Comment Set B0011
Utility Consumers Action Network

UTILITY CONSUMERS' ACTION NETWORK
3100 Fifth Ave. Suite B, San Diego, CA 92103
Tel: (619) 696-6966 Fax: (619) 696-7477
Web: www.ucan.org e-mail: mshames@ucan.org

April 8, 2008

Susan Lee
Vice President, SF Office
Aspen Environmental Group
235 Montgomery Street #935
San Francisco, CA 94104

Billie Blanchard
Public Utilities Commission
505 Van Ness Ave.
San Francisco, CA 94012

Subject: A.06-08-010; Utility Consumers' Action Network (UCAN) Comments on Sunrise Powerlink DEIR B0011-1

DELIVERED VIA E-MAIL

Dear Susan & Billie,

Pursuant to the request made of UCAN by ALJ Weissman, accompanying this letter is a modified set of comments that specifically reference DEIR pages and assertions. A table of contents can be found at the end of the document. I trust that this modified set of comments will be of greater use to you in your EIR process. Please contact myself or David Marcus if you have any questions about the above.

Very truly yours,

Michael Shames

Michael Shames

Comment Set B0011, cont.
Utility Consumers Action Network

Table of Contents

35

B0011-1 cont.

Comment Set B0011, cont.
Utility Consumers Action Network

B0011-1 cont.

Comment Set B0011, cont.
Utility Consumers Action Network

UCAN COMMENTS ON DEIR

I. Intro and Summary

B0011-1 cont.

The Draft Environmental Impact Report developed by the CPUC staff and Aspen Consulting (hereinafter DEIR) demonstrates that there are feasible alternatives to the Sunrise project which are environmentally preferable. UCAN believes some of these same alternatives may also be economically preferable. In particular, UCAN believes that a variation on the Southern Route, or the No Action alternative, would each be preferable to the proposed project both economically and environmentally.[1] Thus, the Commission should reject SDG&E's proposed project.

II. Options 1-5 on pp. ES-2 to ES-4, plus the No Action alternative on p. ES-4

B0011-2

The DEIR identifies a half dozen different options which are environmentally preferable to SDG&E's proposed project. These are identified as Options 1-5 on pp. ES-2 to ES-4, plus the No Action alternative on p. ES-4. In addition, as shown below, it is possible to identify alternative Southern Routes other than the "Environmentally Superior Southern Route" in the DEIR which are still environmentally preferable to the proposed project. Thus the key questions before the Commission are whether these environmentally preferable alternatives are also economically preferable, and whether they are feasible.

In Phase I of this proceeding, SDG&E identified three classes of benefits which it claims Sunrise would provide:

1. operational savings,

[1] UCAN has not analyzed the economics of some other alternatives – TE/VS and in-basin generation – which the DEIR found are also environmentally preferable to the proposed project. Thus there may be more than two alternatives to the Sunrise project which are superior to it on both economic and environmental grounds. However, the "Environmentally Preferred Northern Alternative" appears to be billions of dollars more expensive than the proposed project, and thus economically far inferior to either the No Action or the Southern Route alternatives.

1

Comment Set B0011, cont.
Utility Consumers Action Network

2. reliability, and

3. deliverability for future renewable energy projects.

B0011-2 cont.

The costs to construct and operate the Sunrise project would offset these benefits. The DEIR, and other post-Phase I data discussed below, show that not only has SDG&E understated the cost to construct Sunrise, but also that other alternatives can provide the same three classes of benefits at a lower cost. As will be described below, UCAN believes that the Commission can find environmentally superior alternatives to SDG&E's proposed line that will impose lower costs upon the state's ratepayers and not despoil Anza-Borrego State Park.

A. Costs to construct

1. Environmental mitigation for the Sunrise route identified in the DEIR

a. DEIR, p. ES-27: Undergrounding costs add billions to the cost of Sunrise

The most dramatic environmental drawback of the Sunrise proposal is that it would cross directly across the middle of the largest state park in California, the Anza-Borrego Desert State Park, including parts of the park which are designated State wilderness.[2] The DEIR suggests that these impacts could be mitigated, in part, by building the transmission facilities underground across all or almost all of the park. In addition, the DEIR suggests that the resultant Environmentally Superior Northern Route should also be undergrounded in several other areas outside of Anza-Borrego Desert State park.

The costs of the undergrounding proposed in the DEIR as mitigation along SDG&E's preferred route would be substantial. In rough terms, SDG&E estimated in Phase I that undergrounding a 230 KV line will cost over $20 million per circuit mile.[3] The Environmentally Superior Northern Alternative would have 108 circuit-miles of underground 230 kV line,[4] much more than the 13 circuit miles of underground 230 kV line which SDG&E included in its Phase I cost estimates. The additional 95 circuit miles would cost, at $20 million per circuit-mile, some $1.9 billion dollars. This additional cost would be only slightly offset by the reduced miles of overhead line required by the mitigated Northern Route. Adding almost $2 billion to the capital

---

[2] DEIR, p. ES-27

[3] Ex. SD-6, table following p. V-14, p. 2 of 4, showing a cost of $118.0 million for a 4.2 mile underground double circuit section in the "Inland Valley Link." $118/(4.2 x 2) = $14.05 million/circuit mile. Adding 50.7% for contingency, AFUDC, and escalation (ibid., p. 4 of 4; contingency, AFUDC and escalation total $425.7 million on top of a direct cost of $839.1 million; 425.7/839.1 = 0.5073) raises the as-built cost to $21.2 million/circuit mile (14.05 x 1.507 = 21.17). Similarly, the table following p. V-14, p. 2 of 4, showing a cost of $64.0 million for a 4.8 mile underground single circuit section in the "Coastal Link." $64/4.8 = $13.33 million/circuit mile. Adding 50.7% for contingency, AFUDC, and escalation (ibid., p. 4 of 4; contingency, AFUDC and escalation total $425.7 million on top of a direct cost of $839.1 million; 425.7/839.1 = 0.5073) raises the as-built cost to $20.1 million/circuit mile.

[4] 54 miles of double circuit line. See DEIR, p. ES-3.

2

Comment Set B0011, cont.
Utility Consumers Action Network

cost of Sunrise would completely obliterate any semblance of cost-effectiveness. As will be discussed below, while the undergrounding may be warranted, it isn't necessary given the non-park alternatives.

B0011-2 cont.

b. DEIR, p. ES-3: Other mitigation costs

At DEIR, p. ES-3, the DEIR identifies a plethora of other mitigation measures besides undergrounding which would be required to reduce the environmental impacts of SDG&E's proposed line. UCAN has no independent estimate of what these measures would cost to implement, but their costs would surely be collectively significant. SDG&E's preliminary estimate is that these DEIR measures would increase the cost of the proposed project by some $200 million, in 2011 dollars.[5] Thus, the previously disclosed $1.265 billion cost of SDG&E's proposal would now be over $1.5 billion because of deferral to 2011 plus mitigation costs.[6] Deferral to 2012 would raise the cost of SDG&E's proposal to over $1.6 billion.[7]

2. DEIR, p. C-4: Environmentally preferred Southern Route

At DEIR, p. C-4, the DEIF addresses feasibility. SDG&E will likely argue that because the Environmentally Superior Northern Route would be so expensive to construct (due to the required undergrounding and other mitigation), it should be rejected on cost grounds as "financially infeasible."[8] But the cost to construct even SDG&E's original proposal may well be tens, or even hundreds, of millions of dollars more expensive than the cost to construct the Environmentally Superior Southern Route which is discussed at length in the DEIR.

First, some undisputed facts about the Environmentally Superior Southern Route; it would have 83 miles of 500 kV overhead line (8 miles less than Sunrise),[9] 11.8 circuit-miles of

---

[5] SDG&E, 3/7/07, attachment to response to UCAN DR35-12. The $200 million figure consists of $94 million for "environmental mitigation" and $106 million for "construction mitigation" and is "additive" to previously provided SDG&E cost estimates.

[6] $1.265 billion for a 2010 on-line date, per Ex. SD-6, p. V-11. $200 million in mitigation costs, in 2011 dollars. Additional escalation from 2010 to 2011 for the $1.265 billion figure of over 5 percent, based on the increase in Sunrise revenue requirements shown in confidential attachment JJS-4 to Ex. SD-28C. 5% of $1.265 billion is $63 million. $1.265 billion + $200 million + $63 million = $1.528 billion.

[7] The previous footnote documents a 5%+ percent per year escalation rate, based on Ex. SD-28C, and a $1.528 billion capital cost for a 2011 in-service date. 5 percent of $1.528 billion is over $76 million, which would make the total cost with a 2012 in-service date more than $1.6 billion.

[8] See DEIR, p. C-4, for a discussion of economic feasibility and CEQA.

[9] 83 miles of 500 kV line for the Environmentally Superior Southern Route, per DEIR, p. ES-57; 91 miles for Sunrise per DEIR, p. ES-5. 91 minus 83 = 8.

3

Comment Set B0011, cont.
Utility Consumers Action Network

underground 230 kV line (1.4 miles less than Sunrise),[10] and 21 miles of overhead 230 KV line (29 miles less than Sunrise).[11]

B0011-2 cont.

Based on SDG&E's Phase I cost estimates, the Environmentally Superior Southern Route would cost some $60 million less than SDG&E's proposed project, even if the proposed project were modified to use the RPCC-alternative for the Coastal Link.[12] Specifically, the Environmentally Superior Alternative would cost about $22 million less than Sunrise (with the RPCC alternative) for 500 KV lines,[13] about $73 million less than Sunrise for overhead 230 kV lines,[14] about $68 million more than Sunrise for underground 230 KV lines,[15] and about $33 million less than Sunrise for underground 69 kV and 92 kV lines.[16]

The $60 million cost advantage for the Southern Route does not take into account SDG&E's preliminary estimate in Phase II of another $52 million worth of Southern Route cost advantage from lower mitigation costs. SDG&E has estimated, preliminarily, that the mitigation measures proposed in the DEIR for the Environmentally Superior Southern Route would increase its cost by $154 million in 2012 dollars, but the corresponding measures proposed for the Sunrise route would increase its cost by $200 million in 2011 dollars.[17] Since the $200 million figure is for 2011, it should be escalated to 2012 dollars to be comparable to the $154 million figure.[18] Using a general inflation rate of 3 percent would increase the $200 million figure to $206 million. Thus, the cost advantage of the Southern Route over the Sunrise proposal would

---

[10] 5.9 miles underground (DEIR, p. ES-3) x two circuits = 11.8 circuit miles for Environmentally Superior Southern Route. 4.2 miles of underground double circuit and 4.8 miles of underground single circuit add up to 13.2 circuit-miles of underground 230 kV for the proposed project. 13.2 minus 11.8 = 1.4.

[11] 104 miles total overhead (DEIR, p. ES-3) minus 83 miles of 500 kV overhead (DEIR, p. ES-57) equals 21 miles of overhead 230 KV line for the Environmentally Superior Southern Route. 141 miles total overhead (DEIR, p. ES-4) minus 91 miles of 500 kV overhead (DEIR, p. ES-5) equals 50 miles of overhead 230 kV line for the proposed Sunrise route. 50 minus 21 equals 29. Of those 29 extra miles, 9 miles would be overhead single-circuit between Sycamore Canyon and Penasquitos, and the other 20 miles would be overhead double circuit.

[12] The RPCC Alternative, which is part of the Environmentally Superior Northern and Southern Alternatives, eliminates all transmission lines west of Sycamore Canyon substation.

[13] Ex. SD-6, table following p. V-14, pp. 3-4 of 4, showing 500 kV costs of $155.975 million for the 84 miles of "Desert Link" line, plus 50.7 percent for contingency, AFUDC, and escalation to 2010, for a total of $2.8 million/mile. 8 x $2.8 = $22.4 million.

[14] Ex. SD-6, table following p. V-14, pp. 3-4 of 4, showing 230 kV costs of $50.775 million for the 21 miles of "Inland Valley" 230 kV line, plus 50.7 percent for contingency, AFUDC, and escalation to 2010, for a total of $76.5 million. 20/21 x $76.5 = $72.9 million.

[15] 5.9 miles of Southern Route underground double-circuit 230 kV line (DEIR, p. ES-4) vs. 4.2 miles of Sunrise project double-circuit underground line east of Sycamore valley (DEIR, p. ES-11), at $20 million/circuit-mile. Note that if the RPCC Alternative were not adopted, the Sunrise alternative would also include over $96 million for underground 230 kV line in the "Coastal Link" settlement (Ex. SD-6, table following p. V-14, pp. 2 and 4 of 4, showing underground 230 kV costs of $63.983 million for the "Coastal Link" 230 kV line, plus 50.7 percent for contingency, AFUDC, and escalation, for a total of $96.4 million).

[16] Ex. SD-6, table following p. V-14, pp. 1-2 and 4 of 4, showing underground 69 and 92 kV costs of $22.092 million in ABDSP, plus 50.7 percent for contingency, AFUDC, and escalation, for a total of $33.3 million. None of these costs would be incurred with the Southern Route.

[17] SDG&E, 3/7/08 attachment to the 3/6/08 response to UCAN DR35-12. Footnote 4 to the attached spreadsheet shows that the two cost figures cited are in different year's dollars.

[18] See the ex parte notice of the California Parks and Recreation department regarding required time for an ABDSP General Plan Amendment for the Sunrise route, which strongly suggests that the Sunrise route and the Southern Route should both be evaluated with the same on-line date.

4

Comment Set B0011, cont.
Utility Consumers Action Network

increase by a further $52 million, to $112 million, when the two are compared with the same in-service date and with mitigation costs included for both.[19]

The $112 million figure is the capital cost advantage of the Environmentally Superior Southern Route over the proposed Sunrise route. It assumes the RPCC alternative is used for the Coastal Link of the Southern Route, as proposed in the DEIR, and that the RPCC alternative is also used for the Sunrise route. If the Sunrise proposal included a Coastal Link consistent with SDG&E's CPCN application (a 230 kV line to Penasquitos), that would increase the cost of the Sunrise proposal by at least $77 million.[20] In that case, the Southern Route would be $189 million cheaper than SDG&E's proposed route.

B0011-2 cont.

B0011-3

B. DEIR, p. ES-19: Sunrise "3-legged stool" of benefits quantified by the DEIR are in error

SDG&E has long claimed that Sunrise should be approved based on a triad of justifications: that it will maintain reliability, promote renewable energy, and reduce costs.[21] The DEIR accepts these three justifications as the "Basic Project Objective[s]" for Sunrise or any alternative.[22] However, in each case the DEIR fails to adequately quantify the extent to which Sunrise is necessary to achieve the objective, and the extent to which Sunrise achieves the objective.

At DEIR, p. ES-20, the DEIR lists one of the three "Basic Project Objectives" as "to accommodate the delivery of renewable energy ... from geothermal and solar resources in the Imperial Valley and wind and other sources in San Diego County."[23] However, the eight SDG&E objectives do not include any mention of wind energy, or any mention of renewable energy resources outside of Imperial County.[24] And neither the eight SDG&E objectives nor the three DEIR "Basic Project Objectives" mention renewable resources in Mexico. Nevertheless, UCAN

---

[19] Arguably, the $112 million should be slightly increased to account for the fact that the $60 million share representing construction costs is based on cost estimates from Phase 1 for a 2010 in-service date. UCAN has not attempted to adjust SDG&E's Phase 1 cost estimates to reflect a post-2010 in-service date for either Sunrise or a Southern Route. To the extent SDG&E's March 12 filing uses post-2010 in-service dates or non-Phase I construction cost estimates, UCAN will address them in its rebuttal testimony.

[20] RPCC alternative cost of $78.8 million for a 2012 on-line date, per SDG&E 3/7/08 attachment to supplemental response to UCAN DR35-2. Sunrise project Coastal Link cost estimate from Phase 1, Ex. SD-6, last four pages of Chapter V of $141.7 million, based on 1/3 of "Coastal Substation" costs at Sycamore Canyon plus "Coastal Substation" costs at Penasquitos plus "Coastal Transmission Underground" costs plus "Coastal Transmission Overhead" costs plus an adder of slightly over 50 percent for contingency, AFUDC, and escalation. Adding 5+% per year for escalation from 2010-2012 (per Ex. SD-28C, as referenced above) raises the cost of SDG&E's Coastal Link proposal to at least $141.7 x 1.05 x 1.05 = $156.2 million. $156.2 million minus $78.8 million = $77.4 million.

[21] DEIR, p. ES-19.

[22] DEIR, p. ES-20.

[23] DEIR, p. ES-20.

[24] SDG&E PEA, as summarized in DEIR, p. ES-19.

5

Comment Set B0011, cont.
Utility Consumers Action Network

believes that SDG&E is now claiming increased deliveries of Mexican wind generation along with eastern San Diego wind generation and Imperial County renewable generation as project benefits, if not objectives. Thus the discussion below deals with the deliverability of renewable generation with and without Sunrise from all three areas (northern Baja for wind, eastern San Diego County for wind, and Imperial County). B0011-3 cont.

In Phase I of this proceeding, the ISO admitted that construction of the planned GPN line by IID and LADWP would enable the delivery of up to 2000 Mw of new generation from Imperial County to the Southern California grid. What has changed since Phase I is that the ISO now expects GPN to be built with or without Sunrise,[25] so that access to the next 2000 Mw of new IV generation will exist with or without Sunrise. In addition to the generic 2000 Mw of wind deliverability identified by the ISO in Phase I, a recent ISO deliverability study shows 1561 Mw of specific wind and solar projects planned for delivery to SDG&E that can be fully delivered in the presence of Green Path North.[26] Those 1561 Mw include only projects with ISO queue positions up to 150, and do not include the additional 400-1250 Mw of deliverable imports of wind energy from Mexico in the Sempra proposal to import Mexican wind generation (400 Mw in Sempra Presidential Permit Application, Exhibit E and in ISO queue project number 159A; 1250 Mw in text of Sempra Presidential Permit Application).[27] B0011-4

GPN is not part of any of the alternatives identified in the DEIR. Based on the Phase I testimony of IID regarding its commitment to pursuing GPN,[28] the fact that GPN has already reached the third (and final) step in WECC review and approval,[29] and the fact that the ISO is now assuming GPN will be built as part of its LCR and deliverability studies,[30] it would seem to be appropriate to consider construction of GPN as a project that will be built with or without Sunrise. It is certainly appropriate to consider GPN as part of the No Action alternative, a project that will be built if Sunrise is not built. In either case, achieving the DEIR's "Basic Project Objective" number three does not require the construction of Sunrise, and that objective can be met in the absence of Sunrise, including the No Project alternative.[31]

The DEIR also errs in not adequately considering that IID opposes SDG&E's Sunrise route, and has already built and is planning to build multiple alternative means of delivering B0011-5

---

[25] ISO, 12/28/07, 2010-12 LCR analysis, p. 64 of 77, at http://www.caiso.com/1cc2/1cc2dab86fd50.pdf.
[26] ISO Deliverability Study for SCE and SDG&E, SDG&E tab, updated 2/28/08 per cell L2. See http://www.caiso.com/1f47/1f4791af23910.xls.
[27] ISO Deliverability Study for SCE and SDG&E, SDG&E tab, updated 2/28/08 per cell L2, lines 11, 13, 18, 19, and 22; the 12/18/07 Sempra Presidential Permit Application is available at http://www.oe.energy.gov/DocumentsandMedia/Sempra_Application_(PP-334).pdf.
[28] See UCAN Phase I brief and IID testimony in Phase I.
[29] See IID redirect testimony in Phase I.
[30] ISO, 12/28/07, 2010-12 LCR analysis, p. 64 of 77, at http://www.caiso.com/1cc2/1cc2dab86fd50.pdf; ISO Deliverability Study for SCE and SDG&E, at http://www.caiso.com/1f47/1f4791af23910.xls
[31] At least one Commissioner has long since recognized that delivery of renewable generation from the Imperial Valley does not require two new 500 kV lines out of the Imperial Valley on top of the two 500 kV lines that already exit the Valley (Imperial Valley-Miguel and Imperial Valley-North Gila). See Attachment A, quote from California Energy Circuit reporting on the February 2006 testimony by Mr. Peevey to the California Senate Energy, Utilities and Telecommunications Committee.

6

Comment Set B0011, cont.
Utility Consumers Action Network

Imperial County renewables to the larger grid. Since the close of the Phase I record, IID has prepared a summary of its renewable resource transmission efforts which indicates that (a) IID already has over 1000 Mw of excess transmission capacity available from current transmission projects to deliver energy from future renewable resource projects,[32] (b) IID's 230 kV Dixieland project will increase its export capability to the CAISO grid by 400 Mw,[33] (c) IID is planning new transmission lines to the north (GPN) to connect to LADWP and SCE, and to the east (Highline-Knob-North Gila line) to connect to APS and the SWPL line.[34]

Neither GPN, the Dixieland Project, nor the Highline-Knob-North Gila line appear to be part of any of the alternatives analyzed in the DEIR. Given the commitment of both IID and the state to the development of renewable resources, it would seem likely that as much of those three projects as needed to deliver renewables will be built in the No Action case, and possibly even if Sunrise is built. Thus Sunrise would not be needed to achieve the DEIR's "Basic Project Objective" number three,[35] and that objective could be met in the absence of Sunrise, including the No Action case.

B0011-5 cont.

Finally, the DEIR fails to consider that delivering renewables is only a valid goal if those renewables actually exist. By far the biggest Imperial County renewable project under contract to SDG&E (or anyone else)[36] is the 900 Mw proposed Stirling Energy Systems (SES) solar project. Seven months ago, the CEC's August 2007 "Energy Facility Status" report showed the planned AFC filing date for the SES project was three months away, in November, 2007.[37] Now the CEC's March 6, 2008 "Energy Facility Status" report shows the planned AFC filing date for the SES project is still two months away, in May 2008.[38] At that rate, of course, SES will likely not file its AFC application, let alone get a permit and build anything, in the time frame contemplated by the parties to the contract.[39] Moreover, a recent trade press article about a competing solar thermal technology suggests that the SES project may be economically uncompetitive even within its own particular niche (solar dish systems). This report calls into further question whether SES could comply with its contract obligations to SDG&E even if it filed an AFC and received approval from the CEC.[40]

B0011-6

---

[32] Frank Barbera, IID, 12/07, "Creating a New Path for the Imperial Valley," attachment to IID ex parte notice of 12/13/07 in this proceeding, at p. 17
[33] Ibid., pp. 11-12.
[34] Ibid., pp. 12-13.
[35] Indeed, IID is apparently quite concerned about the converse – that Sunrise will cause its new transmission projects to become stranded assets because the grid does not need both the Sunrise project and IID's new transmission projects. The obvious solution, to both assuage IID's fears and save ISO ratepayers money, is to deny SDG&E permission to build the Sunrise project as proposed.
[36] Ex. U-48.
[37] Ex. U-43.
[38] http://www.energy.ca.gov/sitingcases/all_projects.html.
[39] See confidential Ex. SD-7C, p. III-11, showing that SDG&E previously projected an initial Stirling generation on line date which is now impossible to achieve.
[40] Energy Prospects West, 2/19/08, at http://www.energyprospects.com/cgi-bin/package_display.pl?packageID=2516. See also the brief and testimony of CBD in Phase I of this proceeding for extensive discussion of the implementation difficulties facing the SES project.

7

Comment Set B0011, cont.
Utility Consumers Action Network

UCAN offers this information to support a finding that the SES project is not viable in any near-term time frame. Thus, the need for Sunrise (or anything else) to meet the DEIR's "Basic Project Objective" number three is diminished if not eliminated. The DEIR did not appear to take this recent information into account.[41]

B0011-6 cont.

SDG&E may dispute UCAN's lack of faith in the Stirling project. But if Stirling **is** built on schedule, then it will be generating before Sunrise can be finished in 2011-12, undercutting SDG&E's claim that the Sunrise line is needed to deliver Stirling's output.[42]

C.. DEIR, pp. ES-9, ES-30,ES -31: Sempra's 500 KV line to Mexico from SWPL, and a 500/230 kV substation in Mexico, suggest that either Sunrise is not needed to deliver renewables or that a Southern Route would be more appropriate for interconnecting to Mexican wind

B0011-7

Since the completion of Phase I of this proceeding, and just prior to the publication of the DEIR, Sempra Generation has filed an application to DOE for a Presidential Permit to build a new 500 kV transmission line from Mexico to the U.S. to deliver up to 1250 Mw of wind generation from Baja California to the existing SWPL line in San Diego County. At DEIR, pp. ES-9, ES-30, ES-31, the DEIR treats development of wind generation in Mexico and eastern San Diego County as a "connected action" which would result from approval of Sunrise or the Northern or Southern Environmentally Preferred Routes, and includes a discussion of an expected new Jacumba 230/500 KV substation to connect that generation to SWPL.[43] However, the actual Presidential Permit Application identifies a different substation type and location,[44] and undercuts the DEIR assumption that wind generation connected to SWPL would only occur if a new 500 KV line from Imperial Valley to San Diego (Sunrise, or a Northern Route or Southern Route alternative) is built.

---

[41] The DEIR **does** identify four locations within the proposed Stirling solar array containing human remains. DEIR, Appendix 9B, Table Ap.9B-37. SDG&E has identified the presence of a single site containing human remains as a possible barrier to the feasibility of the Environmentally Superior Southern Route (SDG&E, 3/7/08 response to UCAN DR36-1, referencing DEIR p. E.1.7-2, which in turn references site CA-SDI-1706. While UCAN does not see how SDG&E can be right that a site with human remains is, per se, a fatal barrier to feasibility (given that the DEIR identifies multiple sites with human remains along the SDG&E-proposed route; see DEIR Appendix 9B, Tables Ap.9B-2, -6, -10, -11, -12, -13, -18, and -20), the presence of human remains on the proposed Stirling site may well impose some further constraints on Stirling development beyond those already identified.

[42] SDG&E says "SDG&E's contract with Stirling Energy Systems could deliver as much as 900 MW of solar power from the Imperial Valley to our region, but not unless the Sunrise Powerlink is built." See http://www.sdge.com/sunrisepowerlink/info/Myth_v_Fact.pdf.

[43] See, e.g., DEIR, pp. ES-9, -30, -31.

[44] The 12/18/07 Sempra Presidential Permit Application, available at http://www.oe.energy.gov/DocumentsandMedia/Sempra_Application_(PP-334).pdf, shows the substation as 500 KV only (but with a 230 KV option), and shows it located immediately west of the Imperial County border, at about mile 30 of the I-8 Southern Route alternative. This location is about 5 miles east of the Jacumba substation location identified in the DEIR.

8

Comment Set B0011, cont.
Utility Consumers Action Network

The Sempra "Presidential Permit" application referenced above shows a powerflow for a 2009 case in which 860 Mw of wind generation is interconnected to the SWPL line and over 2000 Mw flows into Miguel via SWPL. That powerflow has only 400 Mw of Sempra wind generation in Mexico, with the other 460 Mw coming from U.S. wind sources,[45] even though the Application is for 1250 Mw.[46] Thus, at least the first 860 Mw of new wind renewable generation interconnecting to SWPL appears not to require construction of Sunrise (unless Sempra is misleading the DOE regarding the viability of a 2009 interconnection to SWPL). We note that this directly contradicts the Phase 1 testimony of SDG&E witness Linda Brown, and partially contradicts the DEIR finding that a new substation at Jacumba is a related action triggered by the construction of Sunrise. The DEIR says that "the existing SWPL could accommodate approximately 300 Mw of wind generation,"[47] but the Sempra application suggests the real number is at least 860 Mw. Thus the representations to DOE in the Sempra application imply that Sunrise is not needed to meet the Basic Objective number three, and that objective number three can be met in the absence of Sunrise, even in the No Action alternative.

The Sempra application shows that adding 400 Mw of Mexican wind generation increases flows into Miguel by 115 Mw (the other 285 Mw effectively flows east towards IV and Arizona, reducing IV-to-SWPL flows by 285 Mw).[48] Adding another 850 Mw of Sempra Mexican wind generation, if it had the same proportional impact,[49] would increase flows into Miguel by another 244 Mw,[50] which would exceed the SWPL line rating and the allowable flows through the Miguel transformers and Miguel outlet lines.[51]

Building a Southern Route would allow Mexican and U.S. wind generation to connect to the Southern Route as well as to SWPL, and thus would provide alternatives to overloading SWPL and/or Miguel. A Southern Route alternative would also create the option of phasing construction, with the Jacumba-Sycamore Canyon section built first if increased Mexican generation precedes increased IV renewable generation, as the ISO queue suggests will be the case.[52]

B0011-7 cont.

---

[45] ISO Queue projects 106A and 112, whose sources are shown by the ISO as being in San Diego County. See Sempra Application, Exhibit E, and the 2/29/08 ISO queue, available at http://www.caiso.com/14e9/14e9ddda1ebf0.pdf.
[46] The Sempra application promises DOE that a powerflow reflecting the full 1250 of planned Mexican wind generation by Sempra will be provided to due in the "first quarter of 2008."
[47] DEIR, p. C-150.
[48] Sempra Application, Exhibit E.
[49] Sempra has not yet provided DOE with powerflows with the full 1250 Mw of proposed Mexican generation on line, which would show whether the assumed proportionality actually holds true.
[50] 115/400 x 850 = 244 Mw.
[51] 2067 Mw with 400 Mw of Mexican wind, plus 244 Mw more with 1250 Mw of Mexican wind, equals 2311 Mw. 2311 Mw exceeds the N-0 rating of SWPL (2250 Mw), the SDG&E-asserted Miguel outlet capacity (1900 Mw) and the currently allowable flow through the Miguel transformers prior to the UCAN-proposed (and ISO-endorsed) transformer cross-trip proposal (1400-1750 Mw).
[52] The ISO queue shows 1160 Mw of wind interconnections to SWPL with planned operating dates in 2008-09 that are earlier than any planned dates for interconnections at the IV substation (and also earlier than any proposed operating date for Sunrise). See ISO queue, 2/29/08, at http://www.caiso.com/14e9/14e9ddda1ebf0.pdf, projects 106A, 112, 159A (Sempra), and 183.

Comment Set B0011, cont.
Utility Consumers Action Network

Both the DEIR and the Sempra application show proposed sites for the Jacumba substation which are in the area of San Diego County where the Southern Route and SWPL are still immediately parallel to one another.[53] Starting the Southern Route at Jacumba instead of Imperial Valley would save at least 30 miles of 500 kV construction costs, and eliminate environmental impacts in Imperial County. Starting construction of the Southern Route at Jacumba would still allow eastern San Diego and Mexican wind to be delivered over SWPL and/or the Southern Route (DEIR Basic Project Objective 3). It would allow generation interconnected at Jacumba to count for reliability (since there would be two transmission lines, in different corridors, connecting Jacumba to Miguel and Sycamore Canyon respectively). If the wind generation projections in the ISO queue are true, then just the projects proposed to interconnect at Jacumba or west of it would be enough to meet the DEIR's Basic Project Objective 1 (maintain reliability).[54] A southern Route starting at Jacumba would also satisfy DEIR Basic Project Objective 3 (deliver new renewables). And it would presumably meet Objective 2 as well (reduce costs), because of its lower construction costs.[55] The DEIR never identifies, let alone addresses, the option of a Southern Route from Jacumba to Sycamore Canyon as an alternative to Sunrise.

B0011-7 cont.

A Southern Route would also be preferable to a Northern Route if it allows the construction of only one or two new 500 kV substations instead of as many as five, as could occur with current SDG&E and Sempra plans . SDG&E is contemplating one or two new substations at Jacumba (to intertie Mexican and San Diego County wind generation to SWPL),[56] as well as new substations at Central (to convert from 500 kV to 230 kV), San Felipe (a primarily IID 230/500 kV substation to intertie IID to the Northern Route/proposed Sunrise route) and in Mexico (a Sempra Generation substation to convert wind generation from 230 to 500 kV). With a Southern Route, the San Felipe 230/500 kV substation would be completely unnecessary. In addition, the Jacumba 500 kV and/or 230/500 kV substation(s) and the 230/500 kV substation to convert the Southern Route line from 500 kV to 230 kV might be combinable into one or two

B0011-8

---

[53] Between mileposts 30 and 40. See DEIR, Figure ES-17, p. ES-57.

[54] The existing wind project in eastern San Diego County, Kumeyaay, has an installed capacity of 48 Mw (ISO queue, 2/29/08, project 18) and provides 10 Mw of capacity for reliability purposes (Ex. SD-6, p. IV-25). At that ratio of reliable capacity to installed capacity, the 1361 Mw of ISO queue wind projects in San Diego County and Mexico with planned on-line dates before 2010 (ISO queue, 2/29/08, projects 32, 106A, 112, 159A, and 183) would provide 1361 x 10/48 = 284 Mw of reliable capacity, and the 820 Mw of projects with 2010-11 planned on-line dates and planned SWPL interconnections (ISO queue, 2/29/08, projects 209 and 215) would provide another 820 x 10/48 = 171 Mw of reliable capacity. (Another 500 Mw of Mexican wind planned to interconnect at Miguel would provide a further 500 x 10/48 = 104 Mw of reliable capacity). 559 Mw of new firm capacity from wind projects connected to SDG&E within San Diego County would be enough to meet SDG&E's reliability needs until 2018 with ISO numbers (ISO Phase I OB, p. 21, Table V-1, line 22), and beyond that with UCAN numbers (UCAN, Phase I OB, Table 1).

[55] As far as the economics of access to low cost generation in Arizona, neither Sunrise as proposed nor a southern route starting in Jacumba increases transmission capacity east of Imperial Valley, so presumably either provides the same amount of access to low-cost Arizona and New Mexico generation.

[56] The substation proposed by Sempra Generation near milepost 30 of the SWPL would interconnect Mexican wind generation at 500 kV; a separate 230/500 kV substation farther west might be required to interconnect San Diego County wind generation delivered at the 230 kV level.

10

Comment Set B0011, cont.
Utility Consumers Action Network

facilities instead of as many as three.[57] That would allow wind generation to be interconnected to SDG&E at 230 kV rather than 500 kV, as already contemplated (as an option) in the Sempra Application, thereby avoiding the need for yet another 230/500 kV substation in Mexico.

B0011-8 cont.

D. DEIR, p. C-146: The existing SWPL is enough to meet DEIR Basic Project Objective 3

B0011-9

At DEIR, p. C-146, the DEIR asserts that "the objectives of the proposed project would remain unfulfilled under the No Project/No Action Alternative,"[58] and implies that no new Imperial Valley generation (and only 300 Mw of eastern San Diego County wind generation connected to SWPL) could be developed in the absence of a new 500 kV line between Imperial County and San Diego.[59] These assertions are incorrect.

The existing SWPL line will soon be able to deliver 1900 Mw to and through the Miguel substation.[60] SDG&E has no contractual obligations to deliver non-renewable capacity to its system over SWPL. An existing Sempra-DWR contract under which Sempra has the right to deliver generation to the ISO at the Imperial Valley substation, will expire in 2011. Thus, by the time the Sunrise line could be in service, there will be no contractual obstacles to using the entire 1900 Mw of SWPL capacity to deliver renewables. Nor will there be any significant economic obstacles to using all, or virtually all, of SWPL to deliver renewables if there are enough renewables available to fill SWPL.[61]

In short, SDG&E's web site is wrong when it claims Stirling generation can't be delivered via SWPL (assuming Stirling gets built),[62] and the DEIR is wrong when it tacitly assumes the same thing. The DEIR is also wrong when it suggests that the 1900 Mw capacity of SWPL is somehow already subscribed, such that no more than 300 Mw of new wind generation can be interconnected to it "in the absence of [Sunrise]".[63] As discussed above, SDG&E's affiliate Sempra Generation has a pending Presidential Permit application to import up to 1250 Mw of renewable energy capacity from Mexico and deliver it to the ISO via SWPL, and has submitted data to DOE showing 860 Mw of new wind generation flowing onto SWPL in eastern San Diego County. The DEIR should be revised to address the post-2011 contractual and economic availability of up to 1900 Mw of transmission capacity on SWPL that could be used to deliver renewable generation.

---

[57] UCAN pointed out the opportunity to use a Southern Route to reduce the required number of 500 kV substations in late 2006, in identifying alternatives to be studied by the ISO.
[58] DEIR, p. C-146.
[59] DEIR, p. C-150.
[60] ISO, 3/11/08 response to UCAN DR8-2b.
[61] If more than 1900 Mw of resources attempt to schedule deliveries over SWPL, some would have to be curtailed using the ISO's economics-based congestion management protocols. But even then, as demonstrated repeatedly in the Phase 1 record, the low marginal costs of renewable resources mean that they would almost always end up getting priority on SWPL over non-renewable resources.
[62] See SDG&E, http://www.sdge.com/sunrisepowerlink/info/Myth_v_Fact.pdf.
[63] DEIR, p. C-150.

11