

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

AGENDA ID # 16573
RESOLUTION E-4886
July 12, 2018

R E S O L U T I O N

Resolution E-4886. Pacific Gas and Electric agreements with California High-Speed Rail Authority and Caltrain's Peninsula Corridor Joint Powers Board for electric system interconnection work.

PROPOSED OUTCOME:

- Approves agreements to conduct technical studies for the required PG&E electrical interconnections but finds that agreements specifying cost allocation principles that could result in high costs to ratepayers must be considered in a Formal Proceeding.
- Orders PG&E not to use an Advice Letter process to seek approval for interconnection work agreements that identify cost allocations to ratepayers unless so ordered by a subsequent Commission decision.

SAFETY CONSIDERATIONS:

- All work required to interconnect PG&E's transmission system with California High-Speed Rail Authority (CHSRA) and Caltrain Peninsula Corridor Joint Powers Board (Caltrain) facilities will conform to all current and applicable laws, Commission regulations, and industry and PG&E safety requirements as documented in the interconnection agreements.

ESTIMATED COSTS:

- PG&E preliminarily estimates ratepayer costs at \$737 million for the CHSRA Project (CAISO 2017) and \$228 million for the Caltrain Project (CAISO 2016) for the required electrical interconnection work.

This Resolution addresses PG&E Advice Letter 5046-E filed on April 5, 2017, including substitute sheets received on September 12, 2017, which seeks approval of five agreements with CHSRA. Advice Letter 5046-E replaces Advice Letter 4570-E and Advice Letter 4570-E-A in full.

This Resolution also addresses PG&E Advice Letter 5139-E filed on September 1, 2017, which seeks approval of Supplement #3 to the Master Agreement with Caltrain.

SUMMARY

The CHSRA and Caltrain projects require PG&E to perform two types of work: (1) *relocation work*, and (2) *interconnection work*. Relocation work refers to work required to relocate PG&E electric and gas utility facilities. Interconnection work refers to PG&E infrastructure upgrades necessary to provide electric power to the projects. This Resolution addresses the interconnection agreements filed by PG&E with Advice Letter 5046-E and Advice Letter 5139-E. Relocation work is not addressed in the two Advice Letters or by this Resolution.

General Order 96-B, Section 8.2.3, allows utilities to begin work for Government Agencies, such as CHSRA and Caltrain, prior to filing for approval with the Commission. Subsequent to beginning the work, energy utilities must promptly notify the Commission by Tier 3 Advice Letter, which requires disposition by Resolution (General Order 96-B, Energy Industry Rules Section 5.3(8)). Pursuant to these sections of General Order 96-B, PG&E filed for Commission approval five interconnection agreements with CHSRA and one interconnection agreement with Caltrain. All of the filed interconnection agreements had already been executed by the parties, and PG&E completed a series of complex technical studies and planning activities required by those interconnection agreements that were paid in full by CHSRA and Caltrain.

This Resolution approves four of the five interconnection agreements between PG&E and CHSRA filed with Advice Letter 5046-E. The four agreements are for the completion of technical reports to identify the scopes of work required for PG&E to provide electrical power to the CHSRA Project. The fifth agreement, which was filed with Advice Letter 5046-E (HSR 16-56), must be submitted via application because the cost allocation details included in the agreement could result in ratepayer costs and there are outstanding issues regarding jurisdiction over the allocation of transmission interconnection-related costs. Similarly, the interconnection agreement between PG&E and Caltrain filed with Advice Letter 5139-E must be submitted via application (Supplement #3 to the Master Agreement) because it also addresses cost allocation issues.

As identified below, those two agreements raise material issues of both fact and law regarding cost allocations to ratepayers that may require evidentiary hearings. The cost allocation proposals also raise policy issues which should be addressed by the Commission in a Formal Proceeding. For all of these reasons, the agreements should be filed in an application, rather than through an Advice Letter process. Consistent with General Order 96-B, Rules 5.1–5.3 and 7.5.1, this Resolution orders that PG&E not use an Advice Letter process to seek approval for interconnection work agreements that identify cost allocations to ratepayers unless ordered by Commission decision.

The high-level cost allocation principles defined in agreements HSR 16-56 and Supplement #3 to the Master Agreement for the CHSRA and Caltrain projects, respectively, would establish precedent for how costs, in general, would be allocated to PG&E ratepayers. The principles are similar for both projects. CHSRA and Caltrain would pay for the interconnection costs in advance but would seek reimbursement from PG&E ratepayers for some of the costs. PG&E anticipates that reimbursement may occur within five to ten years for the portion of interconnection work attributable to new or upgraded electrical facilities that are turned over to the operational control of the California Independent System Operator (CAISO).

PG&E presented preliminary cost estimates for the interconnection work during the CAISO transmission planning processes on September 22, 2017 (CHSRA Project; \$737 million) and September 22, 2016 (Caltrain Project; \$228 million). The

costs for which CHSRA and Caltrain would seek reimbursement, however, are not yet known. The five CHSRA agreements filed for Commission approval do not allocate specific costs to ratepayers. For the Caltrain agreement, although a portion of the estimated interconnection costs are identified (\$46 million), it is not yet known how much of the cost would be allocated to ratepayers. The agreements for both projects reflect that at least some of the costs are expected to be paid by PG&E ratepayers. PG&E indicated that it will continue to negotiate cost allocation with CHSRA and Caltrain in 2018. Negotiations with CHSRA may extend into 2019 or beyond.

BACKGROUND

California High-Speed Rail Project

CHSRA is responsible for planning, designing, building, and operating the first high-speed rail system constructed in the United States. The system would run from San Francisco to Los Angeles/Anaheim (Project Phase 1, about 520 miles) at speeds capable of more than 200 miles per hour. The system will eventually extend to Sacramento and San Diego (Phase 2) and operate along 800 miles of rail. The CHSRA Project's Initial Operating Segment is planned to extend from San Jose to Bakersfield. PG&E plans to interconnect with CHSRA Project electrical infrastructure at ten sites: Site 4 (Gilroy) through Site 13 (Bakersfield). Testing of the completed high-speed rail infrastructure and upgraded PG&E infrastructure is expected to occur in 2026/2027 along the Gilroy–San Jose/San Francisco and Madera–Bakersfield rail segments (CHSRA Project Draft 2018 Business Plan). Additional project information is provided at: <http://www.hsr.ca.gov>.

Relocation Work Filings (CHSRA Project)

To date, the Commission has adopted one Resolution approving a contractual agreement between PG&E and CHSRA: Resolution G-3498 (October 13, 2016). Resolution G-3498 defined cost allocation to utility ratepayers for the relocation of utility facilities as contemplated in the California High-Speed Rail Act (PU Code Section 185000 et seq.). Cost allocation for electric transmission system interconnection work required to provide power the CHSRA project had not

been addressed in a filing to the Commission prior to Advice Letter 5046-E (2017), which is the subject of this Resolution.

Caltrain Peninsula Corridor Electrification Project

This Project is part of the larger Caltrain Modernization Program, which will electrify and upgrade the performance, efficiency, capacity, safety, and reliability of the Caltrain commuter rail service. PG&E plans to interconnect with Caltrain Project electrical infrastructure at two sites: Site 1 (San Francisco) and Site 3 (San Jose). Final system testing of the completed Caltrain infrastructure and upgraded PG&E infrastructure along the rail alignment is planned to begin by 2021 (Caltrain November 2017 Fact Sheet). Project information is provided at: <http://www.caltrain.com/projectsplans/CaltrainModernization/Modernization/PeninsulaCorridorElectrificationProject.html>

Interconnection Work Filings (Caltrain Project)

To date, the Commission has adopted two Resolutions approving contractual agreements between PG&E and Caltrain: Resolution E-4811 (December 15, 2016) and Resolution E-4830 (April 27, 2017). The Resolutions approved agreements related to the interconnection of PG&E facilities necessary to provide power to the Caltrain Project. Cost allocation to PG&E ratepayers was not addressed in either Resolution because Caltrain agreed to pay 100 percent of costs incurred by PG&E for all work associated with those agreements.

The first Resolution approved a Master Agreement with PG&E for interconnection work and Supplement #1 to the Master Agreement. Supplement #2 and Supplement #5 to the Master Agreement were approved by the second Resolution. Supplement #3, which is the subject of this Resolution, describes preliminary cost allocation principles to be applied to the Caltrain Project—the same principles that will apply to the CHSRA Project.

Supplement #4 (not yet filed) will cover final design, engineering, and construction of upgrades to the two PG&E substations that are required to power the Caltrain Project. At its February 1, 2017 meeting, the Peninsula Corridor Joint Powers Board of Directors authorized execution of Supplement #4 to the Master Agreement, but it has not yet been finalized and filed with the Commission.

Supplement #4 is expected to be the final supplement to the Master Agreement, and PG&E anticipates it will be submitted to the Commission for approval in 2018.

The Commission has not yet received a filing from PG&E regarding the relocation work required for the Caltrain Project.

NOTICE

Notices of PG&E Advice Letter 5046-E and Advice Letter 5139-E were made by publication in the Commission's Daily Calendar. PG&E stated that copies of its advice letters were distributed in accordance with Section 4 of General Order 96-B to parties shown on a distribution list attached to Advice Letter 5046-E and Advice Letter 5139-E.

PROTESTS

Advice Letter 5046-E and Advice Letter 5139-E were not protested.

DISCUSSION

The CHSRA and Caltrain projects require PG&E to perform two types of work: (1) relocation work, and (2) interconnection work. Relocation work refers to work required to relocate PG&E electric and gas utility facilities. Interconnection work refers to PG&E infrastructure upgrades necessary to provide electric power to the projects. This Resolution addresses the interconnection agreements filed by PG&E with Advice Letter 5046-E and Advice Letter 5139-E. Relocation work is not addressed by this Resolution.

General Order 96-B, Section 8.2.3, allows utilities to begin work for Government Agencies, such as CHSRA and Caltrain, prior to filing for approval with the Commission. Subsequent to beginning the work, energy utilities must promptly notify the Commission by Tier 3 Advice Letter, which requires disposition by Resolution (General Order 96-B, Energy Industry Rules Section 5.3(8)). Pursuant to these sections of General Order 96-B, PG&E filed for Commission approval five interconnection agreements with CHSRA and one

interconnection agreement with Caltrain. All of the filed interconnection agreements had already been executed by the parties, and PG&E completed a series of complex technical studies and planning activities required by those interconnection agreements that were paid in full by CHSRA and Caltrain.

Specific costs are identified in several of the interconnection agreements filed for the CHSRA Project but will be paid in full by CHSRA. Agreements HSR 10-10, HSR 14-37, HSR 14-37a1, HSR 14-37a2, and HSR 16-56 between PG&E and CHSRA are summarized in Table 1. The first four agreements identified are for the completion of technical reports to identify the scopes of work required for PG&E to provide electrical power to the CHSRA Project.

Table 1. Agreements between California High Speed Rail Authority and Pacific Gas and Electric Company for Interconnection Work Filed in Advice Letter 5046-E

Agreement Number	Topic	Value*	Paid by CHSRA	Signed	Term
HSR 10-10	Preliminary engineering work and initial studies/reports	\$500,000	100%	December 2012	Through June 2013
HSR 14-37	Updated technical study reports	\$3.26 million	100%	June 2015	Through September 2017
HSR 14-37a1	Additional studies for additional interconnection sites, updates HSR 14-37	\$1.71 million	100%	July 2015	Through September 2017
HSR 14-37a2	Updates to contractual language in HSR 14-37a1	none	100%	December 2016	Through September 2017
HSR 16-56	Engineering and permitting	\$36 million	100%	January 2017	Through January 2019

CHSRA provided an update to Energy Division by email in November 2017 describing its rigorous review of PG&E's proposed facility upgrade requirements. CHSRA stated that pursuant to HSR 14-37 (and its two supplements), PG&E ran technical studies to determine the system requirements to serve the CHSRA Project. All costs were paid by CHSRA. Upon PG&E's completion of these studies, CHSRA (along with Commonwealth, a third-party expert hired by CHSRA) reviewed the studies and provided PG&E with a thorough due diligence review of each study detailing any alternative interconnection and network/facility upgrade proposals, approaches, modifications and/or suggested improvements (the Additions). PG&E then considered the Additions presented and consulted with CHSRA to document all Additions PG&E determined needed to be incorporated into its proposed final system design. These reviews and discussions lead to a greatly pared down version of the initial requirements.

The fifth agreement (HSR 16-56) identifies CHSRA and PG&E interconnection work design responsibilities for utility infrastructure. PG&E stated that it will complete design and engineering work for the required network upgrades customarily provided to similarly situated customers (Advice Letter 5046-E and Advice Letter 5139-E). CHSRA design responsibilities include line extensions and other facilities required to enable interconnections that are not located on property owned by PG&E. Generally speaking, PG&E will have design responsibility for substation and network upgrades, and the Authority will have design responsibility for everything else. HSR 16-56 deals with facilities that will ultimately be owned by PG&E, whether designed by PG&E or CHSRA.

Under HSR 16-56, CHSRA told Energy Division that parties are proceeding with the design of new facilities. While CHSRA will initially pay for all work to design and construct the new facilities, the ultimate cost allocation will be determined later pursuant to the high-level cost allocation principles set forth in HSR 16-56.¹ These principles do not include any bright-line rules or calculations. Specific cost allocations will be discussed after final completion of the detailed technical

¹ See CHSRA Agreement HSR 16-56, Section V (Cost Allocation, Cost Estimates, and Payment).

documents. The same general cost allocation language is used Supplement #3 for the Caltrain project (see next section). Among the complexities in the design responsibility and cost allocation negotiations completed to date has been the CHSRA and Caltrain requirement for two transmission-level feeds.

CHSRA has not yet committed to any portion of PG&E's estimated interconnection work costs. Costs will be specific to the existing infrastructure available at each interconnection site, the site location, and other factors still being negotiated; hence, final cost allocations may differ from the cost allocation percentages determined for the two Caltrain interconnection sites. CHSRA explained in a November 21, 2017 comment letter on Advice Letter 5139-E that technical differences between the CHSRA and Caltrain projects will dictate the extent of work and facilities required for interconnection to PG&E electrical facilities. CHSRA states that these differences will affect the fair allocation of interconnection work costs.

PG&E stated to Energy Division staff in 2017 that it expects to amend interconnection agreement HSR 16-56 in 2018. Cost allocation negotiations between PG&E and CHSRA for the interconnection work will continue in 2018 and may extend into 2019 or beyond.

Agreement HSR 16-56 Engineering and Design Reports for Points of Interconnection and Final Permitting

In coordination with PG&E's review and oversight, CHSRA will develop one Engineering and Design Report for each *Point of Interconnection*—each of the ten points at which the CHSRA Project electric system will interconnect with the PG&E electric system between Gilroy and Bakersfield and the interconnection point for the CHSRA Project's heavy maintenance facility. The heavy maintenance facility has not yet been sited but is expected to be constructed along the Central Valley rail alignment.

Each Engineering and Design Report will detail and advance the design of the CHSRA design responsibility items and may be used to support CHSRA environmental approvals and submittal for issuance of any required General Order 131-D permits. The Engineering and Design Reports will include: plans, maps, schematics, project descriptions, project schedule, equipment and material

lists, cost estimates and other information needed to ensure timely permitting, procurement, and construction.

A specific cost (\$46 million) is identified in the interconnection agreement filed for the Caltrain Project. PG&E ratepayers are expected to pay some of this cost, but the specific percentage is not yet known. Supplement #3 to the Master Agreement for the Caltrain Project was signed in August 2017. With Supplement #3, Caltrain authorized the allocation of up to \$46 million as an advance payment for the required interconnection work (Advice Letter 5139-E; Peninsula Corridor Joint Powers Board of Directors July 6, 2017 meeting minutes). Although a portion of the interconnection costs are identified, and while Caltrain is expected to pay up front, it is unclear how much Caltrain may ultimately be reimbursed by PG&E ratepayers. PG&E's cost estimates are specific to the existing infrastructure available at the two interconnection sites.

The same general cost allocation language used in Supplement #3 is used in CHSRA agreement HSR 16-56 (see preceding section). Supplement #3 describes cost allocation to ratepayers for the interconnection work at a high level and without specific percentages.² Cost allocation negotiations between PG&E and Caltrain for the interconnection work agreements are expected to conclude in 2018.

Cost allocation principles defined in the interconnection agreements for the CHSRA and Caltrain projects establish precedent for how costs would be allocated between CHSRA, Caltrain, and PG&E ratepayers. The principles are similar for both projects and should be submitted via application as required by General Order 96-B for the Commission's consideration. For the CHSRA Project, PG&E filed Agreement HSR 16-56, and for the Caltrain Project, PG&E filed Supplement #3 to their Master Agreement with Caltrain. According to the agreements, costs would be assigned to ratepayers based on the extent to which PG&E's work is attributed to facilities turned over to CAISO operational control,

² See Caltrain Supplement #3 to the Master Agreement, Section 4 (Payment of Costs) and Section 5 (Further Process as to Cost Allocation Rules).

and as approved by FERC. CHSRA and Caltrain would pay the interconnection costs up front, and PG&E would then coordinate with the CAISO to seek FERC authorization of reimbursement from ratepayers. PG&E expects that reimbursement may occur within five to ten years.

General Order 96-B identifies matters appropriate for Advice Letters and Formal Proceedings and rules for the disposition of Advice Letters filed that require a Formal Proceeding (Rules 5.1–5.3 and 7.5.1). The Advice Letter process provides a quick and simplified review of the types of utility requests that are expected neither to be controversial nor to raise important policy questions.

PG&E presented preliminary cost estimates for the interconnection work during the CAISO's transmission planning processes on September 22, 2016 (Caltrain Project; \$228 million) and September 22, 2017 (CHSRA Project; \$737 million). PG&E notified the Commission that costs are now estimated to be lower than their 2016 estimate for the Caltrain Project. The cost-estimate range presented to the CAISO for the CHSRA Project was -30% to +50% or \$519.9 million to \$1.1 billion. It is not known, at this time, how much of the interconnection work will cost or how much would be allocated to ratepayers.

Because of the potentially high costs to ratepayers, changing estimates, and the site specific/factual nature of the cost allocations, evidentiary hearings may be required. In addition, factual issues remain. PG&E stated to Energy Division staff in 2017, for example, that it expects to amend the interconnection agreement HSR 16-56 in 2018. For both projects, cost allocation negotiations with PG&E have yet to conclude. Facts will be available in the future that Energy Division staff expect could require evidentiary hearings.

The Advice Letter process does not provide for evidentiary hearings. Matters that require evidentiary hearings may be considered only in a Formal Proceeding (Rules 5.1–5.3 and 7.5.1). In addition to the need to address material issues of fact, the two agreements raise issues of law and policy which should be addressed by the Commission. Consequently, **the Advice Letter process is not appropriate for approval of the cost allocation issues raised.**

PG&E should file an application with the Commission for approval of Agreement HSR 16-56 and Supplement #3 to their Master Agreement with Caltrain. That application should, among other things, identify and discuss all relevant PG&E or CAISO transmission tariffs, and state or federal laws, or other legal principles, that address cost allocation of transmission work requested by others, and how or whether those principles should apply for the proposed agreements. The application should also provide a current estimate for the total costs anticipated to be incurred under both agreements, including the Association for Advancement of Cost Engineering contingency range those estimates are based on, and the specific contingency included in the estimate.

CHSRA is the California Environmental Quality Act (CEQA) Lead Agency for the CHSRA Project, and Caltrain is the Lead Agency for the Caltrain Project.

For the CHSRA Project, the Federal Railroad Administration is the Lead Agency under the National Environmental Policy Act (NEPA). For the Caltrain Project, the Federal Transit Authority completed an Environmental Assessment and Finding of No Significant Impact. The Caltrain electrification corridor is also identified in CHSRA Project environmental documentation. The respective lead agencies will complete all required environmental reviews, public notices, documentation, and monitoring activities for the interconnection work pursuant to CEQA and NEPA. Refer to the respective project website for environmental review status. The websites are listed in the Background section of this Resolution.

COMMENTS

PU Code Section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments, and will be placed on the Commission's agenda no earlier than 30 days from today.

FINDINGS

1. This Resolution addresses the interconnection agreements filed by PG&E with Advice Letter 5046-E and Advice Letter 5139-E pursuant to General Order 96-B (Section 8.2.3 and Energy Industry Rules Section 5.3(8)) for services to government agencies. Relocation work is not addressed by these Advice Letters.
2. Specific costs are identified in several of the interconnection agreements filed for the CHSRA Project, but the specific costs identified would be paid in full by CHSRA.
3. Interconnection agreements HSR 10-10, HSR 14-37, HSR 14-37a1, and HSR 14-37a2 between PG&E and CHSRA filed with Advice Letter 5046-E do not discuss cost allocation to PG&E ratepayers.
4. Interconnection agreement HSR 16-56 between PG&E and CHSRA filed with Advice Letter 5046-E discusses cost allocation to PG&E ratepayers.
5. A specific cost (\$46 million) is identified in Supplement #3 to the Master Agreement for the Caltrain Project (Advice Letter 5139-E), but it is not yet known how much would be paid by PG&E ratepayers.
6. Cost allocation principles defined in agreements HSR 16-56 and Supplement #3 to the Master Agreement for the CHSRA and Caltrain projects, respectively, propose to establish precedent for how costs, in general, would be allocated to PG&E ratepayers. The principles are similar for both projects.
7. PG&E presented cost estimates for the interconnection work during the CAISO transmission planning processes on September 22, 2016 (Caltrain Project; \$228 million) and September 22, 2017 (CHSRA Project; \$737 million).
8. Cost allocation negotiations between PG&E and Caltrain are expected to conclude in 2018 but may extend into 2019 or beyond between PG&E and CHSRA. A central factor in the ongoing cost allocation negotiations is the CHSRA and Caltrain requirement for two transmission-level feeds.
9. Interconnection work costs will be specific to the existing infrastructure available at each interconnection site, the site location, and other factors still being negotiated.

10. It is not known, at this time, how much of the estimated interconnection work costs may be allocated to ratepayers, but the agreements clearly indicate that at least some of the costs will be assigned to PG&E ratepayers.
11. Due to the potentially high costs to ratepayers and site specific/factual nature of the cost allocations, evidentiary hearings may be required, and matters that require evidentiary hearings may only be considered in a Formal Proceeding (General Order 96-B, Rules 5.1–5.3 and 7.5.1).
12. Due to the legal and policy issues raised by the proposed cost allocation, the cost allocation issues are not appropriate for disposition through the Advice Letter process and should be addressed by the Commission in an application.
13. CHSRA is the CEQA Lead Agency for the CHSRA Project and Caltrain is the CEQA Lead Agency for the Caltrain Project. CHSRA and Caltrain will complete all required environmental reviews, public notices, documentation, and monitoring activities for the interconnection work pursuant to CEQA.

THEREFORE IT IS ORDERED THAT:

1. Agreements HSR 10-10, HSR 14-37, HSR 14-37a1, and HSR 14-37a2 between PG&E and the California High-Speed Rail Authority filed with Advice Letter 5046-E are approved.
2. Agreement HSR 16-56 between PG&E and the California High-Speed Rail Authority filed with Advice Letter 5046-E shall be submitted via an application.
3. Supplement #3 to the Master Agreement between PG&E and the Caltrain's Peninsula Corridor Joint Powers Board filed with Advice Letter 5139-E shall be submitted via an application.
4. For both the California High-Speed Rail Authority and Caltrain Peninsula Corridor Electrification projects, PG&E shall not use an Advice Letter process to seek approval for interconnection work agreements that identify cost allocations to ratepayers unless so ordered by a subsequent Commission decision.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on July 12, 2018; the following Commissioners voting favorably thereon:

ALICE STEBBINS
Executive Director