ORA DATA REQUEST
ORA-SDG&E-DR-06
SDG&E GRC Phase 2 APPLICATION – A.15-04-012
SDG&E RESPONSE
DATE RECEIVED: JANUARY 19, 2016
DATE RESPONDED: FEBRUARY 3, 2016

Marginal Commodity Costs:

1.   Re: Chapter 7 MGCC workpaper:
         SDG&E's next planned capacity additions during the period of the GRC Phase 2 (2016-2018) are in the form of advanced CTs–Pio Pico uses 3 LMS100's and is expected to come online in 2018[1] and the Carlsbad Energy Center uses 5 LMS 100's and is expected to come online in 2018.[2]
         Please explain why SDG&E chose a conventional CT rather than an Advanced CT plant using GE LMS100 turbines as the basis for the MGCC calculation.

SDG&E Response:

SDG&E has used the cost of a conventional CT in the past, the cost data are more robust for the conventional CT**[1]**, and all Commission-approved cost effectiveness analyses to date have continued to use conventional CTs to calculate capacity value.[2]

         [1]See page B-15 of the Cost of Generation study: "The advanced CT case cost is based on very limited data for a different advanced gas turbine type. The significantly lower cost for the advanced CT case seems to overstate the potential for economy of scale reduction in cost, particularly since the LMS100 technology requires an increase in auxiliary equipment costs. Therefore, there is a low level of confidence with the advanced CT costs." [Emphasis added]
http://www.energy.ca.gov/2014publications/CEC-200-2014-003/CEC-200-2014-003-SF.pdf

         [2]The latest avoided cost calculator uses a conventional CT. See
https://ethree.com/public_projects/cpucSGIP.php

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[1] CPUC Decision D.14-06-053
"Pio Pico Energy Power Plant Licensing Case," http://www.energy.ca.gov/sitingcases/piopico/index.html
[2] D.15-05-051 & D.15-11-024

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2.   In the Chapter 7 CTC Allocation workpaper, there are factors that adjust each class' proportion of top 100 LOLE hourly loads to 2016:

	Res	Sm Comm	M/L C&I	Ag	Lighting	Total
Factor	1.04	1.03	0.99	1.09	0.82	1.01

Please provide the detail for the derivation of these factors and provide supporting documents and sources of data.
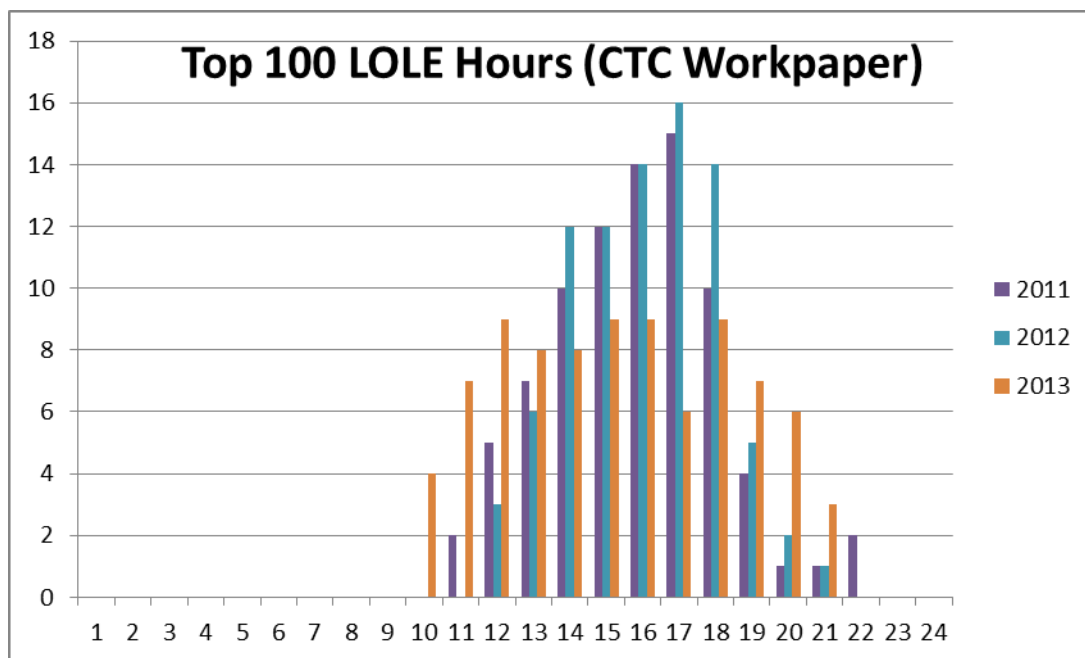
SDG&E Response:

Confidential/Privileged Pursuant to Applicable Provisions of D.06-06-066, G.O. 66-C and PUC Code Section 583 and Section 454.5 (g).

REMOVED DUE TO CONFIDENTIALITY

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3.   SDG&E's response to Data Request 3 (concerning the CTC Allocation workpaper) does
        not seem to show a shift to later hours among the observed Top 100 LOLE Hours for
        2009-2013 (see the distribution below, which shows LOLE hours shifting from 2pm-6pm
        to a wider spread- both earlier and later in the day, for 2013).   How does SDG&E
        reconcile the contradiction between the observed widening of loss of load hours to earlier
        and later in the day (in 2013) and its proposal to shift TOU peak periods to later in the
        day?

SDG&E Response:

The CTC Allocation workpaper does not use Loss of Load Expectation ("LOLE"), therefore it
does not show observed Top 100 LOLE hours for 2009-2013. The data in the CTC allocation
workpaper is based on historic usage by class, which only considers energy demand. LOLE
analysis is used to identify periods when the likelihood of needing additional resources is
highest. It provides the expectation of the hours with the highest need for new resources given
the variable nature of customer demands due to weather and the variable nature of solar and wind
energy production. LOLE analysis considers both demand and supply, whereas the information
provided for CTC allocation is just historic demand.

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4.   Re: SDGE-3, SDG&E explained that it used the Ventyx Planning and Risk model to
develop relative loss of load expectation/distribution for the San Diego Greater
Reliability and San Diego sub-area. Chart RBA-11 showed the flatter distribution of
LOLE and a spikier distribution for San Diego greater reliability area.
  a. How are the LOLE analyses used to support SDG&E's determination of TOU
      period definition?
  b. How does the new TOU period definition address the subarea LOLE results?

SDG&E Response:

As explained in the testimony of Cyndee Fang, SDG&E is using a combination of TOU periods
and Critical Peak Pricing (CPP) to address the loss of load results. The proposed TOU period
covers the likely peak hours for the Greater San Diego Reliability area, while CPP time period of
2 pm - 6 pm is being used to address the San Diego subarea LOLE results.

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5.   Re: SDGE-3, SDG&E explained that "choosing TOU period definition is to group
        together hours with similar energy costs" (p.RBA-8).
        In assessing the TOU period definition, why does SDG&E choose to use DLAP data to
        review the energy price trend without taking into account the hourly capacity costs?

SDG&E Response:

There are no hourly capacity prices. Energy prices tend to be correlated with the allocation of
capacity costs; energy prices are high in periods when capacity becomes constrained. On the
limited days when energy prices are high due to San Diego subarea constraints, CPP is used to
capture those high hourly capacity costs.

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6.   It appears that SDG&E uses a Top 100 Hours LOLE analysis to allocate generation capacity costs, based on both the San Diego Greater Reliability Area and the San Diego sub-area.
        a. How did SDG&E choose to weight the data, i.e. what method was employed, and why?

SDG&E Response:

SDG&E weighted each hour's % LOLE equally for both the results of the San Diego Greater Reliability Area and the San Diego sub-area, and then determined the top 100 hours of LOLE. This is shown in workpaper "A.15-04-012 Chapter 7 Workpaper 2016 LOLE Summary.xlsx" The combined results are used for generation capacity allocation to reflect capacity considerations in both the San Diego Greater Reliability Area and the San Diego sub-area. This was done because SDG&E is unique in that local capacity considers both the San Diego Greater Reliability area and separately the San Diego sub-area (excluding generation from Imperial Valley).