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System Operator

# **2008 LOCAL CAPACITY TECHNICAL ANALYSIS**

## **REPORT AND STUDY RESULTS UPDATE FOR SAN DIEGO AREA**

Updated June 19, 2007

# **Local Capacity Technical Analysis Overview and Study Results Update for San Diego Area**

## **I. Executive Summary**

This update amends the results and recommendations of the 2008 Local Capacity Technical Analysis, dated April 3, 2007 (2008 LCR Study), with respect to the San Diego Area. The changes included in this update are made at the request of the Commission and reflect: (1) the use of the latest CEC load forecast for the San Diego Area and (2) the elimination of the Lake Hodges Project from the list of eligible Local Capacity Area Resources. The 2008 LCR Study incorrectly utilized a load forecast provided by SDG&E. The Lake Hodges Project is being removed because of information provided by SDG&E indicating that the “in-service date” for the project has been delayed to September 2008, making it ineligible for inclusion in the 2008 LCR Study.

The following discussion replaces “Section 10 San Diego Area” on pages 83-85 of the 2008 LCR Study.

## **10. San Diego Area**

### **Area Definition**

The transmission tie lines forming a boundary around San Diego include:

- 1) Imperial Valley – Miguel 500 kV Line
- 2) Miguel – Tijuana 230 kV Line
- 3) San Onofre - San Luis Rey #1 230 kV Line
- 4) San Onofre - San Luis Rey #2 230 kV Line
- 5) San Onofre - San Luis Rey #3 230 kV Line
- 6) San Onofre – Talega #1 230 kV Line
- 7) San Onofre – Talega #2 230 kV Line

The substations that delineate the San Diego Area are:

- 1) Imperial Valley is out Miguel is in
- 2) Miguel is in Tijuana is out
- 3) San Onofre is out San Luis Rey is in
- 4) San Onofre is out San Luis Rey is in
- 5) San Onofre is out San Luis Rey is in
- 6) San Onofre is out Talega is in
- 7) San Onofre is out Talega is in

Total 2008 busload within the defined area: 4873 MW with 119 MW of losses resulting in total load + losses of 4992 MW.

Total units and qualifying capacity available in this area:

<b>MKT/SCHED RESOURCE ID</b>	<b>BUS #</b>	<b>BUS NAME</b>	<b>kV</b>	<b>NQC</b>	<b>UNIT ID</b>	<b>NQC Comments</b>	<b>CAISO Tag</b>
BORDER_6_UNITA1	22149	CALPK_BD	13.8	43.80	1		Market
CBRLLO_6_PLSTP1	22092	CABRILLO	69	3.50	1		QF/Selfgen
CHILLS_1_SYCLFL	22120	CARLTNHS	138	1.00	1		QF/Selfgen
CHILLS_7_UNITA1	22120	CARLTNHS	138	2.50	2		QF/Selfgen
CPSTNO_7_PRMAVS	22112	CAPISTRANO	138	4.10	1		QF/Selfgen
CRSTWD_6_KUMYAY	22915	KUMEYAAY	34.5	8.32	1	Monthly NQC - used August for LCR	Wind
DIVSON_6_NSQF	22172	DIVISION	69	47.00	1		QF/Selfgen
EGATE_7_NOCITY	22204	EASTGATE	69	1.00	1		QF/Selfgen
ELCAJN_6_UNITA1	22150	CALPK_EC	13.8	42.20	1		Market
ELCAJN_7_GT1	22212	ELCAJNGT	12.5	13.00	1		Market
ENCINA_7_EA1	22233	ENCINA 1	14.4	106.00	1		Market
ENCINA_7_EA2	22234	ENCINA 2	14.4	103.00	1		Market
ENCINA_7_EA3	22236	ENCINA 3	14.4	109.00	1		Market
ENCINA_7_EA4	22240	ENCINA 4	22	299.00	1		Market
ENCINA_7_EA5	22244	ENCINA 5	24	329.00	1		Market
ENCINA_7_GT1	22248	ENCINAGT	12.5	14.00	1		Market
ESCND0_6_PL1X2	22257	MMC_ES	13.8	35.50	1		Market
ESCND0_6_UNITB1	22153	CALPK_ES	13.8	45.50	1		Market
ESCO_6_GLMQF	22332	GOALLINE	69	50.00	1		QF/Selfgen
KEARNY_7_KY1	22377	KEARNGT1	12.5	15.00	1		Market
KEARNY_7_KY2	22373	KEARN2AB	12.5	14.00	2		Market
KEARNY_7_KY2	22373	KEARN2AB	12.5	14.00	1		Market
KEARNY_7_KY2	22374	KEARN2CD	12.5	14.00	1		Market
KEARNY_7_KY2	22374	KEARN2CD	12.5	13.00	2		Market
KEARNY_7_KY3	22375	KEARN3AB	12.5	15.00	2		Market
KEARNY_7_KY3	22375	KEARN3AB	12.5	14.00	1		Market
KEARNY_7_KY3	22376	KEARN3CD	12.5	14.00	1		Market
KEARNY_7_KY3	22376	KEARN3CD	12.5	14.00	2		Market
KYCORA_7_UNIT 1	22384	KYOCERA	69	0.00	1		QF/Selfgen
LARKSP_6_UNIT 1	22074	LRKSPBD1	13.8	46.00	1		Market
LARKSP_6_UNIT 2	22075	LRKSPBD2	13.8	46.00	1		Market
MRGT_6_MMAREF	22486	MFE_MR1	13.8	46.60	1		Market
MRGT_7_UNITS	22488	MIRAMRGT	12.5	17.00	1		Market
MRGT_7_UNITS	22488	MIRAMRGT	12.5	16.00	2		Market
MSHGTS_6_MMARLF	22448	MESAHGTS	69	2.70	1		QF/Selfgen
NIMTG_6_NIQF	22576	NOISLMTR	69	35.10	1		QF/Selfgen
OTAY_6_PL1X2	22617	MMC_OY	13.8	35.50	1		Market
OTAY_6_UNITB1	22604	OTAY	69	2.90	1		QF/Selfgen
PALOMR_2_PL1X3	22262	PENCT1	18	155.42	1		Market
PALOMR_2_PL1X3	22263	PENCT2	18	155.42	1		Market
PALOMR_2_PL1X3	22265	PENST	18	230.63	1		Market
PTLOMA_6_NTCCGN	22660	POINTLMA	69	2.40	2		QF/Selfgen
PTLOMA_6_NTCQF	22660	POINTLMA	69	21.90	1		QF/Selfgen
SAMPSN_6_KELCO1	22704	SAMPSON	12.5	14.10	1		QF/Selfgen
SMRCOS_6_UNIT 1	22724	SANMRCOS	69	1.10	1		QF/Selfgen
SOBAY_7_GT1	22776	SOUTHBGT	12.5	13.00	1		Market
SOBAY_7_SY1	22780	SOUTHBY1	15	145.00	1		Market
SOBAY_7_SY2	22784	SOUTHBY2	15	149.00	1		Market
SOBAY_7_SY3	22788	SOUTHBY3	20	174.00	1		Market
SOBAY_7_SY4	22792	SOUTHBY4	20	221.00	1		Market

MSSION_2_QF	22532	MURRAY	69	0.20	1	No NQC - historical data	QF/Selfgen
MSSION_2_QF	22680	R.SNTAFE	69	0.80	1	No NQC - historical data	QF/Selfgen
MSSION_2_QF	22496	MISSION	69	2.10	1		QF/Selfgen
MSSION_2_QF	22760	SHADOWR	138	0.10	1	No NQC - historical data	QF/Selfgen
MSSION_2_QF	22008	ASH	69	0.90	1	No NQC - historical data	QF/Selfgen

### **Critical Contingency Analysis Summary**

#### **San Diego overall:**

In 2008 the most limiting contingency in the San Diego area is described by the outage of the 500 kV Southwest Power Link (SWPL) between Imperial Valley and Miguel Substations over-lapping with an outage of the Palomar Combined-Cycle Power plant (541 MW) while staying within the South of San Onofre (WECC Path 44) non-simultaneous import capability rating of 2,500 MW. This limiting contingency establishes a Local Capacity Need of 3033 MW in 2008 (includes 193 MW of QF generation and 8 MW of Wind as well as 114 MW of deficiency) as the minimum generation capacity necessary for reliable load serving capability within this area.

#### **Effectiveness factors:**

All units within this area have the same effectiveness factor. Units outside of this area are not effective.

#### **San Diego Overall Requirements:**

<b>2008</b>	QF (MW)	Wind (MW)	Market (MW)	Max. Qualifying Capacity (MW)
Available generation	193	8	2718	2919

<b>2008</b>	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Requirement
Category B (Single) <sup>1</sup>	2919	114	3033
Category C (Multiple) <sup>2</sup>	2919	114	3033

<sup>1</sup> A single contingency means that the system will be able to survive the loss of a single element, however the operators will not have any means (other than load drop) in order to bring the system within a safe operating zone and get prepared for the next contingency as required by MORC.

<sup>2</sup> Multiple contingencies means that the system will be able to survive the loss of a single element, and the operators will have enough generation (other operating procedures) in order to bring the system within a safe operating zone and get prepared for the next contingency as required by MORC.