

Table 1-1 Recorded and Projected Peak Demand in Megavolt Amperes for the Valley South 115-kV System (2005 to 2024)

Recorded Peak Demand (2005 to 2009)	2005	2006	2007	2008	2009
Operating Limit	1,119	1,119	1,119	1,119	1,119
Recorded Peak Demand	753	853	909	787	829
Projected Peak Demand, 1-in-5 Year Heat Storm	807	885	1038	1062	1057
Recorded Peak Demand (2010 to 2014)	2010	2011	2012	2013	2014
Operating Limit	1,119	1,119	1,119	1,119	1,119
Recorded Peak Demand	894	924	928	897	925
Projected Peak Demand, 1-in-5 Year Heat Storm	968	1014	1027	1020	1,055
Projected Peak Demand (2015 to 2019)	2015	2016	2017	2018	2019
Operating Limit	1,119	1,119	1,119	1,119	1,119
Projected Peak Demand, 1-in-5 Year Heat Storm	1,045	1,066	1,090	1,119	1,144 ^(a)
Projected Peak Demand (2020 to 2024)	2020	2021	2022	2023	2024
Operating Limit	1,119	1,119	1,119	1,119	1,119
Projected Peak Demand, 1-in-5 Year Heat Storm	1,169	1,193	1,219	1,244	1,269

Source: SCE 2014

Key: kV = kilovolt

Note: ^(a) Projected demand for a 1-in-5 year heat storm exceeds operating limit of Valley South 115-kV System.

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Operational Flexibility

To avoid exceeding the operating limit of the two Valley South 500/115-kV transformers, the applicant considered whether electrical load from the Valley South 115-kV System could be transferred, but could not identify a system to accept the load. Because the Valley South 115-kV System is not tied to another 115-kV system, electrical load cannot be transferred between Valley South and a comparable system. The availability of other electrical systems in proximity to the Valley South 115-kV System is limited because of geographic boundaries and the applicant’s service boundaries. The applicant finds that its inability to transfer load from the Valley South 115-kV System to another 115-kV system limits the operational flexibility of the Valley South 115-kV System, which increases the potential for electrical service interruptions in the event that a component of the Valley South 115-kV System malfunctions (e.g., the operating limit of a 500/115-kV transformer is exceeded).

1.1.1.5 Projected Demand on the Valley–Elsinore–Fogarty 115-kV Subtransmission Line

During its planning processes for the Valley South 115-kV System, the applicant determined that electrical demand on the Valley–Elsinore segment of the Valley–Elsinore–Fogarty 115-kV Subtransmission Line could exceed operating limits during a 1-in-10 year heat storm by 2016 (Table 1-2).⁸ As of 2008 and through the planning horizon, the operating limit could also be exceeded should an N-1 emergency condition occur (see N-1 definition in Table 1-2).

⁸ The original Valley–Ivyglen Project Draft and Final EIRs (CPUC 2009, 2010) presented the applicant’s projected electrical demand for the existing Valley–Elsinore–Ivyglen 115-kV Subtransmission Line because Fogarty Substation had not been constructed. In this document, the existing lines between Valley Substation and Ivyglen Substation is now referred to as the Valley–Elsinore–Fogarty and Fogarty–Ivyglen 115-kV Subtransmission Lines. For the applicant’s projection provided for this document, only the Valley–Elsinore–Fogarty segment of the line was identified.

Table 1-2 Recorded and Projected Peak Demand in Megavolt Amperes for the Valley–Elsinore–Fogarty 115-kV Line (2008 to 2024)

Recorded and Projected Peak Demand (2008 to 2010)	2008	2009	2010
Planned Maximum Operating Limit	184	184	184
Recorded Peak Demand	146	149	168
Projected Peak Demand (1-in-10 year heat storm) ^(a)	191	189	169
Planned Maximum Emergency Operating Limit (N-1 condition) ^(b)	248	248	248
Projected N-1 Loading	284	281	252
Recorded and Projected Peak Demand (2011 to 2013)	2011	2012	2013
Planned Maximum Operating Limit	184	184	184
Recorded Peak Demand	167	163	159
Projected Peak Demand (1-in-10 year heat storm) ^(a)	180	191	173
Planned Maximum Emergency Operating Limit (N-1 condition) ^(b)	248	248	248
Projected N-1 Loading	268	284	258
Projected Peak Demand (2014 to 2016)	2014	2015	2016
Planned Maximum Operating Limit	184	184	184
Recorded Peak Demand	163	–	–
Projected Peak Demand (1-in-10 year heat storm)	179	183	187 ^(c)
Planned Maximum Emergency Operating Limit (N-1 condition) ^(b)	248	248	248
Projected N-1 Loading	266	275	292
Projected Peak Demand (2017 to 2019)	2017	2018	2019
Planned Maximum Operating Limit	184	184	184
Projected Peak Demand (1-in-10 year heat storm)	191	196	201
Planned Maximum Emergency Operating Limit (N-1 condition) ^(b)	248	248	248
Projected N-1 Loading	294	297	305
Projected Peak Demand (2020 to 2022)	2020	2021	2022
Planned Maximum Operating Limit	184	184	184
Projected Peak Demand (1-in-10 year heat storm)	203	205	206
Planned Maximum Emergency Operating Limit (N-1 condition) ^(b)	248	248	248
Projected N-1 Loading	307	309	312
Projected Peak Demand (2023 to 2024)	2023	2024	
Planned Maximum Operating Limit	184	184	
Projected Peak Demand (1-in-10 year heat storm)	208	209	
Planned Maximum Emergency Operating Limit (N-1 condition) ^(b)	248	248	
Projected N-1 Loading	313	315	

Sources: SCE 2014

Key: CPUC = California Public Utilities Commission, kV = kilovolt, SCE = Southern California Edison

Notes:

- ^(a) The Projected Peak Demand and Projected N-1 Loading values prior to 2013 are the same as those provided in the original Valley–Ivyglen Final EIR (CPUC 2010). They were the applicant’s projections for future years at the time they were produced. Projected peak demand values from 2015 through 2024 reflect the latest applicant forecasts submitted to the CPUC.
- ^(b) For the purpose of documenting recorded and projected demand on the Valley–Elsinore–Fogarty 115-kV Line, an N-1 condition refers to the loss of a single subtransmission element (e.g., a subtransmission line or transformer). Demand on the Valley–Elsinore–Fogarty 115-kV Line would temporarily increase until the N-1 condition is corrected.
- ^(c) Projected demand for a 1-in-10 year heat storm exceeds the Valley–Elsinore–Fogarty 115-kV line’s operating limit.

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