the firms or groups who will be responsible for substation design and construction. Specify the relationship between the Project Sponsor and these firms or groups (e.g. owned by the Project Sponsor, under contract to Project Sponsor, etc.)

Response:

a. For each of the firms or groups listed, indicate their individual responsibilities in the project and provide a resume for the lead individual for each. Identify and provide resume of the Engineer of Record (EOR) for the substation.

Response:

b. For each of these firms, provide a list of all transmission substation projects they have constructed within the last five years and a reference for each – reference should include a description of the work, the name of the client for whom the work was performed, and a client contact person, phone number and email.

Response:

c. For each firm or group listed, indicate what previous work the Project Sponsor has completed using these firms for similar areas of responsibility.

Response:

S - 5. Provide the following for the proposed substation or substations:

a. The substation siting criteria that will be used on the project (e.g. future area plans, constructability, earthquake activity, flood plain and mud slide considerations, etc.).

Response:

b. Basic parameters for the substation - primary and secondary voltage, BIL[8], initial design power capacity and final design power capacity (if developed in stages).

Response:

c. Preliminary design criteria document – provide a copy of the design criteria document that specifies the criteria that will be used in the design of the substation or its equivalent.

Response:

d. A list of standards and requirements that will be used in the substation design – e.g. IEEE 142, etc. Provide a complete list of California specific requirements.

Response:

[8] A design voltage level for electrical apparatus that refers to a short duration (1.2 x 50 microsecond) crest voltage and is used to measure the ability of an insulation system to withstand high surge voltage.

e. Substation single line diagram and general arrangement plan - Provide a single line diagram and a general arrangement plan for the substation, including:
   i. bus and breaker arrangement,
   ii. transformer arrangement,
   iii. automatic tap changer, if any,
   iv. power factor correction equipment if any,
   v. voltage regulator, if any,
   vi. ground fault limiting resistor or reactor, if any,
   vii. line terminations for existing or proposed transmission lines,
   viii. bus type and rating,
   ix. high voltage switch types and ratings,
   x. switchgear type and ratings,
   xi. battery system arrangements,
   xii. substation layout with equipment location, fencing, grounding, control/relay building, etc.,
   xiii. Station minimum BIL

Response:

f. The protection system criteria and specific components included in the substation design for primary and back-up protection. Identify any special protection considerations for the substation.

Response:

g. SCADA incorporated in the design:

Response:

   i. list the data that will be provided to the ISO

Response:

   ii. list the control functions that will be included, and which entity will be in control of the devices

Response:

h. The substation physical security criteria and specific security measures that will be incorporated in the final substation design.

Response:

i. The substation oil containment criteria and specific containment measures that will be incorporated in the final design.

Response:

S - 6. Provide a general description of existing substations presently owned by the Project Sponsor, that the Project Sponsor or its contractor (designated to the designer for the proposed project) designed and constructed. Include:

a. Number of stations by high side voltage

Response:

b. Number of transmission voltage circuit breakers by voltage

Response:

c. Installed transmission substation transformer capacity (MVA)

Response:

S - 7. Provide a description of all transmission substation projects that the Project Sponsor or its contractor (designated as the designer on the proposed project) designed and constructed in the last 5 years. Include (for multiple projects, duplicate the headings (a-d) and Response box for each project):

a. Design and construction firm
b. Single line diagram and general arrangement drawing for the project
c. Number, size and type of transmission circuit breakers installed
d. Number, size and type of substation transformers installed

Response:

S - 8. Provide any other information, not listed above, that pertains to the substation that the Project Sponsor believes is relevant to the review of its project.

Response:

7. TRANSMISSION LINE

T - 1. Provide a general overview and description of the transmission line that the Project Sponsor proposes including :

a. the starting and ending points,

Response:

b. proposed conductor size, bundling and type,

Response:

c. intervening substations,

Response:

d. typical structures (wood poles, lattice steel towers and tubular poles),

Response:

e. typical span lengths,

Response:

f. any other unique aspects of the line that the Project Sponsor proposes.

Response:

g. If any underground transmission is proposed, include:

Response:

i. a general description of the proposed substructures, conduits and duct banks,

Response:

ii. underground conductor size and type,

Response:

iii. proposed termination facilities, and

Response:

iv. other unique aspects of the underground portion of the line.

Response:

T - 2. Describe how your transmission line facilities are consistent with the transmission elements in the comprehensive Transmission Plan.

Response:

T - 3. Describe the Applicable Reliability Standards and ISO Planning Standards that your proposal satisfies as these are defined in the ISO Tariff.

Response:

T - 4. Provide a description of the firms or groups who will be responsible for the transmission line design and construction. Specify the relationship between the Project Sponsor and these firms or groups (e.g. owned by the Project Sponsor, under contract to Project Sponsor, etc.)

Response:

a. For each of the firms or groups listed, indicate their individual responsibilities and provide a resume for the lead individual for each.

Response:

b. For each of these firms, provide a list of all transmission projects that have been completed in the past 5 years and a reference for each – references should include a description of the work, the name of the client for whom the work was performed, and a client contact person, phone number and email.

Response:

c. For each firm or group listed, indicate what previous work the Project Sponsor has completed using these firms for similar areas of responsibility.

Response:

T - 5. Provide the following for the proposed overhead transmission line:

a. The transmission line siting criteria that will be used on the project (e.g. future area plans, linear features, constructability, etc.).

Response:

b. Basic parameters of the transmission line(s) - Design voltage, BIL (design or adjacent substation criteria), initial design power capacity and final design power capacity (if developed in stages).

Response:

c. Preliminary design criteria document – provide a copy of the design criteria document that specifies the criteria that will be used in the design of the transmission line.

Response:

d. Provide a list of standards and requirements that will be used in the transmission line design – e.g. IEEE 951, ASCE Manual No. 72, GO 95, etc. with an emphasis on providing a complete list of California specific requirements. Also provide any interconnection standards for interconnection of the project to existing utility system(s).

Response:

e. Single line diagram - Provide a single line diagram and a general arrangement plan of the proposed transmission line, including transmission line crossings by the new project line. Include isolation devices to be installed for operations and maintenance purposes.

Response:

f. If the proposed transmission line terminates in an existing utility substation, include a diagram of the bus/breaker arrangement and drawing of the proposed connection and termination for the transmission line facilities (even if these will be owned by the existing utility).

Response:

g. Support structures including wood poles, tubular poles, and lattice steel structures – provide:
    i. a description of the proposed support structures and conductor geometry,

Response:

    ii. structure foundations as appropriate and grounding criteria and implementation,

Response:

    iii. insulation level, insulator types,

Response:

iv. lightning protection

Response:

v. estimated right of way widths for each different segment of the project with drawings for each.

Response:

h. Line ratings – Provide the ampacity rating methodology including maximum conductor temperature that will be used to determine the normal and emergency ratings of the overhead line for summer and winter. Provide the proposed ampacity for the line under normal conditions and emergency operations (specify time limit for emergency operations) for summer and winter operating conditions.

Response:

i. Line impedance – provide the estimated per mile line impedances for each different line section proposed in the project, suitable for use in power flow, system stability and system protection studies. Also provide an estimate of the completed line overall impedance.

Response:

j. Transmission line crossings - provide a list by voltage and type of construction of lines crossed (either over or under) by the proposed project.

Response:

k. GO95 Grade of Construction - will the transmission line be designed to meet the requirements of GO95 Grade A or B?

Response:

l. Unique or special construction techniques proposed, including ROW clearing, construction and permanent access road construction, expected helicopter work, etc.)

Response:

T - 6. For any proposed underground transmission sections, provide:

a. Type of transmission cable, including splicing and cable grounding,

Response:

b. Substructures, conduits and duct banks, and splicing enclosures,

Response:

c. Termination facilities and structures,

Response:

d. Additional relevant information listed for the overhead line sections above (5a, b, c, d, e, f, g, h, i, j) that pertains to UG.

Response:

T - 7. Provide your plan for a constructability review of the project at various phases to identify and address potential problems that maybe encountered.

Response:

T - 8. Provide a general description of existing transmission facilities presently owned by the Project Sponsor, that the Project Sponsor or its contractor (designated to design the proposed project) designed and constructed. Include:

a. Miles of overhead transmission facilities by voltage. If the proposed project includes underground, include miles of underground transmission facilities by voltage.

Response:

b. Types of support structures for these lines (i.e., lattice steel structures, tubular steel poles, etc.)

Response:

T - 9. Provide information for all transmission line projects that the Project Sponsor or their contractor (designated to complete the design of the proposed project) has designed and constructed in the last 5 years. Include:

a. Design and construction firm

Response:

b. Single line diagram for the project

Response:

c. Pole and tower map for the project

Response:

d. Design voltage, miles of line and conductor size, type and bundling,

Response:

e. Types of supporting structures

Response:

T - 10. For transmission line elements, please provide the following information:

a. Corridor separation – Identify all existing or permitted transmission lines, including voltage, structure type, and separation, located in the same corridor as the proposed project.

Response:

T - 11. Provide any other relevant information, not listed above, that pertains to the transmission line that the Project Sponsor believes is relevant to the review of its project.

Response:

8. OPERATION AND MAINTENANCE

O-1 Provide a chart of the Project Sponsor's current organizations showing the reporting relationships of the maintenance and operations organizations. Describe the roles and responsibilities of the maintenance and operations organizations, including operating jurisdictions as they relate to the proposed project. Describe any organizational changes that are planned to accommodate the proposed project.

Response:

O-2 Provide resumes describing the qualifications of key management personnel in the maintenance and operating organizations. Relate each resume to a position on the organization chart provided in response to O-1.

Response:

O-3 Describe the experience over the past 5 years with operating and maintaining all transmission facilities by the Project Sponsor or Project Sponsor team members.

Response:

O-4 Describe the Project Sponsor's policies, processes and procedures for assuring that only persons who are appropriately qualified, skilled, and experienced in their respective trades or occupations are employed. Include qualifications and experience requirements for operators and field personnel.

Response:

O-5 Describe the Project Sponsor's training program for operations and maintenance personnel. Include initial and continuing education requirements for maintaining qualifications for classifications with operation and maintenance responsibilities (e.g. what are the training requirements for operators, linemen and substation electricians?). Identify training resources used.

Response:

O-6 Identify the NERC functions for which the Project Sponsor has registered or intends to become registered related to the proposed project. If the Project Sponsor plans to contract for services to perform the NERC functions, identify the contractor and the NERC functions for which it is registered.

Response:

O-7 If the Project Sponsor plans to contract for services to perform any NERC functions, describe how the Project Sponsor will ensure that these reliability standard(s) or requirement(s) will be accomplished?

Response:

O-8 Who will perform the Scheduling Coordinator function for the proposed project in accordance with ISO Tariff 4.3.1.2.? For which NERC function is, or will the designated Scheduling Coordinator be registered?

Response:

O-9 Describe the approach the Project Sponsor will use to assure compliance with NERC reliability standards for which Transmission Owners are responsible. Include descriptions of processes and procedures if available. Identify any Applicable Reliability Criteria for which Transmission Owners are responsible that require temporary waivers under TCA 5.1.6. Explain any.

Response:

O-10 Describe the approach the Project Sponsor will use to assure compliance with NERC reliability standards for which Transmission Operators are responsible. Include descriptions of processes and procedures if available. Identify any Applicable Reliability Criteria for which Transmission Operators are responsible that require temporary waivers under TCA 5.1.6. Explain any.

Response:

O-11 Describe, in general, how the Project Sponsor proposes to divide responsibility for NERC reliability standards between the Project Sponsor and the ISO in the Reliability Standards Agreement. Compare your response with existing agreements between the CAISO and other PTOs, and describe expected differences if any. Existing agreements are available on the CAISO website.

Response:

O-12 Describe the approach the Project Sponsor will use to assure compliance with NERC reliability standards related to cyber security as identified in CIP-001 to CIP-009. Include descriptions of processes and procedures if available.

Response:

O-13 Describe the applicable agreements that will define the Transmission Operator responsibilities and authority with respect to Generator Owner(s), Generator Operator(s), Planning Authority(ies), Distribution Provider(s), Transmission Owner(s), Transmission Service Provider(s), Balancing Authority(ies), Transmission Planner(s), and adjacent Transmission Operator(s).

Response:

O-14 Describe how the Project Sponsor will meet the requirement that Transmission Operators have adequate and reliable data acquisition facilities for its Transmission Operator Area and with others for operating information necessary to maintain reliability. Include back-up control center plans if any.

Response:

O-15 Provide information demonstrating that the Project Sponsor has been in compliance with the Applicable Reliability Standards for all transmission facilities that it owns, operates, and or maintains. This could include information for facilities outside the ISO controlled grid and should include available NERC compliance audit results and any notices of violation. Provide information describing the amount of transmission facilities subject to NERC compliance, e.g. miles of line by voltage class, number of substations by voltage class.

Response:

O-16 Describe the Project Sponsor's capability and experience that will enable it to comply with the activities required by TCA 6.1. Physical Operation of Facilities. (Operation, ISO Operating Orders, Duty of Care, Outages, Return to Service and Written Report)

Response:

O-17 Describe the Project Sponsor's capability and experience that will enable it to comply with the activities required by TCA 6.3 Other Responsibilities.

Response:

O-18 Will the project be subject to any encumbrance? If so, provide a statement of any Encumbrances to which any of the transmission lines and associated facilities to be placed under the ISO's Operational Control are subject, together with any documents creating such Encumbrances and any instructions on how to implement Encumbrances and Entitlements in accordance with the TCA 6.4.2.

Response:

O-19 Describe the Project Sponsor's capability and experience that will enable it to comply with the activities required by TCA 7 Operations and Maintenance. (Scheduled Maintenance, Exercise of Contractual Rights and Unscheduled Maintenance)

Response:

O-20 Describe the Project Sponsor's capability and experience that will enable it to comply with the activities required by TCA 9.2. Management of Emergencies by Participating TOs and 9.3. System Emergency Reports: TO Obligations. Identify resources available to respond to major problems on the proposed project. Include resources available through mutual assistance agreements and describe expected response times. Provide samples of emergency operating plans.

Response:

O-21 Describe the Project Sponsor's capability and experience that will enable it to comply with the maintenance standards described in Appendix C of the TCA.

Response:

O-22 Indicate whether or not the project sponsor's standards include the elements listed in TCA Appendix C 5.2.1. Transmission Line Circuit Maintenance and 5.2.2. Station Maintenance. If not, indicate whether the Project Sponsor will revise its standards to include those elements for the facilities to be subject to conditions of the TCA Appendix C. (Note: Each PTO will prepare its own Maintenance Practices that shall be consistent with the requirements of these ISO Transmission Maintenance Standards. The effectiveness of each PTO's Maintenance Practices will be gauged through the Availability performance monitoring system. Each PTO's adherence to its Maintenance Practices will be assessed through an ISO review. (TCA Appendix C Maintenance Procedure 4).

Response:

O-23 Provide the Project Sponsor's preexisting procedures and historical practices for managing ROW for transmission facilities. If the Project Sponsor does not have such preexisting procedures, provide a detailed description of its plan for managing ROW. Describe the project Sponsor's Vegetation Management plan as it applies to the proposed project.

Response:

O-24 Provide information, notices or reports regarding the Project Sponsor's experience with implementation and compliance with its standards for inspection, maintenance, repair and replacement of similar facilities.

Response:

O-25 Describe the Project Sponsor's capability and experience that will enable it to provide its Availability Measures in accordance with TCA Appendix C 4.3 as applicable. Provide sample availability measures, or similar measures, for other facilities owned by the Project Sponsor to demonstrate the Project Sponsor's capability and experience.

Response:

O-26 Would adding the project to the ISO controlled grid require any changes or exceptions to the provisions of the TCA? If "yes", describe.

Response:

9. MISCELLANEOUS:

M-1: Provide any additional evidence or support that the Project Sponsor believes supports its selection as an approved Project Sponsor. This can include, but is not limited to, other benefits the Project Sponsor's proposal provides, specific advantages that the Project Sponsor or its team have, or any efficiencies to be gained by selecting the Project Sponsor's proposal.

Response:

Approval History

Approval Date: December 19, 2012

Effective Date: December 19, 2012

Application Owner: Stephen Rutty

Application Owner's Title: Director, Grid Assets

Revision History

Version	Date	Description
3	4-4-2013	Revised Version Released – Add Version Control, Approval History, and Revision History Sections
2	4-1-2013	Revised Version Released - General clarification modifications and clean-up for 2012-2013 TPP Phase 3 Bid Window Opening
1	12-19-2012	Initial Version Released