

*Southern California Edison*  
*A.15-12-007 – Circle City\_Mira Loma-Jefferson PTC*

**DATA REQUEST SET ED - Circle City - SCE - 19**

**To: Energy Division**  
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**Job Title: Manager**  
**Received Date: 3/8/2019**

**Response Date: 3/15/2019**

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**Question 04:** Please explain to what extent and in what ways the facilities listed in SCE's GNA (attached) identify the stated needs pursuant to A.15-12-007 for the proposed Circle City Substation. Identify all applicable spreadsheet rows and discuss the associated distribution facilities (e.g., discuss the needs identified for the Corona 66/12 kV feeders, Corona 66 kV Substation, Jefferson 66/12 kV feeders, Jefferson 66 kV Substation, etc.).

**Response to Question 04:**

There are a total of 16 records in SCE's 2018 amended GNA, filed on July 25, 2018, that have a correlation to the three substations (Corona, Chase, and Jefferson Substations) within the Electrical Needs Area of the proposed *Circle City Substation and Mira Loma-Jefferson 66 kV Line Project* ("Project"). Of these records, 14 are distribution circuit related and 2 relate to subtransmission lines.

The 14 circuit related records include:

- **(8) for Needs of existing 12 kV distribution circuits out of Chase 66/12 kV Substation**
  - The Bobbit circuit containing a capacity Distribution Service Required<sup>1</sup> for mitigating both a MW deficiency found at Excel line 78 and °Celsius deficiency<sup>2</sup> found at Excel line 239.
  - The California circuit containing a capacity Distribution Service Required for mitigating both a MW deficiency found at Excel line 79 and °Celsius deficiency found at Excel line 240.
  - The Ramsgate circuit containing a capacity Distribution Service Required for mitigating a °Celsius deficiency found at Excel line 241.
  - The Tolton circuit containing a capacity Distribution Service Required for mitigating a °Celsius deficiency found at Excel line 242.

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<sup>1</sup> The Distribution Service Required (DSR) is a mandated attribute used to characterize the nature of the grid need(s) being presented in the GNA (D. 18-02-004 issued 2/15/2018 section 3.4.1.2). The DSRs include: capacity, reactive power, voltage, reliability and resiliency.

<sup>2</sup> Increases in load can cause the capacity limits of distribution equipment to be exceeded based on current carrying capacity or in this case, cable operating temperature limits. SCE's 2018 GNA included needs related to these underground cable temperature criteria violations. Engineers must identify a method to reduce the load on any combination of the circuits passing through the underground structure to satisfy a 90° Celsius temperature criteria rating. The GNA identifies the deficiency above this 90° threshold for these records.

- The Wyle circuit containing a capacity Distribution Service Required for mitigating both a MW deficiency found at Excel line 80 and °Celsius deficiency found at Excel line 243.
- **(3) for Needs of existing 12 kV distribution circuits out of Corona 66/12 kV Substation**
  - The Tesoro circuit containing a capacity Distribution Service Required for mitigating a °Celsius deficiency found at Excel line 256.
  - The Michael circuit containing a capacity Distribution Service Required for mitigating a °Celsius deficiency found at Excel line 257.
  - The Price circuit containing a capacity Distribution Service Required for mitigating a °Celsius deficiency found at Excel line 258.
- **(3) for Needs of existing 12 kV distribution circuits out of Jefferson 66/12 kV Substation**
  - The Bohemia circuit containing a capacity Distribution Service Required for mitigating a °Celsius deficiency found at Excel line 320.
  - The Border circuit containing a capacity Distribution Service Required for mitigating a °Celsius deficiency found at Excel line 321.
  - The Guinness circuit containing a capacity Distribution Service Required for mitigating a °Celsius deficiency found at Excel line 322.

The 2 related subtransmission records include:

- **(1) for Needs identified at the Corona 66 kV Substation**
  - 66 kV circuit breaker overload on the Mira Loma-Corona 66 kV Line (Excel line 564).
- **(1) for Needs identified at the Jefferson 66 kV Substation**
  - 66 kV circuit breaker overload on the Mira Loma-Corona-Jefferson 66 kV Line (Excel line 575).

Each of the identified needs associated with the aforementioned 12 kV distribution circuits from their respective three substations are expected to eventually be solved by SCE's originally proposed Circle City Substation project which includes a new substation and associated new 12 kV distribution circuits. It's unclear if the energy storage solution as proposed in the Circle City Proceeding will also solve the specific circuit needs. The identified 14 distribution circuit related needs do not encompass all the needs that justify Circle City Substation Project but would be another beneficiary from the construction of the new substation. The additional needs driving Circle City substation are beyond the 5 year forecast horizon.

Each of the two 66 kV circuit breaker overloads identified are subtransmission system needs and are unrelated to the *Circle City Substation and Mira Loma-Jefferson 66 kV Subtransmission Line Project* ("Project"). The two identified needs in the 2018 GNA at Corona 66 kV Substation and Jefferson 66 kV Substation were associated with anticipated 66 kV circuit breaker ratings being exceeded by power flow on the 66 kV subtransmission system. These needs occur irrespective of distribution system needs and occur in the absence of the proposed new Mira Loma – Jefferson 66 kV line. Please reference the answer to Question 1 as to why the needs related to the Mira Loma – Jefferson Subtransmission Line Project were not included in SCE's 2018 GNA.