UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Southern California Edison Company  )  Docket No. RC15-___-000

APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY
FOR FACTUAL DETERMINATION THAT THE INDICATED
115 KV FACILITIES ARE USED IN LOCAL DISTRIBUTION

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**APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY**  
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I. INTRODUCTION

In this filing, SCE seeks to establish two key matters. First, certain SCE 115 kV facilities are not part of the Bulk Electric System (“BES”), in accordance with Commission precedent. Second, SCE has appropriately sought to exempt these facilities from the Bulk Electric System by filing the instant Application rather than pursuing other less durable procedural avenues.

Federal Energy Regulatory Commission (“FERC” or “Commission”) Order Nos. 773 and 773-A¹ adopted the North American Electric Reliability Corporation’s (“NERC”) revised Bulk Electric System definition, including a “bright line” that preliminarily classifies facilities above 100 kV as BES. These Orders also recognize that there may be some rare instances in which facilities are operated above 100 kV, but are used in local distribution and do not negatively impact the reliability of the BES. The Commission created a separate procedural avenue through

which the Commission determines that such facilities function as local distribution. The instant Application presents this exact scenario.

Pursuant to the Commission’s direction in Order Nos. 773 and 773-A, SCE has conducted an extensive review of certain of its 115 kV Facilities in light of the revised definition, including applying the BES core definition, conducting a detailed technical evaluation of the 115 kV Facilities, utilizing the Commission’s functional tests, and analyzing prior Commission examinations of these facilities as well as other relevant Commission precedent. That review revealed that, because of their unique design, use, and function, these 115 kV Facilities are “used in the local distribution of electric energy” as contemplated by the NERC’s revised BES definition and the Commission’s orders on this issue, and therefore should not be classified as BES. This is consistent with how both SCE and the California Independent System Operation Corporation (“CAISO”) currently treat these Facilities as used in local distribution, and with how the Commission has addressed SCE facilities in prior orders. This Application for Factual Determination That the Indicated 115 kV Facilities Are Used In Local Distribution seeks to maintain the Facilities’ current status as local distribution, and does not seek any change in the treatment of the 115 kV Facilities for purposes of the applicability of the NERC Reliability Standards. Rather, SCE simply requests that the Commission review all of the unique facts

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2 The 115 kV facilities at issue in this Application are: Devers, El Casco, Mirage, Valley, Victor, Vista, and the radial facilities north of Lugo substation. In this Application, SCE refers collectively to these as the “115 kV Facilities” or the “Facilities,” to distinguish them from SCE’s other 115 kV facilities that operate as part of the transmission network. The 115 kV Facilities are currently not classified as transmission and are not under operational control of the CAISO. Additional detail about the location, design, and function of each facility can be found in attachments Exhibit SCE-2 through Exhibit SCE-10.

3 The reconfigured Devers and Mirage 115 kV Systems were initially configured as CAISO grid facilities, but in 2013 were split into two radial distribution systems and re-classified as non-ISO (see CAISO website). All the other 115 kV facilities have been classified as non-ISO, local distribution since the onset of the CAISO.

4 Hereinafter referred to as the “Application.”
related to this narrow subset of Facilities and confirm that the 115 kV Facilities should not be re-classified as BES.  

SCE recognizes that the Commission has stated its expectation that there would be very few facilities that qualify for this treatment, facilities that: 1) are operated at 100 kV or above, 2) are used in the local distribution of energy, and 3) have no material impact on the BES. However, the extensive analysis of the 115 kV Facilities covered in this Application in light of the Commission’s own precedent unquestionably show that the 115 kV Facilities at issue here fall squarely into that category. A finding of “used in local distribution” is appropriate in this instance because of the specific design, function, and use of these 115 kV Facilities, as demonstrated by the application of the Seven Factor Test and Mansfield tests and the detailed studies performed in connection with these Facilities.

In complying with the Commission’s own guidance, SCE has elected to proceed directly to the Commission for a factual determination, rather than proceeding first through the NERC exception process. Below, SCE explains the legal basis for this Application, including the precedent that provides this avenue of direct petition to the Commission under these facts, as well as a comprehensive assessment of the functional nature of the Facilities and lack of material impact on the BES, using the analytical tools the Commission has developed for this purpose. This Application also provides the supporting technical details required by the Commission to assess the Facilities in light of the revised BES definition.

Therefore, in accordance with the guidance provided by Order Nos. 773 and 773-A, SCE hereby submits its Application requesting that the Commission make a factual determination that the 115 kV Facilities are “used in local distribution,” and thus are exempt from being defined as BES. SCE respectfully requests that the Commission rule on SCE’s Application no later than December 2015, as the timely resolution of this issue is critically important to SCE because of

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5 If the Commission grants SCE’s request, the designation of the Facilities will remain unchanged from their existing designation and for purposes of compliance with the NERC Reliability Standards, the status quo will be maintained for these Facilities.
the potential implications to long-range planning, including substantial physical upgrades, if these local distribution facilities were to be re-classified as BES.6

II. PROCEDURAL AND SUBSTANTIVE REQUIREMENTS FOR APPLICATION

Order No. 773 and subsequent Commission precedents7 create a specific sequence of steps for entities to follow when facts may warrant a determination by the Commission that a facility is used in local distribution, and has established requirements that must be met in such a petition. In this Sections II, SCE outlines the major steps of that prescribed sequence, and identify the corresponding parts of SCE’s Application that detail SCE’s compliance with these steps. Section II.D describes the specific requirements the Commission has established for a petition such as this, and explains how SCE’s Application fulfills each requirement.

A. Applying the Core Definition

The Commission has indicated that the initial step in any analysis of whether a facility should be classified as BES – and thus must be brought into compliance with the applicable NERC Reliability Standards – is to apply the “core” BES definition.8 This step remains primary in the sequence, regardless of whether an entity seeks only to make its own self-determination of status, requests an Exception from NERC, or is petitioning for a factual determination from the Commission. As the Commission indicated in Order No. 773, “application of the ‘core’ definition and the four exclusions should serve to exclude most facilities used in local distribution from the bulk electric system.” Therefore, SCE’s starting point for its analysis of the

6 Should any or all of the Facilities be re-classified as BES, a number of issues may need to be addressed, including appropriate jurisdictional arrangements; potential rate impacts; and integration of planning for an affected facility with the rest of its distribution system.


8 Referring to this step as the “hierarchical application of the definition,” NERC breaks it down further into three steps: 1) core definition, 2) inclusions, and 3) exclusions. NERC Reference Document at § IV.
115 kV Facilities was to apply the core definition (as discussed in more detail in Section III.B, *infra*).

Observing that applying the core definition and exclusions will likely end the analysis in most cases, as it “should serve to exclude most facilities used in local distribution from the bulk electric system,” Order No. 773 recognized *that there would be cases*, although infrequent, in which the Commission itself should resolve the factual question of whether the facilities are used in local distribution. In its decision in *City of Holland*, the Commission acknowledged that:

> while we have endorsed the use of a 100 kV threshold as an “initial proxy for determining which facilities are local distribution, and which are transmission,” we have acknowledged the necessity of identifying and excluding any local distribution that is improperly included as part of the bulk electric system using that threshold, in order to remain within the jurisdictional bounds of FPA section 215.

Based on the results of the studies and analyses performed in conjunction with applying the core definition, SCE has concluded that the 115 kV Facilities are designed for, function, and are used in local distribution, they and do not negatively impact the BES, and therefore it would be improper to include them as part of the BES. Section VI.A *infra* and Exhibit SCE-1 through Exhibit SCE-13 provide the relevant technical and engineering details of each facility to demonstrate how SCE reached this conclusion.

**B. Seeking Commission Factual Determination of Local Distribution**

The Commission specifically recognized that “applying the definition and its exclusions is not necessarily the end of the inquiry,” where the definition could result in a facility inappropriately being designated BES when it is used in local distribution, as is the case with SCE’s 115 kV Facilities. FERC specifically permits entities such as SCE to petition the

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9 Order No. 773 at P 72.
10 *Id.*
12 Order No. 773-A at P 93.
Commission directly to resolve the factual and jurisdictional question of whether such facilities are used in local distribution. Importantly, Order No. 773 notes that this avenue is a separate and distinct process from the exceptions process administered by NERC, and need not be preceded by an exception request to NERC. In Section III.C, SCE discusses the difference in analysis and procedure between these two processes, and explains the factors that figured into its determination that this Application is the appropriate mechanism. In short, given the unique design, function, and use of the 115 kV Facilities, SCE has concluded that it is appropriate to directly request that the Commission determine “whether [these] facilities are used in local distribution and thus excluded from the bulk electric system,” rather than proceeding first with the NERC exception process.

C. **Substantive Analysis of Whether a Facility Is “Used in Local Distribution”**

In the rare case where the nature of the facility in question necessitates the entity to apply to FERC for a local distribution determination, the Commission will review the facts using the tests it has developed over time, with the Seven Factor Test as a starting point. The analysis will not end there, because, while the Seven Factor Test and other tools developed prior to Order 743 were devised to carve out distribution facilities, they did not take into account the impact of the facilities on the reliability of the BES. Therefore, the Commission’s analysis of this Application will consider technical studies and reviews, and will lead either to a conclusion that the facility in question is used in local distribution and has no material impact on the BES, and thus cannot be categorized as BES, or to the Commission’s finding that the facility is not used in local distribution. In the latter case, if the entity desires to pursue an exception at that time, it must proceed through the NERC exception process, where NERC will analyze the facility’s

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13 Order No. 773 at P 193. *See also*, Order No. 773-A at P 93, affirming that there are “two separate and distinct processes and [FERC] does not direct entities to seek an exception from NERC before seeking a local distribution determination from the Commission.”

14 Order No. 743 (requiring NERC to revise the definition to address the Commission’s identified technical concerns).
impact on the BES and either grant or reject the request for a three-year Exception from the
requirements of the NERC Reliability Standards.

Section III.D, infra, details the substantive analysis the Commission has developed, and
Section VI walks through the analysis of SCE’s 115 kV Facilities, utilizing the Commission’s
tools, including the Seven Factor Test and Mansfield test.

D. Components of Application

Regarding the elements of the application itself, the Commission has provided some
guidance for entities seeking a factual determination that facilities are used in local distribution.
Order No. 773 requires that “[s]uch petitions should include information that will assist the
Commission in making such determination, and notice of the petition must be provided to NERC
and relevant Regional Entities.” In City of Holland, the Commission further clarified the very
high burden that the applicant must meet to demonstrate that facilities that exceed the 100 kV
threshold are not “material to the Bulk Power System,” and thus not BES. It found that the City
of Holland:

has not provided a sufficient demonstration of its lack of impact on
the rest of the bulk electric system to overcome that assumption
[that its facilities are material to the BPS], and agree with NERC
that reliability could suffer if Holland is not required to comply
with the mandatory Reliability Standards applicable to TOs and
TOPs.16

Therefore, merely an assertion that the facilities are used in local distribution and have no impact
on the BES is not sufficient.

The instant Application fulfills both requirements: the information necessary for the
Commission to make its determination, and notice to both NERC and SCE’s Regional Entity.
Section IV provides an overview of SCE’s system, including its historical development, design
philosophy, physical characteristics, and relation to the BES. Section VI and the Testimony of

15 Order No. 773 at P 72.
16 City of Holland, at P 46.
Jonathan M. Shearer, together with attached exhibits, present a detailed technical review of the Facilities, and provide the necessary supporting information regarding the outcome of the studies performed, which will allow the Commission to review all the facts and make its determination. Separately, Exhibit SCE-14, Notices, supplies documentation demonstrating that SCE has strictly complied with the Commission’s notice requirement.

At the time of this filing, the Commission has not stated a preference regarding whether an entity should submit a separate application for each facility for which it seeks a local distribution determination, or whether it may combine such requests where the same facts and circumstances support each request. In this case, SCE believes that this single Application will better meet Commission goals of efficiency, while also ensuring that the Facilities are considered in their physical, operational, regulatory context. The necessary consistency can best be achieved by assessing them together, as a group of like facilities. SCE recognizes that the Commission may ultimately make divergent determinations regarding each individual facility, but because the same issues, function, design, usage, and precedent support the analysis for each, SCE explains in Section V why it is essential from a policy and consistency standpoint that these Facilities be considered and evaluated jointly, in a single Application.

III. REGULATORY CONTEXT OF “USED IN LOCAL DISTRIBUTION”

A. Transmission vs. Local Distribution

The Federal Power Act (“FPA,” 16 USC §§ 824–824w) establishes the Commission’s exclusive jurisdiction over the “transmission of electric energy in interstate commerce,” the “sale of electric energy at wholesale in interstate commerce,” and “all facilities for such transmission or sale of electric energy.” (16 USC 824(b)) In enacting the Energy Policy Act of 2005

17 See, Public Service Company of New Mexico, 135 FERC ¶ 61,196 at P 11 (2011). (“The Commission will consolidate proceedings where issues are closely intertwined to unnecessary duplication of efforts and to promote administrative efficiency.”)
(“E.P.A.C.T. 2005,” Pub. L. 109-58, 119 Stat. 941 (2005)), Congress reiterated FERC’s exclusive jurisdiction in this arena, giving the Commission sole authority to approve, administer, and enforce Reliability Standards established by NERC\(^\text{18}\) for the “bulk-power system,” which it defines as:

… (A) facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof); and (B) electric energy from generation facilities needed to maintain transmission system reliability. (16 U.S.C. §824o(a)(1))

The Commission has consistently held that the bulk-power system “does not include facilities used in the local distribution of electric energy,”\(^\text{19}\) and, even in other contexts, has emphasized that the Commission’s jurisdiction does not extend to “local distribution facilities.”\(^\text{20}\)

To put this point in its appropriate context here, consider the Commission’s discussion and analysis in its Notice of Proposed Rulemaking,\(^\text{21}\) which served as the foundation for NERC’s recommended definition, and ultimately the basis for Order No. 773. The Commission highlighted NERC’s own recognition of the important dividing line between transmission and local distribution facilities. Referring to NERC’s proposed BES definition, the Commission specifically called out the following:


\(^\text{19}\) See, e.g., Order No. 743 Revision to Electric Reliability Organization Definition of Bulk Electric System, Order No. 743, 133 FERC ¶ 61,150 (2010), order on reh’g, Order No. 743-A, 134 FERC ¶ 61,210 (2011); See also, Order on Complaint, California Wind Energy Association, et al, 147 FERC ¶ 61,050 (2014), and 16 U.S.C. §824o(a)(1).


NERC explains that the second sentence in the core definition, which excludes “facilities used in the local distribution of electric energy,” is consistent with section 215(a)(1)(B) of the FPA and the Commission’s regulations at 18 C.F.R. § 39.1 and as recognized in Order No. 743-A.” NERC states that “the core definition…establish[es] an express carve out for facilities used in the local distribution of electrical energy.” NERC also states that facilities for the local distribution of electric energy are expressly excluded from the bulk electric system by the core definition as well as by the local network exclusion, exclusion E3.22

Thus, in developing the revised definition and associated processes and procedures, there has been a very specific and purposeful omission of facilities “used in local distribution.”

Furthermore, in setting out the framework for soliciting a revised definition, recognizing the importance of this issue and highlighting NERC’s decision not to include a specific test in its exception process to determine which facilities are, in fact, local distribution, the Commission in Order No. 773 reconsidered its previous decision to leave this question to the NERC exceptions process, stating:

Included in [NERC’s exceptions] process is an opportunity for entities to seek to exclude facilities from the bulk electric system because they are used in local distribution. NERC’s petition does not provide criteria or guidance that it would apply in the case-by-case exception process to determine whether an element above 100 kV should be excluded as local distribution, as directed in Order No. 743. Thus, we cannot conclude that the case-by-case exception process will “adequately differentiate[] between local distribution and transmission facilities in an objective, consistent, and transparent manner.”23

The Commission continued:

After further review of NERC’s proposal in this proceeding, and upon consideration of the comments submitted, we believe that it is more appropriate that the Commission make such case-by-case jurisdictional determinations when necessary, and to apply the Seven Factor Test set forth in Order No. 888 to make such determinations. The determination whether an element or facility is

22 BES NOPR at P 59 (internal citations omitted).
23 Order No. 773 at P 68 (internal footnotes and citations omitted)(emphasis added).
“used in local distribution,” as the phrase is used in the FPA, requires a jurisdictional analysis that is more appropriately performed by the Commission. Further, Commission review of whether a facility is used in local distribution comports with relevant legal precedent. As we explained in Order No. 743-A, “[w]hether facilities are used in local distribution will in certain instances raise a question of fact, which the Commission has jurisdiction to determine.”

In the City of Holland Decision, the Commission reiterated the necessity of correct resolution of this issue, stating conclusively that “we have acknowledged the necessity of identifying and excluding any local distribution that is improperly included as part of the bulk electric system using that threshold, in order to remain within the jurisdictional bounds of FPA section 215.

Because SCE’s analyses, consistent with past and existing practices, have led it to conclude that the 115 kV Facilities at issue are local distribution facilities, the Commission’s reservation to itself of that specific factual determination necessitates the instant Application requesting that the Commission confirm that these 115 kV Facilities are “used in local distribution” and thus should continue to be treated as non-BES facilities.

B. The Core BES Definition

Order No. 743 directed NERC to revise the definition of BES such that it “provides a 100 kV threshold for facilities that are included in the bulk electric system and eliminates the currently-allowed discretion of a Regional Entity to define ‘bulk electric system’ within its system without NERC or Commission oversight.” As directed, NERC submitted a proposal to revise the definition of “bulk electric system” including provisions to exclude certain facilities that exceed the 100 kV bright-line from the “core” definition. Finding that “the vast majority of 100 kV and above facilities are part of parallel networks with high voltage and extra high

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24 Order No. 773 at P 69 (internal citations omitted)(emphasis added).
25 City of Holland at P 38.
26 Order No. 743 at P 17.
27 Petition for Approval of a Revised Definition of “Bulk Electric System” in the NERC Glossary of Terms Used in Reliability Standards, Docket No. RM12-6-000 (January 25, 2012).
voltage facilities and are necessary for reliable operation” of the BES, the Commission determined that the 100 kV bright-line threshold is “a reasonable first step or proxy” for determining which facilities should be deemed BES. The Commission stated its belief that the 100 kV bright-line threshold:

…will remove from the bulk electric system the vast majority of facilities that are used in local distribution, which tend to be operated at lower, sub-100 kV voltages. Based on the information provided in NERC’s petition, as well as the supporting comments of EEI and others, we anticipate that the “core” definition together with exclusion E3 should provide a reasonable means to accurately and consistently determine on a generic basis whether facilities are part of the bulk electric system. In other words, most local distribution facilities will be excluded by the 100 kV threshold or exclusion E3 without needing to seek a Commission jurisdictional determination.

Recognizing that not all facilities that do not impact the BES would be excluded through the application of the core definition, in a separate but concurrent filing, NERC proposed changes to its Rules of Procedure, adding an exception process by which it would classify or declassify an element as part of the BES if they were improperly classified through use of the definition itself.

Order No. 773 adopted NERC’s proposed BES definition, which provides that:

Unless modified by the [inclusion and exclusion lists], all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

The specific language of this definition further supports SCE’s decision to apply to the Commission directly on the fundamental question of whether these 115 kV Facilities are “used in

28 Order No. 743 at P 96.
29 Order No. 773 at P 43.
30 Order No. 773 at P 67.
31 Petition for Approval of a Revised Definition of “Bulk Electric System” in the NERC Glossary of Terms Used in Reliability Standards, Docket No. RM12-6-000 (January 25, 2012).
32 Order No. 773 P 12.
local distribution.” NERC expressly chose to employ the term “Elements,” as used in NERC’s Glossary in the first sentence of the definition, rather than the term “facility,” which was used by the Commission in Order No. 743. NERC’s Glossary defines “elements” as “[a]ny electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components.” Significantly, however, the word “facilities” remains in the second sentence, referring to those used in local distribution. This distinction in terminology highlights the jurisdictional separation between Transmission Elements and local distribution facilities.

SCE applied the core definition to the 115 kV Facilities to determine whether their classification should be changed from non-BES (as it currently stands) to BES. Based on extensive technical and functional analyses, SCE has concluded that these 115 kV Facilities are used in local distribution and do not negatively impact the BES, and therefore it would be improper to include them as part of the BES. SCE then turned to the question of the appropriate process by which to confirm that these Facilities are correctly defined as non-BES local distribution facilities. As noted supra, Order No. 773 recognized the importance of correctly categorizing facilities as “local distribution,” and emphasized that there is an alternative to the NERC exception process, “pursuant to which an entity can seek a determination by the Commission whether facilities are ‘used in local distribution’ as set forth in the [FPA].” An entity such as SCE could proceed through the NERC exception process if it elects to do so, but the Commission has consistently deemed this question a “jurisdictional analysis that is more appropriately performed by the Commission,” and Order No. 773 “does not direct entities to

34 BES NOPR at fn. 24.
35 Order No. 773-A P 1.
36 Order No. 773 at P 69.
seek an exception from NERC before seeking a local distribution determination from the Commission.”

C. **An Application Directly to FERC Is the Appropriate Mechanism in This Case**

The Commission’s Orders have resulted in two separate and distinct paths for resolution of the issue of the BES status of a facility with a voltage greater than 100 kV that functions as local distribution and does not impact the BES, namely the NERC exceptions process and an Application to the Commission. SCE carefully considered all of the facts concerning the 115 kV Facilities in light of both options and concluded that, regardless of which election it pursued it is likely that the Facilities would not be deemed BES because they are used in local distribution. However, an analysis of both available options leads inexorably to the conclusion that this Application to the Commission is the appropriate election, for two reasons: 1) the Commission has specifically noted that it should be the arbiter of this question in such instances; and 2) any NERC exceptions granted, whether as a result of an applicable Exclusion or otherwise, would be temporary, and in turn could create new unanswered questions and could result in notable waste of resources.

1. **The Commission has reserved the factual determination to itself in these circumstances**

As discussed *supra* in Section III.A, the Commission’s orders have specifically and consistently indicated that the classification of most facilities can be resolved without need to petition FERC directly. In fact it would be extremely inefficient for the Commission to consider most situations, as they can easily be resolved through the NERC process, and do not present the specific jurisdictional question. However, in the rare instance where such is not the case, the

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37 Order No. 773-A P 93.
determination of whether a facility is “used in local distribution” is a factual question that should be resolved by the Commission itself, because the NERC exception process is not the appropriate venue for resolution.  

Order 773 emphasized that:

The determination whether an element or facility is “used in local distribution,” as the phrase is used in the FPA, requires a jurisdictional analysis that is more appropriately performed by the Commission. Further, Commission review of whether a facility is used in local distribution comports with relevant legal precedent.

SCE’s extensive analyses of the 115 kV Facilities have led to the conclusion that, while they are operated above 100 kV, they are used in the local distribution of energy and have no material impact on the BES. Therefore, the 115 kV Facilities at issue in the instant Application fall into very narrow category of situations for which the Commission has reserved jurisdiction to itself.

2. A NERC exception would not resolve the jurisdictional issue and could create new unanswered questions

The NERC exception process is not the appropriate starting point for these specific 115 kV Facilities because utilizing that it cannot resolve the fundamental question of whether these 115 kV Facilities are “used in local distribution,” an issue which only FERC can decide under these circumstances. Because of the limited lifespan of a NERC exception and the unique nature of the Facilities at issue, the process will involve SCE, SCE’s Regional Entity WECC, and NERC in a perpetual three-year cycle of re-application for each exception without ever producing a different substantive result, as the Facilities in question will still remain “local distribution” facilities.

More specifically, NERC’s Rules of Procedure require SCE to notify WECC and NERC “within ninety (90) days after learning of any change of condition which would affect the basis

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38 See, Order No. 773 at P 68.
39 Order No. 773 at P 69.
stated by NERC in its decision.” At that time NERC must decide if a substantive review is called for to justify continuing the Exception for the remainder of its lifespan. Any studies and evaluations must then be reviewed by WECC, who may be required to perform some level of system analysis of its own. NERC, of course, would ultimately be responsible for final review and analysis of each iteration of the request. This could entail significant amounts of work for everyone involved. However, no studies – regardless of how extensive or performed by how many entities – could change the fact that these Facilities continue to have the exact same design, function, and use that they do now, and would still satisfy the Commission’s tests for “local distribution” facilities with no material impact on the BES, and therefore should not be classified as BES. Thus, the study process would serve no substantive purpose and would burden the system. For these additional reasons the NERC exception process is not appropriate for the 115kV Facilities at issue in this filing.

3. Conclusion: An Application to the Commission is the appropriate option, given the facts

Based on the very unique and particular facts surrounding the Facilities at issue, SCE has determined that it is appropriate, and even crucial, to proceed with this Application under the process developed in Order No. 773. SCE does not intend to pursue the NERC exception process at this time.

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40 See NERC Rules of Procedure, Appendix 5C: Procedure For Requesting And Receiving An Exception From The Application Of The NERC Definition Of Bulk Electric System, § 11.2, stating: “Submitting Entity(ies) shall notify the appropriate Regional Entity, with a copy to NERC, within ninety (90) days after learning of any change of condition which would affect the basis stated by NERC in its decision pursuant to section 8.0 approving the Exception Request. NERC shall review such notification and determine whether to direct the Regional Entity to perform a substantive review (pursuant to section 5.2) to verify continuing justification for the Exception and to issue a Recommendation to NERC” (emphasis added).

D. Technical and Functional Tests

1. Seven Factor Test

Through the testimony of Jonathan M. Shearer, (Exhibit SCE-1), SCE will demonstrate that the identified 115 kV Facilities are used in local distribution and have no material impact on the reliability of the BES, and thus should not be re-classified as BES. Section VII of this Application provides an overview of the technical specifications of each system, with evidentiary support from Mr. Shearer’s testimony, establishing that application of Commission tests and precedent supports a finding that these facilities are not BES. For several of the facilities, this finding will merely be a re-affirmation of previous decisions the Commission has made regarding these same Facilities in various contexts, recognizing their unique characteristics and use as part of the local distribution system.42

Significantly, in its landmark Order No. 888,43 the Commission recognized that:

[w]hile it would be preferable to draw an absolutely ‘bright’ line (e.g., based on technical characteristics such as voltage), this does not appear to be required by the case law and, importantly, would not be a workable approach in all cases because of the variety of circumstances that may arise and because utilities themselves classify facilities differently (e.g., one utility may classify a 69 kV facility as transmission; another may classify it as distribution).44

To appropriately assess these varying circumstances, the Commission established the combined functional-technical analysis tool known as the “Seven Factor Test” to ascertain which facilities

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42 See, e.g., Order Granting Petition For Declaratory Order In Part, 77 FERC ¶ 61,077 (1996) (confirming [SCE’s] proposed delineation of certain of their facilities as either ‘local distribution’ facilities (subject to state jurisdiction) or ‘transmission’ facilities (subject to the Commission’s jurisdiction) based upon the existing uses of such facilities” and their design that does not parallel the transmission network, at the formation of the CAISO).
44 Order No. 888 at 31,770-71 (emphasis added).
are local distribution, and thus will remain under state jurisdiction for determining retail stranded cost adders and other retail regulatory issues.\textsuperscript{45} The resulting corollary finding delineates which facilities should be deemed transmission, and thus are subject to the Commission’s jurisdiction.\textsuperscript{46}

In keeping with this jurisdictional philosophy, in Order No. 773-A, the Commission declared that if, “after applying the definition and exclusions, an entity believes its facility is used in local distribution, it must petition the Commission for a determination, and the Commission will apply the factors in the Seven Factor Test, plus other factors, as the starting point for making local distribution determinations.”\textsuperscript{47}

The Seven Factor Test distinguishes local distribution facilities from transmission facilities by looking at whether the delivery component of a retail power sale is distribution or transmission. Specifically, the Order proposed seven indicators of local distribution to be evaluated on a case-by-case basis:

1. Local distribution facilities are normally in close proximity to retail customers;
2. Local distribution facilities are primarily radial in character;
3. Power flows into local distribution systems, and rarely, if ever flows out;
4. When power enters a local distribution system, it is not reconsigned or transported on to some other market;
5. Power entering a local distribution system is consumed in a comparatively restricted geographic area;
6. Meters are based at the transmission/local distribution interface to measure flow into the local distribution system; and

\textsuperscript{45} Order No. 888 at 31,771 and 31,981.
\textsuperscript{46} See also, Order on Complaint, \textit{California Wind Energy Association,} 147 FERC ¶ 61,050 (2014) (“Cal Wind Order”) (noting that “the seven-factor test was established in Order No. 888 to determine what facilities would be under the Commission’s jurisdiction and what facilities would remain under the states’ jurisdiction for purposes of retail stranded cost adders or other retail regulatory purposes.”).
\textsuperscript{47} Order No. 773-A at P 90. See also, Order No. 773 at P 69, 71; Order No. 773-A at PP 69, 82, 90, 97, 101-104.
7. Local distribution systems will be of reduced voltage.\(^{48}\) As the Commission noted, “The seven-factor test is intended to provide sufficient flexibility to take into account unique local characteristics and historical usage of facilities used to serve retail customers.”\(^{49}\) In Exhibit SCE-1, Mr. Shearer provides details and supporting evidence demonstrating why application of the Seven Factor Test leads inexorably to the conclusion that SCE’s 115 kV Facilities are “used in local distribution,” and thus are outside the parameters of the BES.

2. **The Mansfield test and supporting precedent**

The Commission’s analysis of facilities’ nature as transmission or local distribution facilities has been developed and refined over time, but it has continued to use the Seven Factor Test as an appropriate starting point. In *Mansfield*,\(^ {50}\) the Commission established a five factor test (the “Mansfield test”) to discern which facilities are integrated with the transmission grid, and are thus “transmission.” These factors examine the following:

1. Whether the facilities are radial, or whether they loop back into the transmission system;

2. Whether energy flows only in one direction, from the transmission system to the customer over the facilities, or in both directions, from the transmission system to the customer, and from the customer to the transmission system;

3. Whether the transmission provider is able to provide transmission service to itself or other transmission customers…over the facilities in question;

4. Whether the facilities provide benefits to the transmission grid in terms of capability or reliability, and whether the facilities can be relied on for coordinated operation of the grid; and

5. Whether an outage on the facilities would affect the transmission system.\(^ {51}\)

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\(^{48}\) Order No. 888, *affirmed* in Order No. 888-A at 30,181.

\(^{49}\) Order No. 888-A at p. 30,342.


\(^{51}\) *Mansfield* at ¶¶ 61,613-14.
In several more recent decisions, the Commission has reaffirmed that the Mansfield test is the appropriate analytical tool by which to review whether facilities are integrated transmission or non-integrated local distribution facilities. In the Cabazon and Whitewater proceedings, among others, the Commission upheld the validity of the Mansfield Test in assessing whether certain required network upgrades were integrated with the grid. Further guidance for applying the Mansfield test can be gained from the City of Holland, in which the Commission acknowledged that there must be both an absence of evidence of bi-directional flows or flow reversal, and there must be sufficient evidence that the facilities have no impact on reliability of the grid. Likewise, in Southern Louisiana Electric Cooperative Association (“SLECA”), the Commission emphasized that a facility’s load must directly connected to the bulk power system to be deemed BES.

In 2014, the Commission had the opportunity to revisit the issue when it considered a Complaint under section 206 of the FPA that argued that the CAISO should not be permitted to transfer operational control of certain transmission assets to SCE. At issue was SCE’s proposed East Kern Wind Reliability Area 66 kV Reconfiguration (“EKWRA”) Project, which required SCE’s Antelope and Bailey 66 kV system to be reconfigured from an integrated, looped system to three separate radial, non-integrated, distribution facilities. In its Order on the Complaint, the Commission once again specifically affirmed the Mansfield Test’s applicability, stating:

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53 City of Holland, Michigan Board of Public Works, 145 FERC ¶ 61,054, at P 30 (2013) (“City of Holland”). In this Order, the Commission also reaffirmed its previous statement in Order No. 773 that the 100 kV threshold is an “initial proxy” for assessing a facility’s status as transmission or local distribution, but does not end the inquiry. See, City of Holland, P 33. A more detailed analysis of SCE’s Facilities in light of the City of Holland decision appears in Section IV.2.d infra, and in SCE-1 at pp. 27-30.
54 S. La. Elec. Coop. Ass’n, 144 F.E.R.C. ¶ 61,050 (2013), reh’g denied, 145 F.E.R.C. ¶ 61,232 (2013). In the SLECA case, the Commission determined that a normally open switch, which prevents looped flow of power, makes the facilities in question correctly categorized as local distribution.
[t]he Mansfield test has been applied by the Commission on a case-by-case basis depending on the facts involved, generally used to determine whether specific facilities are integrated or non-integrated in situations where the Commission’s “at or beyond the point of interconnection” test does not adequately address the issue of whether a facility is a network upgrade (subject to rolled-in pricing), interconnection facilities or otherwise subject to direct assignment.  

The Commission agreed with SCE’s proposed designation of the new EKWRA facilities as “local distribution” in accordance with FERC’s technical and functional tests, affirming the continuing validity of the Mansfield Test in determining which facilities are integrated into the BES. While the Commission’s decision focused on, and ultimately rested upon, the factors of the Mansfield test, the Cal Wind Order also reaffirmed the continuing applicability of Order 888’s Seven Factor Test in determining whether facilities are used in local distribution.  

Section VI.B infra analyzes SCE’s 115 kV Facilities in light of the Mansfield factors, resulting in a conclusion that these are not integrated network facilities, but rather are used in local distribution, and are not BES facilities. Section IV.B provides a more in-depth discussion of the distinction between two of SCE’s facilities and those addressed in the Commission’s decision in City of Holland.

IV. **SCE SYSTEM**

A. **Historical Development of SCE’s System**

In contrast to the East, in the Western Interconnection, dense population centers are often quite distant from each other, tied electrically together across remote and sparsely


56 Cal Wind Order at fn. 7.

57 The Western Interconnection is “a physically- and electrically-defined area that encompasses the infrastructure components of the Bulk Electric System. The area extends from Canada to Mexico and includes Alberta and British Columbia, all or parts of the 14 Western states, and northern Baja California. WECC works with entities that are located within the Western Interconnection.”  
The territory that SCE serves today is comprised of an amalgamation of electrical utilities that have merged or been acquired over the last 125 years. Prior to 1964, the California Electric Power Company served power from Tonopah, Nevada to Palm Springs, California, a distance of many hundreds of miles. In January of 1964, SCE and California Electric merged, resulting in SCE’s territory expanding to its current size of nearly one-third of the state of California. Significantly, the now-absorbed “Cal Electric” system used 115 kV, 55 kV, and 33 kV voltage classes, as opposed to the 66 kV voltage class used by SCE prior to the merger. SCE built its higher voltage transmission system to efficiently connect these lower voltage distribution systems serving relatively rural and sparsely populated areas. Today, SCE operates its integrated transmission system delivering bulk power from around the Western Interconnection principally at 500 kV, 220 kV, 161 kV A.C., and 1000 kV D.C., as well as in a few instances, lower voltage 115kV, 66 kV and 55 kV facilities. SCE’s local distribution facilities operate at 115 kV, 66 kV, 55 kV, 33 kV, 16 kV, 12 kV, and 4 kV.59

At issue in this filing are the legacy “Cal Electric” 115 kV local distribution systems and facilities, which are not integrated with the transmission system.60

B. **SCE Transmission and Distribution Networks**

1. **Transmission system**

SCE’s current integrated transmission network is mainly comprised of parallel 220 kV and 500 kV transmission lines. It accommodates the transfer and importation of energy to SCE’s distribution network, which serves our very large and geographically diverse service territory. In order to meet the needs of southern California’s electrical demand, SCE’s 500 kV transmission

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58 *See* Exhibit SCE-1 at pp. 7-8. *See also*, Exhibit SCE-2.
59 SCE’s has two facilities operating at 115 kV/55 kV and 66 kV respectively, that are integrated with the transmission network, and have always been treated by SCE as part of the BES.
60 As noted in Mr. Shearer’s testimony at p. 10, fn. 11, SCE has two portions of 115 kV facilities that function in parallel with the BES, and therefore are categorized as BES. Because of the looped nature of those facilities, they are treated as BES facilities, and thus are not included in this Application.
network delivers high voltage energy to our 220 kV network.\(^6^1\) Other than one exception,\(^6^2\) local substations receive energy from the 220 kV network, transform down the voltage level, and distribute the energy to local end-use customers.

During the formation of the California energy market, SCE’s transmission facilities that make up part of the integrated transmission network were transferred to the operational control of the CAISO pursuant to the Transmission Control Agreement (“TCA”). These transmission facilities are mainly the Company’s 220kV and 500kV lines and AA-bank transformers at the Company’s larger substations. In addition, it was determined that the CAISO would need operational control of certain lower voltage systems and facilities that operated in parallel to the high voltage transmission facilities, which function as BES, to ensure safety, reliability, and efficiency.\(^6^3\) These facilities currently under CAISO operational control are used to transmit and transform bulk power that is then sold to or used by retail and wholesale customers across the state. SCE maintains operational control of its remaining local distribution networks and facilities, specifically because of their radial nature and immaterial impact to the reliability of the integrated transmission network. This is in contrast to other CAISO Participating Transmission Owners in that almost all of their low voltage subtransmission facilities (e.g., 66 kV) are under CAISO operational control. SCE’s radial, non-integrated local distribution systems and facilities were not designed to be – and are not – needed for the reliability of the Bulk Electric System.\(^6^4\)

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\(^6^1\) In one instance (Valley 115 kV), SCE’s 500 kV network is connected directly to a local substation, which then transforms the energy down to serve lower voltage distribution networks. As discussed in Section VI, this facility does not operate in parallel with the 500 kV network, and functions as local distribution.

\(^6^2\) See, fn. 35, supra.


\(^6^4\) Order Granting Petition For Declaratory Order In Part, 77 FERC ¶ 61,077 (1996) (“CAISO Declaratory Order”) (acknowledging that, in contrast to PG&E and SDG&E, SCE’s facilities are not operated in parallel to the transmission network, and therefore are appropriately classified as distribution facilities).
2. Non-integrated local distribution networks

a) Unique design and function

SCE’s service territory covers nearly one-third of the state of California’s land area, and includes service to customers within portions of, or the entirety of, 14 California counties. Of these counties, seven are within the top 100 most populous counties in the United States according to the 2010 U.S. Census Report. SCE’s 115 kV Facilities were designed to operate at higher voltages to reduce line losses over the long distances in remote areas, and are radial to the integrated transmission network to provide increased reliability, voltage stability and safety, as well as provide additional operational flexibility. At the formation of the CAISO, the Commission reviewed the analysis of the California Public Utilities Commission (“CPUC”), as well as comments by other interested entities, and ultimately recognized SCE’s facilities as local distribution. These 115 kV Facilities take power off of the CAISO’s integrated transmission network at only a single point and transform it down to be used in localized areas to serve SCE’s customers.

b) Operate radially from the BES

As discussed in more detail in Section IV of Mr. Shearer’s testimony, SCE operates its local distribution networks radially from the BES in order to maintain a high level of transmission network resiliency and distribution system operational flexibility. This distinctive design, in which a single substation serves as the interface between the integrated transmission network and each radial local distribution system or facilities, maintains electrical isolation between SCE’s radial local distribution systems. This minimizes the impacts of any unforeseen forced outages on SCE’s customers, and ensures that these distribution facilities do not negatively impact the reliability of the BES.

66 See, CAISO Declaratory Order.
c) **Generation connected to the radial facilities**

Mr. Shearer’s testimony describes how, at times when the load exceeds the total power generated locally, the 115 kV Facilities can draw power from the integrated transmission network. For example, in SCE’s Devers System (See Exhibit SCE-4), which encompasses part of the desert region of California, during the daytime, loads are generally higher and the wind-produced power is lower. Power flows from the BES, through the single interface at the Devers substation, into the Devers 115 kV distribution system. When the wind generation levels in the Devers system exceed the load there, the power flows from the 115 kV system into the integrated transmission network in the same way that power would flow from a generation tie-line. At no point does the power simultaneously enter and exit the Devers 115 kV local distribution system, and the same is true of the other 115 kV Facilities, and therefore the radial nature of the facilities is unchanged.

The Commission has directly addressed the issue of bi-directional power flows several times in cases concerning SCE’s 115 kV Facilities. Most recently, in the Cal Wind Order, the Commission analyzed facilities in which “energy predominantly flows inward to load, except in unusual circumstances when generation exceeds load.” The Order held that “occasional energy outflows do not make the facilities integrated with the transmission network…,” and that “the relevant inquiry, in cases where bi-directional flow occurs, is whether the facilities permit [the Transmission Provider] to serve the load of other transmission customers.” In other words, SCE’s 115 kV Facilities are still designated as local distribution facilities if they otherwise meet

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67 Of note is that the majority of generation connected to the 115 kV Devers System is intermittent wind. The System is designed to compensate and prevent a reliability impact due to the intermittent nature of wind generation.


69 Cal Wind Order at P 44.

70 Cal Wind Order at P 45.
the Seven Factor Test and Mansfield factors, even when they occasionally flow energy onto the BES as a generation-tie line would.

d) **Distinguished from City of Holland**

In *City of Holland*, the Commission found that the utility’s 138 kV facilities function as transmission, and thus should be treated as BES facilities. The Commission rested its finding on three essential facts: 1) City of Holland’s infrastructure functions as transmission lines by transporting power, at higher voltages, from the City’s own generation as well as from the BES, to substations where it is used to serve the City’s retail load; 2) Holland’s facilities are not configured radially, and do not function as a radial line; and 3) the normally-closed breakers connecting the Holland facilities to the BES can create bi-directional flows in non-emergency situations (*e.g.*, when maintenance is being performed on certain segments of the system).

The line and bus arrangement emanating from SCE’s Control 115 kV and Inyokern 115 kV substations appear to have generally similar configurations to the bus and breaker configuration at the Black River substation discussed in *Holland*. However, as explained in detail in Exhibit SCE-1, further examination reveals several important factual distinctions – differences in design and impact to reliability of the BES. Specifically for SCE: 1) the magnitude of load and local generation within each subsystem is very small, resulting in no impact to the reliability of the BES; 2) each pair of lines terminate at a single substation; and 3) SCE’s protection systems associated with each pair of lines do not present the reliability gap identified by the Commission in *Holland*, because the same entity (SCE) owns the facilities at

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71 Cal Wind Order at P 42 (holding that “radial facilities, as a category, include broader applications than just generator tie lines”).

72 The Commission was careful to note that merely exceeding the 100 kV bright line is not sufficient to deem a facility BES. Specifically, the Order states that “Holland’s case is distinguishable from that of systems in the Western region, where distribution lines are designed with comparatively high voltage levels due to the large distances that must be traversed in serving retail load. By contrast, Holland’s 138 kV loop delivers power from Holland-owned generation facilities to Holland’s 138 kV substations, where the voltage is reduced to distribution voltage levels before being distributed to Holland’s retail customers.” *City of Holland* at P 42.

73 *City of Holland* at PP 38-42.
both ends of the lines in question, so with respect to PRC-001-1.1, SCE has exclusive control
over all protection settings, and the protection systems on these lines (or any of the facilities that
interface with the Bulk Electric System here) do not meet any of the applicability requirements
of PRC-005-2. For these three critical reasons, the Control and Inyokern subsystems are quite
factually dissimilar to those noted in the *Holland* decision, and thus the Commission’s reasoning
in *Holland* does not apply to the Control 115 kV and Inyokern 115 kV facilities.

V. **FERC DETERMINATION REGARDING ALL OF THE FACILITIES IS
NECESSARY AND APPROPRIATE AT THIS TIME**

There are seven separate and distinct 115 kV Facilities to be considered in this
Application. However, it is important that the Commission consider all of these at once, rather
than in multiple proceedings analyzing each separately. As the Commission has stated, “where
issues are closely intertwined to unnecessary duplication of efforts and to promote administrative
efficiency,” it will consolidate separate proceedings.\(^7^4\)

Here, the question to be examined – whether the 115 kV Facilities are used in local
distribution and have an immaterial impact on the BES – is the same for each. The facilities are
designed and function in a like manner. The underlying studies are the same and have the same
results, and in fact SCE’s technical analyses performed both during the development and after
adoption of the revised BES definition confirm that these facilities are still used in local
distribution and do not significantly impact the integrated transmission network. The technical
experts required to review the studies for the Commission, NERC, and WECC are likely to be
the same or substantially overlap. The tests the Commission will apply according to its
precedent are the same.

Convening seven separate proceedings, in which SCE, the CAISO, NERC, WECC, and
other intervenors will likely make identical arguments regarding each facility, is not cost-

\(^7^4\) *Public Service Company of New Mexico*, 135 FERC ¶61,196 at P 11 (2011).
effective for the Commission or any party. Likewise, the Commission’s discussion of the seven facilities is likely to be substantially the same, or greatly overlapping, and these areas of overlap could better be addressed here. Furthermore, consolidation should eliminate the possibility of inconsistent treatment of like facilities.

Addressing SCE’s unique factual situation and the issues in this single Application provides a clear and concise analysis of the boundaries of the BES and the processes established by Order Nos. 773 and 773-A.

VI. FUNCTIONAL AND TECHNICAL ANALYSES OF THE FACILITIES

A. Short Description of the Facilities 75

1. Devers 115 kV facilities

The Devers 115 kV system covers approximately 1,120 square miles of service area, and is comprised of twenty four (24) 115 kV connected to one another by188 circuit miles of power lines servicing approximately 511 MW of peak load, 2.2% of SCE’s 2014 peak demand. 76 This local distribution system currently has market and Qualified Facility intermittent wind resources totaling 752 MW of installed generation capacity in the Devers 115 kV system, and a dispatchable gas-fired generating station can provide as much as 136 MW of generation to the system.

2. El Casco 115 kV facilities

The El Casco 115 kV system covers approximately 50 square miles of service area comprised of seven (7) load-serving substations and 82 circuit miles of power lines, and related facilities that support approximately 188 MW of peak load, 0.8% of SCE’s 2014 peak demand. There are no generating facilities with a gross individual nameplate rating greater than 20 MVA,

75 A more detailed review of the characteristics of each of the Facilities is provided in Exhibit SCE-1.
or for which the gross plant aggregate nameplate rating is greater than 75 MVA, located within the El Casco 115 kV system.

3. **Mirage 115 kV facilities**

The Mirage 115 kV system covers approximately 112 square miles of service area comprised of six (6) 115 kV substations and 78 circuit miles of power lines, and related facilities that support approximately 480 MW of peak load, 2.0% of SCE’s 2014 peak demand. One SCE generation customer provides 20 MW of intermittent wind generation to the Mirage System.

4. **Valley 115 kV facilities**

The Valley 115 kV system service area covers approximately 844 square miles of Riverside County, and is comprised of 25 load-serving substations with close to 387 circuit miles of power lines, and related facilities that support roughly 1,825 MW of peak load, 7.9% of SCE’s 2014 peak demand. There are no generating facilities with a gross individual nameplate rating greater than 20 MVA, or for which the gross plant aggregate nameplate rating is greater than 75 MVA, located within the Valley 115 kV system.

5. **Victor 115 kV facilities**

The Victor 115 kV system service area covers approximately 300 square miles in San Bernardino County, and is comprised of 14 substations with close to 200 circuit miles of power lines, and related facilities that support nearly 750 MW of peak load, 3.3% of SCE’s 2014 peak demand. There are no generating facilities with a gross individual nameplate rating greater than 20 MVA, or for which the gross plant aggregate nameplate rating is greater than 75 MVA, located within the Victor system.

6. **Vista 115 kV facilities**

The Vista 115 kV system covers approximately 90 square miles of service area, and is comprised of 11 load-serving substations and 136 circuit miles of power lines, and related
facilities that support approximately 435 MW of peak load, 1.9% of SCE’s 2014 peak demand. There are two generating facilities in the Vista 115 kV system totaling 314.5 MWs.

7. **115 kV facilities North of Lugo substation**

There are three 115 kV subsystems, Inyokern 115 kV, Kramer 115 kV, Control 115 kV, that SCE operates north of SCE’s Lugo 500/220 kV substation. A portion of each subsystem is integrated with the transmission network and is under the operational control of the California ISO; SCE is not seeking any Commission determinations regarding these portions, and they are not at-issue in this Application.

The SCE-controlled portions of the Inyokern, Kramer, and Control subsystems comprise a service area of approximately 400 square miles that includes portions of San Bernardino, Kern, Inyo, Tulare, and Mono Counties. In total these three subsystems contain 13 substations and over 1400 circuit miles that support approximately 290 MW of peak load, 1.3% of SCE’s 2014 peak demand. Currently, there is a total of 158.8 MW of cogeneration and 54.6 MW of hydro generation connected to these subsystems.

B. **Order No. 888 Seven Factor Test Analysis**

1. **Factor one—proximity of facilities to retail customers**

The 115 kV systems at issue in this Application are all of a generally rural nature with occasional pockets of urban and suburban development, and these systems comprise a relatively small total area compared to SCE’s total service territory. This shows that the systems served by these 115 kV Facilities are in close proximity to the retail customers they serve.

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77 A more detailed review of the application of the components of the Seven Factor Test to the Facilities is provided in Exhibit SCE-1.
2. **Factor two—primarily radial in character**

Each of these 115 kV local systems radiate from a single substation in the integrated transmission network. Each system has normally-open circuit breakers that maintain electrical isolation from neighboring systems. The normally-open circuit breakers exist solely for emergencies in order to transfer (“roll”) load to a neighboring system. However, the systems are not planned or designed to form parallel paths between the systems. Rolling load between the systems is only performed in emergencies and pursuant to specific operating procedures discussed more fully in the testimony of Jonathan Shearer.

3. **Factor three—power flows into local distribution systems**

Each of the 115 kV systems at-issue in this Application have flows coming into them from the integrated transmission network through a single point. As with any radial distribution system with interconnected generation, the flow at the point of interconnection with the transmission system is unidirectional, but its direction can vary based on distribution system conditions. In some instances, the flow direction can be from the distribution system to the transmission network when the local generation exceeds the load. Recently, the Commission has found that the fact that power may flow to the transmission system from the distribution system as a result of increased generation on the distribution system does not mean that such distribution system has the characteristics of an integrated transmission system. Such a condition results in the distribution system behaving like generation tie-lines which does not change the radial nature of the facilities.
4. **Factor four—when power enters a local distribution system, it is not reconsigned or transported onto some other market**

In all of the radial 115 kV systems and facilities, power entering from the integrated transmission network operated by the California ISO will remain within the respective system of radial facilities. The radial nature prevents this power from being transported back to the integrated transmission network for consignment to another market. Further, generator owners interconnected to any of SCE’s radial 115 kV distribution facilities are provided distribution service from the point of interconnection to the California ISO-controlled grid where it could then be transported through the California ISO system to the ultimate buyer of the resource. This is the case even if the amount of load is more than the amount of generation. While actual generation offsets local system or substation load, the delivery of the power to the ultimate buyer is provided by the California ISO even if the buyer is the same entity whose load is offset. The role of the radial 115 kV systems and facilities with respect to this factor, however, remain unchanged. The California ISO is the Transmission Provider for SCE. Under the system conditions where power enters any radial 115 kV system or facilities, the local load exceeds the level of generation, if any. This power has been procured by SCE for SCE’s customers and is not reconsigned or transported onto some other market. Further, the California ISO does not rely upon any of the radial 115 kV Facilities to serve the load of other transmission customers.

5. **Factor five—consumption of power entering the distribution system is in a restricted area**

Power entering into the 115 kV Facilities is consumed in a comparatively restricted geographical area such as evidenced by the proximity of these Facilities to the retail customers. While the load density of each 115 kV system is not anticipated to be as great as many of SCE’s
66 kV distribution systems, power entering a 115 kV system is used within the system or respective radial substation and is unable to serve load outside the respective area.

6. **Factor six—meters are based at the transmission/local distribution interface to measure flow into the local distribution system**

SCE’s local distribution systems are metered at or near the point of interconnection to the California ISO-controlled integrated transmission network. The meters between the integrated transmission network and the Facilities are necessary to enable reliable transfer of energy between the operational control jurisdictions of the California ISO and SCE and support reliable operations. The meters are connected to the transformer banks for each 115 kV system measuring the flow into or out of the 115 kV system depending on system conditions. Likewise, the radial facilities north of Lugo substation meter flow at the substation or switchrack at the interface with the California ISO-controlled transmission network.

7. **Factor seven—local distribution will be of reduced voltage**

The use of 115 kV voltage by SCE for local distribution has previously been accepted by the Commission and is unchanged in function today. As noted, SCE’s BES consists of 500 kV, 220 kV, 161 kV A.C., and 1000 kV D.C. but also includes limited 115 kV, 66 kV and 55 kV facilities. SCE uses the majority of its 115 kV facilities for the local distribution of energy, which is of “reduced voltage,” in the context of higher voltages used for transmission in the Western Interconnection.78

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78 *See, City of Holland, Michigan Board of Public Works, 139 FERC ¶ 61,055 (2012) (“Order Denying Holland Appeal”) at P 42 (distinguishing the City’s facility from “systems in the Western region, where distribution lines are designed with comparatively high voltage levels due to the large distances that must be traversed in serving retail load”).*
C. Mansfield Test Analysis

1. Mansfield factor one—the facilities will be operated radially and will not loop back into the integrated transmission system

These 115 kV Facilities each operate off from a single substation that serves as the interface with the integrated transmission network and are isolated by normally open circuit breakers so that they do not loop back into the integrated transmission network.

2. Mansfield factor two—energy will flow primarily from the transmission system to local load

The source of power flow into each of the 115 kV Facilities in this Application is primarily from the integrated transmission network. However, as with any radial distribution system with generation interconnecting thereto, the flow at the point of interconnection with the transmission network is unidirectional but its direction can vary based on distribution system conditions. When local generation exceeds the local load, the 115 kV system behaves like a generation tie-line.

3. Mansfield factor three—transmission provider provision of transmission service to itself or other transmission customers

The 115 kV Facilities at-issue are not under the operational control of the CAISO and do not provide any transmission service for SCE or any other entity. For SCE’s retail customers in these 115 kV Facilities, distribution service is provided pursuant to SCE’s retail tariff and is subject to the jurisdiction of the CPUC. For wholesale generators or loads, distribution service will be provided pursuant to SCE’s Wholesale Distribution Access Tariff which is subject to the

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79 A more detailed review of the application of the Mansfield factors to the Facilities is provided in Exhibit SCE-1.
jurisdiction of the Commission. The transmission provider, the CAISO, is the Transmission Provider in its territory and it is unable to use these 115 kV systems to provide transmission service at all. Under the independent system operator construct in California, the CAISO provides transmission service only over the integrated transmission network subject to its operational control. Distribution Providers, such as SCE, provide distribution service to or from the CAISO-controlled grid over the distribution facilities subject to SCE’s operational control, these 115 kV systems noted in this Application.

4. **Mansfield factor four—the impacted facilities do not provide benefits to the integrated transmission grid in terms of capability or reliability**

The radial 115 kV Facilities do not add to the capability of the integrated transmission grid. These systems will bring no benefit to the integrated transmission system in terms of capability or reliability because each of these 115 kV systems and Facilities operate radially and have only one point of interconnection to the CAISO grid.

5. **Mansfield factor five—an outage on impacted facilities would not impact the integrated transmission network**

Outages of any element within the 115 kV Facilities will not impact the integrated transmission network because the system does not operate in parallel with the integrated transmission network. Outages in these radial 115 kV Facilities will not impact the reliability of the integrated transmission network and vice-versa. An outage of facilities internal to a radial system or within a group of the radial facilities north of Lugo will only result in localized impacts internal to the system or radial facilities and will not propagate to the integrated transmission network.
D. Conclusion of Functional Analyses

When SCE’s 115 kV Facilities that are at-issue in this Application are analyzed using both the Seven Factor Test and Mansfield five factor functional test, the analysis clearly shows that the 115 kV Facilities continue to function as local distribution facilities and are not integrated with the transmission network, just as the Commission decided nearly 20 years ago at the formation of the CAISO, and in succeeding orders issued thereafter. The findings were that: each of these 115 kV Facilities is in close physical or geographical proximity to the retail customers it serves; each is primarily radial in character with only one CAISO node that acts as the power source into the system; the power flows into these systems and rarely, if ever, flows out (flowing out only on occasions when the load is low and the generation, typically intermittent wind, is high); the power entering these systems is not reconsigned or transported to another market by the CAISO or by SCE; the power is consumed in a comparatively restricted geographic area; and meters are located at the integrated transmission/local distribution interface.

E. Technical Analyses

In addition to applying both the Seven Factor Test and Mansfield five factor test, SCE performed a series of technical analyses which took into account specific technical and descriptive situations to determine the amount of impact the Facilities may have on the Bulk Electrical System. Using a software program that is commonly used to study power flows, voltage stability, and dynamic stability in the Western Interconnection, SCE sought to determine, under certain load and generation assumptions, whether the Facilities would have an impact of the Facilities to the reliability of the BES. Only if a potential for impact was identified by elements exceeding the flow change threshold was a detailed analysis performed to consider the full range of impact. SCE used a “TPL-like” analysis for further inspection of elements exceeding a change of 10% in power flow defined by the WECC BES Inclusion Guideline. In SCE’s detailed analysis, each local distribution element that was identified for further study was examined in accordance with the WECC System Performance Criteria for single contingency
outages. In summary, consistent with common good utility practices for ensuring the reliability of the integrated transmission network, SCE’s “TPL-like” analysis studied the following conditions to examine the reliability of the BES: loss of all local generation within a system (for areas where aggregate generation exceeded 75 MVA threshold of BES definition), steady-state thermal loading and voltage deviation analysis, dynamic frequency, voltage, angular stability analysis, and tests for positive reactive power margin.

F. Conclusion of Technical Analyses

After performing these analyses, SCE determined that all of the 115 kV Facilities have no material impact to the reliability of the Bulk Electric System. With the exception of seventeen elements in the North of Lugo region, all 115 kV Facilities passed the screens for potential impacts and no further analysis was required. Those elements that did not pass the screens in the North of Lugo region underwent further investigation, where each was assessed, found to have no negative impact to the reliability of the integrated transmission network, and verified to have no widespread impact on the Western Interconnection. After thorough analysis of the systems in which the aggregate generation exceeds 75 MVA (Devers, Vista, and North of Lugo areas), results demonstrated that a loss of all local generation within these local areas does not cause performance violations on the Bulk Electric System. In summary, the results provide confirmation that these 115 kV Facilities have no impact to the reliability of the Bulk Electric System or the Western Interconnection.

VII. CONCLUSION

SCE’s detailed review and analysis of the 115 kV Facilities, including use of the Seven Factor Test and the Mansfield test, demonstrate that these Facilities continue to be “used in the local distribution of electric energy” as contemplated in the revised BES definition adopted by the Commission. Moreover, the additional technical studies SCE conducted demonstrate that they have an immaterial impact on the BES. Therefore, these Facilities should not be re-
categorized as BES facilities, but instead should retain their existing classification as local distribution.

For all of the reasons noted above, SCE requests that the Commission make a factual determination confirming SCE’s findings that the 115 kV Facilities are used in local distribution, and are correctly categorized as non-BES. Given the timeline for compliance with the NERC Reliability Standards, SCE respectfully requests that the Commission issue its Decision no later than December 2015.

Respectfully submitted,

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Dated: April 15, 2015
CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing APPLICATION OF SOUTHERN CALIFORNIA EDISON COMPANY FOR FACTUAL DETERMINATION THAT THE INDICATED 115 KV FACILITIES ARE USED IN LOCAL DISTRIBUTION upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Rosemead, California, this 15th day of April, 2015.

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