REQUEST WINDOW SUBMISSION FORM

Please complete this submission form and the Attachment A (technical data) and send the documentation to the ISO contact listed in section 2. Please note that this form should be used for the purpose of submitting information that applies to the scope of Request Window that is a part of the ISO Transmission Planning Process only. For more information on the Request Window, please refer to the Business Practice Manual (BPM) for the Transmission Planning Process which is available at: http://www.caiso.com/planning/Pages/TransmissionPlanning/Default.aspx.

The undersigned ISO Stakeholder Customer submits this request to be considered in the CAISO Transmission Plan. This submission is for (check one)[1]:

- ☒ Reliability Transmission Project (refer to section 1 of Attachment A)
  - ☒ Submission is requested by a PTO with a PTO service territory
  - ☐ Submission is requested by a non-PTO, a PTO without a PTO service territory or a PTO outside its PTO service territory.
- ☐ Merchant Transmission Facility (refer to section 1 of Attachment A)
- ☐ Location Constrained Resource Interconnection Facility (LCRIF) (refer to sections 1 & 2 of Attachment A)
- ☐ Project to preserve Long-term Congestion Revenue Rights (CRR) (refer to section 1 of Attachment A)
- ☐ Demand Response Alternatives (refer to section 3 of Attachment A)
- ☐ Generation Alternatives (refer to section 4 of Attachment A)

1. Please provide the following basic information of the submission:

a. Please provide the project name and the date you are submitting the project proposal to the ISO. It is preferred that the name of the project reflects the scope and location of the project:

Project Name: **Central California Transmission--Greater Fresno Area Upgrade Project**

Submission Date: **September 14, 2012**

b. Project location and interconnection point(s): **Project interconnects with Los Banos, Panoche, or Gates substations at the Western terminus and the Herndon (or Gregg) substations and the proposed North Fresno Substation at the Eastern terminus.**

c. Description of the project. Please provide the overview of the proposed project (e.g. overall scope, project objectives, estimated costs, etc.): **The project establishes a new 230 kV**

[1] Please contact the ISO staff at requestwindow@caiso.com for any questions regarding the definitions of these submission categories in this form.

Station in the vicinity of Raisin City Junction (RCJ), loops the existing Gates-Gregg, Gates McCall, Panoche-Kearney, and Panoche McCall 230 kV lines into the proposed Station, installs 2-230 kV lines between Los Banos, Panoche or Gates and the proposed station, installs a 230 kV line between the proposed station and Herndon or Gregg, and installs a 230 kV line between the proposed station and the proposed North Fresno Substation. Additional details on the project scope, objectives and estimated costs are included in the attachment to this document

d. Proposed In-Service Date, Trial Operation Date and Commercial Operation Date by month, day, and year and Term of Service.

Proposed In-Service date: **5 / 30 / 2020**

Proposed Trial Operation date (if applicable): **/ /**

Proposed Commercial Operation date (if applicable): **/ /**

Proposed Term of Service (if applicable):

e. Contact Information for the Project Sponsor:

Name:	**Stephen Metague**
Title:	**Senior Director, Transmission Project Development**
Company Name:	**Pacific Gas and Electric**
Street Address:	**77 Beale Street, Mail Code B14J**
City, State:	**San Francisco, CA**
Zip Code:	**94106**
Phone Number:	**415-973-6545**
Fax Number:	**415-973-5974**
Email Address:	**SJMd@pge.com**

2. This Request Window Submission Form shall be submitted to the following ISO representative:

Name: Dana Young

Email Address: requestwindow@caiso.com

3. This Request Window Submission Form is submitted by:

Check here if the information is the same as the Project Sponsor information in 1 (f) of this submission: ☒

Name: Redacted

Title: **Manager**

Company Name:	**Pacific Gas & Electric**
Street Address:	Redacted
City, State:	
Zip Code:	
Phone Number:	Redacted
Fax Number:	Redacted
Email Address:	Redacted

Central California Transmission -- Greater Fresno Area Upgrade Project

As part of the CAISO's 2012/2013 transmission planning process, the CAISO has undertaken a reliability and economic assessment of the Central California area. This study will consider (1) potential impacts on the 500 kV transmission system between Tesla and south of Midway, (2) the import and export needs of the Greater Fresno Area[2], and (3) the need for added operational flexibility that could be provided by the Helms Pumped Storage project (PSP). This assessment is scheduled for completion in December 2012.

On August 15, the CAISO posted its preliminary study results for the 2012/13 Reliability Assessment. These results show that under a defined set of circumstances, it would be reasonable to expect thermal overloads on some 230 KV facilities used to serve the Greater Fresno area loads.

1. Description and Scope of Proposed Project (Preliminary)

To mitigate the thermal overloads found in the CAISO's preliminary results, PG&E proposes the following project

1. Establish a 230 kV Switching Station in the vicinity of Raisin City Junction (RCJ) just southwest of the City of Fresno. This Station would consist of (a) six-complete breaker-and-a-half (BAAH) bays (three-breakers per bay) to terminate 12-230 kV lines, and (b) one-partial BAAH bay (two-breakers) to terminate a Static VAR Compensator (SVC).
2. Loop the existing Gates-Gregg, Gates McCall, Panoche-Kearney, and Panoche McCall 230 kV lines into the proposed RCJ Switching Station.
3. Install a 230 kV Double Circuit Transmission Line (DCTL) from Los Banos, Panoche or Gates to the proposed RCJ Switching Station.
4. Install a 230 kV Single Circuit Transmission Line (SCTL) from RCJ Switching Station (Item1) above to Herndon or Gregg substations.
5. Install a 230 kV SCTL from the proposed RCJ Switching Station to the proposed North Fresno 230/115 kV Substation.[3]
6. Install a 225 MVAR SVC at the proposed RCJ Switching Station

Attachment 1 of this document provides a single line diagram of the proposed arrangement.

PG&E currently estimates that the cost of implementing this project will be $400 to $500 million[4] and the target operating date is 2020.

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[2] The Greater Fresno Area includes the Central California Counties of Fresno, Madera, Mariposa, Merced and Kings.

[3] PG&E is proposing the North Fresno 230/115 kV Substation in a separate submittal in this 2012 Request window for reliability-driven projects.

[4] Estimated cost is based on the engineering based unit cost estimates published on the CAISO Webpage. Those costs do not include escalation, contingencies, permitting costs, environmental mitigation costs, land acquisition

2. CAISO 2012 Annual Assessment

The CAISO preliminary results indicate the following deficiencies:

Table 1: CAISO Preliminary Study Results (Fresno Area) – Summer Peak Period

Redacted

Table 2: CAISO Preliminary Study Results (Fresno Area) – Other Periods

Redacted

To mitigate these impacts, PG&E proposes the Upgrade Project, described above.

costs, and other overheads. The cost estimate is subject to change as the Plan of Service is refined and more detailed engineering costs are prepared.

[5] The 2012 Portfolio will be considered in the Additional Reliability Assessment studies described in Section 3, below.

Between the initial year of impact and the operating date of the Phase 1 Upgrades, PG&E proposes that Fresno Area generation, including Helms and other thermal generation be relied on to mitigate the overloads.

3. Additional Reliability Assessment

In conjunction with the ongoing CAISO Central California study which is scheduled for completion in December 2012, PG&E will develop and analyze the following three alternatives:

> Alternative 1 - Status Quo: With no added transmission the CAISO analysis indicates that as early as 2017, this case would not comply with NERC reliability standards.
>
> Alternative 2 - Reconductor Existing Lines: Implement reconductoring and other relatively small transmission upgrades (for example, voltage support), as needed to meet reliability standards and criteria.
>
> Alternative 3 - Proposed Project,add new 230 KV transmission into the greater Fresno Area: Implement the Greater Fresno Area Upgrade Project. This alternative meets the necessary reliability needs.

The analysis that is underway involves Power System Analysis, Helms water analysis, and voltage stability analysis.

- Power System Analysis.

The power system analysis is investigating both the 2017 and 2022 system requirements for each of the alternatives to identify:

(1) The level, duration, and number of facilities that would have expected thermal overloads in the Status Quo case (Alternative 1).
(2) The transmission facility upgrades that would be needed over time to maintain transmission reliability standards and criteria needed to analyze the Reconductoring case. During some periods it still may be necessary to generate at Helms to maintain the Greater Fresno Area reliability. The analysis will identify the conditions and the level of Helms generation required to meet the transmission reliability criteria under Alternative 2.
(3) The best configuring and phasing options for the Proposed Project under Alternative 3.

The Power System Analysis will include the steady state power flow, transient stability, and voltage stability analyses.

- Helms PSP Water Analysis

This analysis will rely on input from the Power System Analysis. In addition, to the extent that any of the alternatives relies on or restricts the use of the Helms PSP resource to maintain local Fresno area reliability, PG&E will analyze the impact of these restrictions on the long term availability of the resource. For example, if there are restrictions to pumping during the partial peak period, this will have a future impact on the ability of the resource to be available for future peak period use.

4. Additional Project Information:

While PG&E contemplates being the majority owner and lead developer for the needed reliability project, PG&E may enter into a joint venture with one or more project co-sponsors.

This Central California Transmission -- Greater Fresno Area Upgrade Project submittal is separate from but closely related to the North Fresno 115 kV project, which is also submitted by PG&E as a reliability project in the 2012 Reliability Request Window.

Attachment 1:

Redacted