UCAN's 15th Set of Data Requests
A. 06-08-010

1. Please supplement your answers to the following UCAN data requests by answering them with regard to SDG&E Cases 200, 201, 204, 240, and 241 for each of the years 2010, 2015, and 2020:

a. 5-41

b. 7-110b (previously answered for 2010 and 2015 for cases 200, 201, and 204, but SDG&E should check to see if its answer reflected the change in load forecast from 8/4/06 to 1/26/07; no 2020 data or Case 240-241 data yet supplied)

2. Please supplement your answers to the following UCAN data requests by answering them with regard to SDG&E Cases 100, 101, and 104 for each of the years 2010 and 2015:

a. 5-41

3. In its response to UCAN DR9-26b, SDG&E provided a CD with 4 documents; the first paragraph of the first one, in the paragraph entitled "Background", refers to comments from LADWP and PG&E prior to 3/22/06, to SDG&E responses on 3/22/06, and to responses to SDG&E's response from PG&E and LADWP on 3/27/06. Please provide each of these documents (plus any attachments, appendices, exhibits, etc.) from PG&E, LADWP, and SDG&E.

4. Please identify and quantify the A&G costs which would be associated with the O&M expenses shown in Chapter 5 of SDG&E's 8/4/06 testimony, as well as any other A&G expenses that would result from construction, ownership, and operation of the Sunrise Powerlink.

5. Please identify any known problems with GridView's ability to forecast market prices.

6. Please provide the data for the the actual SDG&E peak load in 2006, adjusted for:

a. Normal (1-in-2) weather
b. 1-in-10 hot weather

7. Please provide copies of all data responses to parties other than UCAN which have not been posted on SDG&E's web site, either because they are confidential, or for any other reason.

8. For the item in Ex. J to SDG&E's 1/26/07 filing concerning WECC load forecasts:

a. UCAN identified the WECC load forecasts shown in Tables IV-24 and IV-25 as having contradictory numbers (e.g., negative load growth in some areas from 2010 to 2015) soon after they were published in August 2006. SDG&E indicates in its response to UCAN DR9-33 that it was aware of "two major inconsistencies" in its regional WECC load forecasts by 10/13/06. When and how did SDG&E first become aware of the "major inconsistencies" with the load forecasts in Tables IV-24 and IV-25?
b. When did SDG&E decide that the 2010 numbers in Table IV-25 were in error?
c. When did SDG&E decide what numbers to use in its 1/26/07 Gridview inputs in lieu of the numbers shown in Tables IV-24 and IV-25?
d. Why did SDG&E not correct the WECC forecast data in its 1/19/07 errata filing?

9. For each of the other items in Ex. J that were not incorporated into SDG&E's 1/19/07 errata filing:

a. Does this item represent an error, or simply a change in modeling assumptions or inputs?
b. If it represents an error, when and how was it identified as such?
c. If it was identified as an error prior to 12/1/06, why was it not corrected in the errata filing made on 1/19/07?

10. Please provide the technical study(ies) which established SDG&E's N-0 import limit as 2850 Mw, as referenced in the data response to Energy Divisions data request ALT-31c.

11. Please identify all the constraints that act to limit N-0 imports to 2850 Mw which are referenced but not specifically identified in SDG&E's response to Energy Division data request ALT-31c.

12. Please identify each of the constraints that currently limit SDG&E's import capability to 2850 Mw under N-0 conditions will still exist in 2010 whether or not Sunrise is built (e.g., after new transformers at Penasquitos and Sycamore Canyon, new 230 kV transmission between Encina and Penasquitos, a new 230/138 kV transformer and South Bay-Los Coches 138 kV loop-in at Miguel, and all other planned transmission upgrades to the SDG&E system by 2010 whose costs are not included in Chapter 5 of SDG&E's 8/4/06 testimony but are shown in either the CAISO's 2007 transmission plan or SDG&E's 10/13/06 import capability study provided in response to UCAN DR4-31).

13. Please provide a copy (preferably in electronic form) of SDG&E's 1999 annual transmission plan.

14. In SDG&E's 12/05 filing it identified potential Central substation locations farther west than the location proposed in the 8/4/06 filing. Please identify the location and expected land acquisition cost for each Central substation site that was considered and rejected by SDG&E.

15. Please provide the LEAPS import study which forms the basis for SDG&E's claim that LEAPS would increase its G-1/N-1 import capability by 795 Mw claim, as referenced in the workpaper entitled "Jan26-07_Alt_TEVS-LEAPS_v2.xls".

16. UCAN interprets SDG&E's response to UCAN DR7-109b for Case 204 to say that on 1/1/15 (and presumably on other dates as well) the CT portion of a future Encina combined cycle plant would operate for many consecutive hours at a greater than at 90% capacity factor while the steam turbine portion was turned off.

a. Does SDG&E agree with this interpretation of this 1/1/15 data, and if not, please explain why not.
b. Please explain the ways in which a new combined cycle as CTs without steam generation make either physical or economic sense.
c. Assuming permit conditions similar to those for Palomar or Otay Mesa, would operating a combined cycle plant with the CTs at near-full power for many consecutive hours while the steam turbine was turned off even be permissible under the air permit conditions?

d. Does SDG&E believe that Gridview is in error when it projects a scenario with numerous consecutive hours of steam turbine output at zero while CT output is near maximum, for a new combined cycle plant? If not, why not?

17. UCAN interprets SDG&E's supplemental responses to UCAN DR7-113b and DR7-113c to say that there is no congestion in Cases 200, 201,or 204 on SWPL or Sunrise.

a. Please provide SDG&E's interpretation of the data, if different from UCAN's. If not, please state that you agree with UCAN's interpretation.

b. Please provide the hourly shadow prices associated with the Miguel nomogram for each of Cases 200, 201, 204, 240, 241 and 212, in each of the years 2010, 2015, and 2020.

c. Please provide the hourly import flows counted as part of the Miguel nomogram for each of Cases 200, 201, 204, 240, 241, and 212, in each of the years 2010, 2015, and 2020, showing Line 50001 and Line 23040 separately.

18. SDG&E's supplemental response to UCAN DR7-109a shows hourly LMPs are up to $30/Mwh different for Sterling and SS07 Geo (e.g., in Case 200, on 1/1/15, at 3am). Please explain how two generators both located in the Imperial Valley can have LMPs so widely different.

19. SDG&E has applied to the CEC to modify its Palomar combined cycle permit to add chillers. Please provide a quantitative analysis of the effect of chillers at Palomar on:

a. Maximum net plant capacity at summer peak
b. Average Pmax over the course of the year

20. With regard to the Miguel outlet capacity limit of 1900 Mw:

a. Why is it 1900 Mw?
b. When did it become 1900 Mw?
c. Please explain the effect that the Miguel upgrades identified in SDG&E's 1/8/07 response to UCAN data request 4-31 (10/13/06 import study, at p. 4) will have on the 1900 Mw limit.

d. Please explain the effect that the Otay Mesa transmission project will have on either the 1900 Mw limit or which imports are counted against the 1900 Mw limit.

e. Does the 1900 Mw limit vary with different SDG&E load levels?

f. What is the Miguel outlet limit when Otay Mesa is out of service, if the SPS described in SDG&E's 1/8/07 response to UCAN DR4-31 (at p. 4 of the attached import study) is implemented?

g. What is the Miguel outlet limit in the 2nd-SWPL case modeled on 1/26/07 (Case 212)?

h. What would the outlet limit be if a third 230/69 kV transformer were added at Miguel as well as the upgrades identified on p. 4 of SDG&E's 10/13 study provided in response to UCAN DR4-31?

i. What would the outlet limit be if a third 230/69 kV transformer were added at Miguel instead of the upgrades identified on p. 4 of SDG&E's 10/13 study provided in response to UCAN DR4-31?

21. With regard to the Miguel import limit of 1450+ Mw:

a. Please identify the limit under N-0 conditions due to Imperial Valley-Miguel line capacity, without regard to current transformer-related constraints.

b. What would the import limit be under N-0 conditions if a third Miguel 500/230 kV transformer were added?

c. Please specify what the import limit be under N-0 conditions if the current SPS for loss of one transformer were supplemented by a cross-trip of the remaining transformer after a forced outage of one transformer, when necessary to avoid overloading the remaining transformer.

d. Please specify the Miguel import limit in Gridview if the "SDGE Solar 1" generator is producing 500 Mw.

e. In hours when the Miguel import limit is shown by SDG&E as 1450 Mw, does that mean that no generators are operating which are direct-connected to the Imperial Valley substation? If not, please explain how the Miguel import limit can be 1450 Mw while there is direct-connected generation in operation.

f. Please specify the maximum Miguel import limit in each of Cases 200, 201, 204, 240, 241, and 212.

22. Please provide the "technical study" referenced in fn. 3 to Table H-13 of SDG&E's 1/26/07 filing.

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23. Why does SDGE model an import limit well below 2500 Mw for various contingencies in 2010/2015/2020 per the "Outage" tabs of "1-25-07-SR_RMR_Costs Workpaper 200 220 201 221 204 208 .xls"?

24. Please update the "Make-Whole Payment" tab of "1-25-07-SR_RMR_Costs Workpaper 200 220 201 221 204 208 .xls" for data since 4/06. Provide make-whole payments separately for CTs, Encina 1-5, and Palomar.

25. Please provide all e-mails to and from Victor Kruger since 8/4/06 regarding RMR modeling in this proceeding.

26. Please provide all e-mails to and from Linda Brown since 8/4/06 regarding SDG&E reliability issues in this proceeding.

27. Provide all e-mails to and from Jan Strack since 8/4/06 regarding economic analysis of Sunrise or alternatives to it.

28. SDG&E workpapers for new CTs include working capital and FFU costs. Please indicate where the corresponding Sunrise costs are found, or provide them if not previously provided.

29. SDG&E's responses to UCAN DR7-12b and 7-12c show powerflow diagrams after a trip of SWPL, as imports are reduced from 4200 Mw in DR7-12b to 3500 Mw in DR7-12c. Please identify each SDG&E-area powerplant whose output increases between DR7-12b and DR7-12c, and the Mw amount of the increase.

30. Please update DR7-12b and DR7-12c to reflect the situations in which the N-1 outage is not Imperial Valley-Miguel, but instead is:

a. San Felipe-Central
b. Imperial Valley-San Felipe

31. Please update DR7-12 to include 2015 and 2020 cases.

32. Please confirm that with SWPL out, a trip of Central-Sycamore Canyon #1 or #2 or a trip of either Central transformer will require a cross-trip of the matching element and be equivalent to an outage of San Felipe-Central.

33. With SWPL out, please state whether the loss of the Imperial Valley-San Felipe line require a cross-trip of the Bannister-San Felipe 230 kV line to avoid overloading either that line and/or the San Felipe 500/230 kV transformer. Please provide the basis for your answer.

34. Please explain SDG&E's technical basis for agreeing or disagreeing that each the following potential consequences of the completion of the Otay Mesa transmission loop project will occur:

a. Tijuana-Otay Mesa flows will no longer directly impact the Miguel 230 KV bus
b. Tijuana-Otay Mesa flows should no longer be included as part of the Miguel import nomogram
c. Tijuana-Otay Mesa flows should not count against the 1900 Mw Miguel outlet limit.

35. Please identify any internal SDG&E facilities that overload in 2015 and 2020 under N-0 or N-1 conditions in Case 201 that don't overload in Case 200, or overload in Case 241 but not in Case 240.

36. Please identify all SDG&E transmission facilities added in 2015 and/or 2020 in any of SDG&E's 1/26/07 cases to meet load growth after 2010 (e.g., additional 230/69 KV transformer at Miguel).

37. In its response to Energy Division data request ALT-31c, SDG&E says the 2850 Mw import limit under N-0 conditions is caused by internal system constraints. Please assume external upgrades to Path 44 allowed total N-0 imports of either 3200 Mw or 3350 Mw over Path 44, line 50001, and line 23040 combined (with individual N-0 import limits, in either case, of 2200 Mw for Path 44, 1900 Mw for line 50001, and 408 Mw for line 23040), and identify what internal upgrades would be required to accommodate N-0 imports of

a. 3200 Mw
b. 3350 Mw

38. SDG&E's response to UCAN DR5-40 shows annual 2015 generation at Elk Hills 1-2 as 0 gwh in Cases 100, 101, and 104, while Elk Hills 3 produces about 1600 gwh per year. Since Elk Hills is a combined cycle

plant, UCAN believes it is impossible for the steam turbine to generate while the CTs are off. Please:

a. Explain the results shown,
b. Indicate whether SDG&E's 1/26/07 modeling has comparable results, and
c. Indicate whether SDG&E believes having generation from only Elk Hills 3 is an error in Gridview.

39. SDG&E's response to UCAN DR5-40 shows "RCECCTG1 and G2" in the "PG&E Bay" area in 2015. These appear to be the Russell **C**ity Energy Center Combustion Turbine Generators 1 and 2. However, the Russell City project is a CEC-permitted combined cycle. Please confirm that:

a. These units represent the planned Russell City CT units
b. No other "PG&E Bay" area generator modeled by SDG&E represents the Russell City CTs or steam turbine.
c. Modeling the Russell City combined cycle plant as two CTs rather than a combined cycle plant is an error.
d. The same modeling shown in DR5-40 also occurred in SDG&E's 1/26/07 Gridview runs.

40. SDG&E's response to UCAN DR5-40 shows "SECAL" 1-3 in the "PG&E Bay" area.

a. What Bay Area units are these supposed to represent?
b. Does the acronym "Secal" stand for "South East California," and if so are these units mislocated in SDG&E's Gridview runs?
c. Are the "Secal" units still located in the "PG&E Bay" area in SDG&E's 1/26/07 GridView modeling?

41. SDG&E Table IV-11 lists 1343 Mw for various new California generators with "PO" in their names, and SDG&E's response to UCAN DR5-40 shows over 9000 gwh in 2015 from 9 "POxxx" units.

a. What powerplants at what locations are these names supposed to represent?
b. Are these units also included in SDG&E's 1/26/07 Gridview modeling?

42. SDG&E's response to UCAN DR5-40 shows generation of approximately 5000 gwh in 2015 for the Los Medanos combined cycle units 1-3.

a. Please explain how this is possible, since the net capacity of the Los Medanos combined cycle is 555 Mw (http://www.energy.ca.gov/sitingcases/all_projects.html, line 3), and a 555 Mw project will produce less than 5000 gwh per year even at a 100 percent capacity factor.

b. Do the Los Medanos units also produce 5000 gwh per year in SDG&E's 1/26/07 GridView modeling?

43. SDG&E's response to UCAN DR5-40 shows generation of approximately 1800-2000 gwh in 2015 in Cases 100, 101, and 104 for the four units (three CTs and a steam turbine) of the Delta combined cycle plant. The Delta plant has a net capacity of 887 Mw (http://www.energy.ca.gov/sitingcases/all_projects.html, line 13), so 1800-2000 gwh per year corresponds to a capacity factor of 23-26%. Please explain:

a. How such a low capacity factor is credible for a combined cycle power plant, particularly when another combined cycle plant only a few miles away (Los Medanos) is modeled with a much higher capacity factor and GridView supposedly uses the same heat rates for all recent combined cycle plants.

b. Whether the Delta plant generation in 2015 is similar in SDG&E's 1/26/07 GridView modeling to that reported in its response to DR5-40.

44. SDG&E's response to UCAN DR5-40 shows Moss Landing 6-7 with outputs that differ by a factor of more than 2. These are twin 700 Mw class units, located at the same bus.

a. What heat rates were used for Moss Landing 6 and 7 in GridView?

b. Did SDG&E's 1/26/07 GridView modeling produce results for Moss Landing 6-7 generation in 2015 comparable to those in its response to UCAN DR5-40?

c. Please explain if and/or why it is credible for Moss Landing 6 and 7 generation to differ so much from each other?

45. SDG&E's 12/1/06 response to UCAN DR5-41c gives peak hour generation for the LA Basin for Cases 0-3 in 2010 and 2015. Please provide:

a. Comparable data for Cases 100, 101, 104, 200, 201, 204, 240, and 241.

b. For Cases 200, 201, 204, 240, and 241, please provide the Mw level for each individual powerplant in the LA Basin which sums to the aggregate levels shown in response to subpart (a) of this question.

46. Please explain why SDG&E's responses to UCAN DR2-16 include the Silver Hawk generator in Cases 0 and 1 but not in Case 101. In particular, please explain:

a. Was Silver Hawk deleted as a future generator between SDG&E's 12/05 and 8/4/06 filing? If so, why?

b. Is Silver Hawk included in SDG&E's 1/26/07 modeling? If not, why not?

47. Please reconcile the difference between the Stirling generation numbers shown in SDG&E's response to UCAN DR7-30 and the solar generation numbers shown in SDG&E's response to UCAN DR8-29.

48. In the 3/14/06 ABB Consulting report to SDG&E provided in response to UCAN DR7-33e, ABB Consulting claims that the "RMR requirement for SDG&E area was enforced" in its GridView modeling.

a. If GridView was capable of modeling SDG&E RMR requirements in March 2006, please explain why SDG&E created an entirely separate spreadsheet model of RMR costs in this proceeding for each of its filings.

b. If Gridview already models RMR requirements, please explain how the CPUC be sure that SDG&E has not double-counted RMR costs with its separate RMR spreadsheet models.

c. If GridView is capable of modeling RMR requirements for SDG&E, but SDG&E modeled RMR costs outside of Gridview, did SDG&E disable the RMR-modeling capabilities of Gridview for its 8/4/06, 1/19/07, and 1/26/07 GridView filings?

49. SDG&E's responses to UCAN DR7-152 show WECC-wide gas-fired generation is barely half as large in Cases 200 and 204 as in Cases 100 and 104 (with the 1/19/07 corrections). Please:

a. Explain how this enormous difference could occur.

b. Provide the WECC-wide generation (i) from coal, (ii) from nuclear, and (iii) from hydro for each of Cases 100, 101, 104, 200, 201, 204, 240, and 241 for 2010, 2015, and (where available) 2020

50. SDG&E's responses to UCAN DR7-152 show that WECC-wide natural gas-fired generation is lower in Case 204 than in Case 200, in both 2010 and 2015. Please explain how a Case with new combined cycle plants (Case 204) could have lower natural gas-based generation than a case with identical loads, transmission facilities, and resources except for some CTs and inefficient gas-fired steam plants (Case 200).

51. Please provide a copy of SDG&E's EOP 5130.

52. In the response to UCAN DR7-78 regarding the 1/19/07 version of Cases 100, 101, and 104, the files "IOCurve_10X_201X_Errata.xls" (for various values of "X") show heat rate data for various powerplants. The files labeled 2010 appear to have 2015 data, and vice versa. Please indicate whether or not the titles have in fact been reversed.

53. In the response to UCAN DR7-78 regarding the 1/19/07 version of Cases 100, 101, and 104, the files "IOCurve_10X_201X_Errata.xls" show heat rate data for various powerplants. Please provide the justification for the following inputs:

a. Sempra and SDG&E combined cycles shown as three units which each of an incremental 2nd block heat rate of 6186 Btu/kwh, but South Bay Repower project has higher heat rates

b. Elk Hills has higher heat rates for 2 of 3 units

c. LADWP's Valley CC has higher heat rates

d. Nevada CC heat rates

e. Calpine generator in Nevada with > 1000 Mw

f. Delta and Moss Landing have higher heat rates than Los Medanos and Sutter

54. According to the CAISO, "transmission losses are dynamically calculated by Gridview." (CAISO, 3/1/07, Appendix A, p. 1). Please indicate how SDG&E adjusted the CEC load forecast input into Gridview to avoid double-counting transmission losses.

55. In response to UCAN DR9-7a, SDG&E states that "generally speaking, SDG&E does not retain copies of e-mails used to transmit data to the CAISO…." Please indicate SDG&E's general practices with regard to e-mail retention for e-mails regarding the Sunrise proceeding.

56. In UCAN DR9-36c, UCAN requested copies of documents related to various projects listed in Table 2-3 of the CAISO's most current draft transmission plan.

a. The document provided in response to UCAN's request for documents regarding project 18 was actually documentation for project 5, which UCAN had not requested. Please provide the requested information for project 18.

b. SDG&E's response to DR9-36c indicated that projects 4, 15, or 17 "were not submitted to the ISO for approval" and provided no responsive documents. Please supplement this response with any documents which have been submitted to the ISO or to SDG&E management describing projects 4, 15, and 17, whether or not those documents sought approval to proceed with the projects.

c. In SDG&E's response to DR9-36c, two different options are listed for project 6, upgrading the Imperial Valley 500/230 KV transformers. Please indicate which option has been selected (or when the selection will be made, if it has not yet been made), and whether the selected option is the same as the option modeled in SDG&E's Gridview analyses for its 1/26/07 testimony.

57. In response to UCAN DR9-36b, SDG&E indicates that "items 1, 2, 4, 5, 7, and 10-17 from Table 2-3 of the CAISO's draft 2006 transmission

expansion plan will not be included in the economic modeling supporting SDG&E's January 26, 2007 supplemental testimony."

a. Please explain why items 1, 5, 7, 11, and 14 were not included, since all of them have, according to the ISO table on which they are listed, already been approved by the ISO.

b. Please explain why items 15 and 17 were not included, since they **are** included in SDG&E's analysis of its post-Sunrise import capability (see p. 4 of the 10/13/06 import capability study attached to SDG&E's response to UCAN DR4-31).

c. Please explain why SDG&E says item 15 (Encina-Penasquitos #2 230 kV circuit) will not be included, in light of SDG&E assertion in response to UCAN DR10-31a that "The Encina-Penasquitos #2 230 KV line was included in SDG&E's analyses for it's [sic] 1/26/07 filing." Is the later data response the correct one, or the earlier one?

d. Please identify any errors in data response 9-36b other than the potential error with Encina-Penasquitos #2 raised in the previous question.

58. In its responses to UCAN DR6-23b and DR6-23d, SDG&E says it does not have responsive powerflows for 2015 because "SDG&E has not yet completed the import study work for 2015."

a. Please provide any responsive 2015 documents which now exist.

b. Please indicate when "the import study work for 2015" was (i) started, (ii) produced or is expected to produce draft results, and (iii) was completed or is expected to be completed.

59. For the powerflow analyses which produced the powerflow diagrams supplied in response to UCAN DR6-23b and DR6-23d, please provide:

a. Pgen at Huntington Beach units 1-4.
b. Mw flow and percent loading on the Mira Loma-Chino and Barre-Ellis lines.

60. In its responses to UCAN DR6-23b, DR6-23c, and DR6-23d, SDG&E indicates in each response that no facilities are loaded over the applicable

rating (continuous in the case of DR6-23b; emergency in the case of DR6-23c and DR6-23d). Please confirm that the statement that "no facilities" are overloaded applies to SCE-area facilities as well as SDG&E-area facilities. If not, please identify any SCE-area facilities that are overloaded in the cases provided.

61. In the modeling that underlies SDG&E's responses to UCAN DR6-23, were the following facilities or operating practices included:

a. Encina-Penasquitos #2 230 KV line?
b. New (2nd) Miguel 230/138 KV transformer?
c. Loop-in of the South Bay-Los Coches 138 KV line into Miguel?
d. SPS changing the normal open/closed configuration of the OMPPA lines after an outage of the Otay Mesa generator?

62. In the studies summarized in the 2010 import capability report attached to SDG&E's response to UCAN DR4-31, what Pgen is used for each of the Huntington 1-4 units?

63. For a 230 KV transmission line using 900 ACSS bundled wire (as proposed for Central-Sycamore Canyon, in this proceeding):

a. What does SDG&E normally use as the continuous rating for such a line, in MVA? Please specify the assumed conditions for the rating (ambient temperature, wind speed, inland/coastal location, any others) and provide alternative ratings for alternative conditions if SDG&E has more than one rating level depending on those conditions.

b. What does SDG&E normally use as the emergency rating for such a line, in MVA? Please specify the assumed conditions for the rating (ambient temperature, wind speed, inland/coastal location, any others) and provide alternative ratings for alternative conditions if SDG&E has more than one rating level depending on those conditions.

64. For a 230 KV transmission line using 954 ACSS bundled wire:

a. Please specify what SDG&E would use as the continuous rating for such a line, in MVA? Please specify the assumed conditions for the rating (ambient temperature, wind speed, inland/coastal location, any others) and

provide alternative ratings for alternative conditions if SDG&E has more than one rating level depending on those conditions.

b. What would SDG&E use as the emergency rating for such a line, in MVA? Please specify the assumed conditions for the rating (ambient temperature, wind speed, inland/coastal location, any others) and provide alternative ratings for alternative conditions if SDG&E has more than one rating level depending on those conditions.

65. Please provide a copy of the most current version of SDG&E document TMC1015a – Transmission Line Ratings, referenced in the attachment to SDG&E's response to UCAN DR7-119a

66. In the SDG&E Import Capability Study provided in response to UCAN DR4-31:

a. Please explain why SDG&E needs WECC approval for the item described on p. 12, fn. 4.

b. Hypothetically, if the WECC approval described in fn. 4 on p. 12 is **not** granted, please state whether Sunrise will meet the performance criteria for performance level C in Table 5.5.1-3 on p. 13.

c. Please specify what IID load was assumed.

d. Please list all Imperial County generators included in the modeling underlying the study by name, Pmax, and Pgen.

67. In its 11/13/06 responses to UCAN DR7-78 through DR7-81, SDG&E shows Arizona generation in Case 104 on the margin more than 100 percent of the time in 2015 and less than 36% of the time in 2010 (DR7-79). SDG&E shows generation from the CAISO, Nevada, Arizona, and New Mexico on the margin a combined 125+ percent of the time in 2010.

a. Please explain what "on-the-margin" means and how it is calculated.

b. Please explain how it is possible that the collective time on the margin for all generators in a single WECC subregion to be lower than 100 percent.

c. Please explain how it is possible for the collective time on the margin for all generators in several (but by no means all) WECC regions taken together to be lower than 100 percent.

d. Please explain how it is possible that the collective time on the margin for all generators in a single WECC subregion to be higher than 100 percent.

e. Please explain how it is possible for the collective time on the margin for all generators in several (but by no means all) WECC regions taken together to be higher than 100 percent.

68. SDG&E's 11/13/06 response to UCAN DR7-100 indicates that Table IV-10 is in error when it shows no costs in section (1) for the 2040-2049 period.

a. Please provide a corrected Table IV-10.

b. Please provide the reason(s) why a corrected table IV-10 was not included in the errata to SDG&E's 8/4/06 filing which were filed in January 2007.

c. Please indicate what the levelized annual cost of the total revenue requirement would be for a corrected Table IV-10, using the same methodology used to compute a Sunrise annual levelized cost of $156.1 million in SDG&E's 1/26/07 supplemental testimony.

69. With regard to import limits into SDG&E:

a. What is the maximum SDG&E import allowed as a percentage of load?

b. How is the maximum allowable SDG&E import as a percentage of load expected to change over time, if at all?

c. What limit on imports as a percentage of load was included in SDG&E's Gridview modeling for its 1/26/07 filing?

d. For each of Cases 200, 201, 204, 240, and 241, and each of the years 2010, 2015, and 2020: In how many hours did the GridView-modeled imports exceed the maximum allowable percentage of load values in the response(s) to subparts (a) and (b) of this question?

70. In SDG&E's confidential attachment to its response to UCAN DR7-119a, section 6.3 addresses the basis for the 1900 Mw north-of-Miguel limit.

a. Please specify the emergency ratings for the facilities described as causing the 1900 Mw limit to exist under contingency conditions.

b. Please state whether SDG&E could, and the corresponding cost involved, upgrade the limiting facilities so that no post-contingency

overloads would occur when imports were at or below approximately 2100 Mw.

c. Please state whether SDG&E could, and the corresponding cost involved, modify the Miguel substation so that the "base case" problem described as occurring with 1900 Mw of Miguel imports could be avoided until imports reached approximately 2100 Mw.

d. What will be the effect on the "base case" problem of the new shunt capacitors planned for operation at Miguel next month (http://www.caiso.com/1b6b/1b6bb4d51db0.pdf, p. 102, item 48) and intended to "mitigate potential low voltages at Miguel bus"?

e. Please explain whether the operation of the Otay Mesa transmission project, with the result that TL23040 will no longer connect to Miguel and there will be no normal 230 KV connection from Otay Mesa to Miguel, results in any changes being made to section 6.3. If so, please describe the expected changes.

71. In SDG&E's 2/1/07 supplemental response to UCAN DR7-111, is the 2010 LMP for SCE in Case 200 accurate? If not, please provide a corrected value.

72. In SDG&E's 11/13/06 response to UCAN DR7-112:

a. footnote 4 identifes which GridView subregions correspond to the WECC "Rocky Mountain" region. Please identify which GridView subregions correspond to the WECC AZ/NM and CA/MX regions.

b. Should the reference to "case 104" on p. 61, 4th paragraph, actually refer to case 101?

c. Please clarify the reference in the same paragraph to "note "c" to the table provided in SDG&E's response question 131," since SDG&E's response to UCAN DR7-131 has no table with a note "c".

73. In SDG&E 2/1/07 response to UCAN DR10-28, please explain why the 2020 data appears to include a leap day for Case 204 but not for Cases 200 and 201. Provide a corrected response as necessary.

74. In SDG&E's 1/26/07 Case 212, please describe:

a. How the Miguel import nomogram limits were determined (e.g., were "Miguel Imports" still limited to 1900 Mw? Were "Miguel Imports"

still defined as flows through two Miguel 500/230 KV transformers plus flows over line 23040?

b. What new facilities were added at Miguel besides a termination for the 2nd SWPL line, and what was the assumed cost for each of them?

c. How the “North-of-Miguel” limit of 1900 Mw was adjusted, if at all.

d. What ratings were assumed for the 230 KV busses at Miguel under normal and emergency conditions.

75. Please provide the "technical study" referenced in fn. 3. to Table H-13.

76. In SDG&E’s response to UCAN DR9-5, SDG&E shows net exports from the CAISO control area to CFE of thousands of gwh per year. Please provide:

a. Historical data in the same format as in the response to UCAN DR9-5, for the years 2000-2006.

b. The same data as in the response, but for the year 2020.

c. An explanation of why the forecasted net exports are occurring in 2010 and 2015 (and 2020, if they also occur then) in Cases 200, 201, and 204.

d. SDG&E’s opinion as to whether net exports to CFE of the level shown for 2010 are actually likely to occur if Sunrise is built, or if Sunrise is not built.

e. Any analyses by or of the CFE Baja California Norte system in SDG&E’s possession which have estimates of net CFE imports from the U.S. into Baja California Norte for any future year.

77. In SDG&E’s response to UCAN DR11-4a, SDG&E asserts that it used a heat rate of “7000 Btu/kwh for all of the newer vintage of combined cycle units” in its 1/19/07 filing.

a. Is the same true for its 1/26/07 filing?

b. Please list all of the combined cycle units with commercial operating dates of 2000 or later and provide the heat rate inputs used for them in Gridview for SDG&E’s 1/19/07 and 1/26/07 filings.

78. In SDG&E’s response to UCAN DR11-9c and DR11-9d, it refers to the “forecasthourly LMPs” and the “LMPs used to detemine when and how much to generate and pump.” Please explain how these forecast LMPs are

calculated and provide any documentation of the LMP forecasting process and/or the reasonableness of its results.

79. In SDG&E's response to UCAN DR11-10 it indicates that it is "unwilling to express an opinion as to which of the GridView dispatch options for pumped/storage/generation would be considered as "more representative of real world operations" even though "does believe" the "flexible dispatch" option produces "distortions which significantly compromise" the usability of the model results.

a. Does this mean that SDG&E thinks that the "price driven" option is equally likely to produce "distortions" (albeit possibly not to market prices) which "significantly compromise the usefulness of the information produced"?

b. Please specify as to whether SDG&E is "unwilling" or is practically unable to answer UCAN DR10-5's request for an opinion.

c. Please state SDG&E's expert opinion as to whether either of the two GridView options is representative of real world operations. If yes, please identify which one and explain the basis for your conclusion.