

Comment Set B0011, cont.
Utility Consumers Action Network

E. DEIR, p. ES-20: DEIR CONTAINS AN INADEQUATE ANALYSIS OF THE NO-PROJECT ALTERNATIVE.

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The DEIR identifies “reduce[ing] the cost of energy in the region” as “Basic Project Objective 2.”⁶⁴ However, the DEIR contains almost no analysis of the extent to which the proposed project would actually do so, nor does it contain any analysis of the extent to which alternatives (including the No Action alternative) would do so. Thus the DEIR does not contain any information which would allow the CPUC to compare alternatives based on their degree of success in meeting this basic project objective.

The UCAN and DRA briefs, along with the rest of the Phase I record, contain a vast amount of information on the relative impacts on energy costs of different alternatives. However, since the Environmentally Superior Southern Route and the Environmentally Superior Northern Route were not analyzed in Phase I, there is still nothing in the record regarding their economic net benefits.

UCAN will not attempt to re-litigate the Phase I record in this initial Phase II testimony.⁶⁵ However, recent CAISO documents addressing “RMR” valuation and Miguel substation are worth pointing out as they shed light on the deficiencies of the DEIR analysis – or lack thereof.

a. “RMR” benefits”

UCAN asserts that the “RMR” benefit calculated by SDG&E was only a proxy for the real capacity cost benefit of Sunrise, which would be a reduction in local RA requirements and an offsetting increase in non-local RA benefits. UCAN then argued that SDG&E’s quantification of the “RMR” benefit was grossly overstated, with the real difference between local and non-local capacity values being under \$30 per kw-year.⁶⁶

Recently, the ISO has pointed out that the California IOUs in R.05-12-013 have proposed valuing non-local capacity as worth only \$24/kw-year more than non-local capacity.⁶⁷ The ISO has now endorsed the same approach for valuing demand response.⁶⁸ But if demand response in an ISO local area is only worth \$24/kw-year more than demand response outside of that area, then logic dictates the same difference in value should apply for generation. And that would

⁶⁴ DEIR, p. ES-20.

⁶⁵ Preliminary SDG&E cost estimates received on March 3 in response to UCAN DR35-2, and revised by SDG&E on March 7, appear inconsistent with SDG&E’s Phase 1 cost estimates, suggesting that SDG&E does intend to revisit its Phase I cost estimates. To the extent that SDG&E does so in its actual testimony on March 12, UCAN will address those cost estimates in its rebuttal testimony.

⁶⁶ See the UCAN Opening Brief in Phase I. With a claimed 1000 Mw increase in N-1 import capacity due to Sunrise, each \$1/kw-year difference between local and non-local capacity costs would equate to a \$1 million per year “RMR” benefit.

⁶⁷ ISO, 11/19/07, p. 5 of filing in R.07-01-041 re valuation of demand response, available at <http://www.caiso.com/1c9b/1c9be90135310.pdf>.

⁶⁸ Ibid.

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mean that the value of Sunrise in allowing RA requirements to be met non-locally would be only \$24 million per year, not the \$56-61 million per year (in 2006 dollars) claimed by SDG&E.⁶⁹ There is no mention of this inconsistency in the DEIR.

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b. Miguel substation

Much of the claimed operational economic benefits of Sunrise could be achieved by increasing SDG&E's import and outlet capability at the Miguel substation.⁷⁰ In Phase 1, specifically, UCAN called for increasing the inlet capability at Miguel from its current 1400-1750 Mw up to 1900 Mw in all hours by changing the SPS that protects the Miguel transformers from overloads.⁷¹ UCAN also called for further analysis of the outlet capability at Miguel and measures that would enable it to be increased above the current 1900 Mw.⁷² While the DEIR acknowledges that reducing energy costs is one of the three "Basic Project Objective[s],"⁷³ neither the DEIR analysis of the proposed project or alternatives ever addresses modifications at Miguel and how they could help meet this Basic Project Objective.⁷⁴

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The ISO has recently admitted that its modeling of flows into Miguel tends to overstate those flows when compared to actual flows, which means that its models tend to overstate congestion at Miguel compared to actual congestion levels.⁷⁵

Unlike the DEIR, the CAISO has considered the opportunities for increasing imports into Miguel. In its 2008 Transmission Plan, the ISO has endorsed modifying the SPS at Miguel to reduce congestion there, which is precisely what UCAN recommended back in June of 2007.⁷⁶ In the same document, the ISO indicates that its Board has approved construction of a new

⁶⁹ Ex. SD-6, Table IV-4, p. IV-28.

⁷⁰ See UCAN 's Phase I Opening Brief.

⁷¹ Ibid.

⁷² Ibid.

⁷³ DEIR, p. ES-20.

⁷⁴ Instead the DEIR summarily rejects further consideration of alternatives which increase import capacity into Miguel on the grounds that they would not increase reliability (true) and would not reduce costs or allow imports of renewables (false, at least for the UCAN proposals, as shown in UCAN's Phase I testimony and briefs). See, e.g., p. C-124, rejecting an increase in SWPL capacity with no discussion of its impacts on cost or renewable deliverability. The DEIR appears not to have considered that raising Miguel import capability up to the level of outlet capability which already exists would not increase outlet congestion, and would provide opportunities to reduce costs. Nor does the DEIR appear to have considered actions SDG&E is already planning, or could undertake in the future, which would increase the outlet capacity at Miguel and thus decrease congestion. See UCAN's Phase 1 OB.

⁷⁵ See the ISO's January 2008 web posting at <http://www.caiso.com/1f42/1f42e565fff0.pdf>, which shows that the ISO's post-MRTU modeling, both as designed ("open loop") and as now proposed to be revised ("partially closed loop") will tend to overstate flows into Miguel by hundreds of Mw, and thus overstate congestion at Miguel. See p. 15 of 15 for a graphical example. The ISO's January 2008 analysis suggests that considerable economic value from decreased congestion could be achieved simply by better ISO modeling of the existing grid, without needing to build anything at all.

⁷⁶ ISO 2008 Transmission Plan, January 2006, p. 71, line 2; available at <http://www.caiso.com/1f52/1f52d6d93a3e0.pdf>. See also the ISO's 11/20/07 Short Term Plan presentation, p. 18 of 23, for more and clearer detail; available at <http://www.caiso.com/1c9b/1c9bd6101b920.pdf>.

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transformer at Miguel substation, a project which will increase the outlet capacity there.⁷⁷ More recently yet, the ISO has clarified that its intended modification to the Miguel SPS is the same modification UCAN proposed, tripping one transformer after a forced outage of the other.⁷⁸ The ISO intends its modification of the Miguel SPS to increase the flow capacity and SWPL and through the Miguel transformers to 1900 Mw, on a permanent basis.⁷⁹ For purposes of analyzing the basic objectives of the SDG&E proposal as well as the DEIR's no-project alternative, the DEIR must give added weight to this new information.

B0011-11 cont.

c. Reliability – new options and data continue to weaken the alleged need for Sunrise for reliability purposes

B0011-12

Also at DEIR ES-20, the DEIR identifies “maintain[ing] reliability in the delivery of power to the San Diego region” as “Basic Project Objective 1.” However, the DEIR does not appear to quantify, anywhere, how many Mw of new transmission, generation, or demand-side resources will be needed year by year to meet the reliability objective. Because reliability is usually the driving force in determining how large an alternative needs to be (except for very lumpy alternatives like Sunrise itself), the DEIR does not contain enough information to determine if the various alternatives have been properly sized. Just because Sunrise is proposed to increase SDG&E import capacity by 1000 Mw, that does not mean that every alternative needs to be 1000 Mw in size in order to meet the reliability requirements of the SDG&E area and thus satisfy Basic Project Alternative 1.

UCAN's Opening Brief in Phase I discussed at length the importance of quantifying the baseline conditions – what will happen with **or** without Sunrise – in order to properly determine the annual reliability requirements of the SDG&E area. Both UCAN and DRA concluded in their Phase I briefs that the SDG&E area needs far less than 1000 Mw over the next decade to meet its reliability requirements.⁸⁰ The ISO, purporting to start from the CEC's 1-in-10 (90/10) load forecast, showed a reliability need of only 588 Mw a decade from now in 2018, even after retiring the existing 702 Mw South Bay 1-4 units.⁸¹ Since the actual adopted CEC 1-in-10 forecast is some 190 Mw lower in 2018 than the numbers reported in the ISO brief, the ISO's

⁷⁷ Ibid., p. 61; see also p. 20 of the presentation from the SDG&E Grid Assessment Stakeholder Meeting of 11/20/07, preceding ISO approval of the new transformer, in which the new transformer is specifically described as a project that “increases Miguel outlet capability;” available at <http://www.caiso.com/1c9b/1c9bd50412490.pdf>. The ISO documents do not quantify the increase in Miguel outlet capability, but 6½ years ago in I.00-11-001, two experts who also appeared in Phase I of this proceeding testified that various transmission upgrades would increase the outlet capacity of Miguel to 2250 Mw, which suggests that the current 1900 Mw limit is by no means fixed in stone. See testimony of Linda Brown and Richard Lauckhart, 9/17/01, p. 5.

⁷⁸ ISO, 3/11/08 response to UCAN DR8-2a.

⁷⁹ ISO, 3/11/08 responses to UCAN DR8-2b (increase to 1900 Mw) and UCAN DR8-2d (increase is not temporary).

⁸⁰ Indeed, ISO and SDG&E numbers also show a reliability need well under 1000 Mw, as discussed in the UCAN Phase I Opening Brief.

⁸¹ ISO, Phase I OB, p. 21, Table V-1, lines 1 (CEC 1 in 10 forecast), 16 (-702 Mw for South Bay retirement), and 22 (deficiency of 100 Mw in 2011, increasing to 588 Mw in 2018).

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own methodology would now imply a 2018 reliability need of under 440 Mw.⁸² Since the closing of the record in Phase I, several additional documents and developments have come to UCAN's attention which further reduce the need for Sunrise to meet SDG&E's reliability requirements over the next decade.⁸³ For the reasons below, the CPUC must reassess the DEIR assumption that 1000 Mw are required for all alternatives.

B0011-12 cont.

F. DEIR, p. A-11: New supply side alternatives within the SDG&E service area - up to 282+ Mw of renewable or DG generation

B0011-13

The DEIR identifies one existing SDG&E contract for a 20 Mw biomass facility.⁸⁴ However, SDG&E has signed two additional contracts for new biomass facilities which will produce an additional 10 Mw.⁸⁵ Those contracts were not included in the Phase I record, and do not appear to be in the DEIR either.⁸⁶

The DEIR also does not identify any future wind projects which it expects to be interconnected to the SDG&E system with or without Sunrise.⁸⁷ However, there is one pending wind project in the SDG&E service area that would not be dependent on SWPL for its deliveries. According to the ISO, all 201 Mw of that project's capacity will be deliverable (ISO queue project #32; reported by the ISO to be fully deliverable.⁸⁸ With the same effectiveness factor as the existing Kumeyaay wind project in the same area (10 Mw of reliable capacity from 48 Mw of installed capacity),⁸⁹ 201 Mw of installed capacity would equate to 42 Mw of RA capacity.

At DEIR, pp. C-27, C-140, C-141, the DEIR states that there is the potential for about 35 Mw of new DG over and above the 17 Mw already forecasted by SDG&E for the year 2016.⁹⁰ However, the 35 Mw figure appears to be much too low. What the DEIR actually shows is that a "base case" based on existing incentives and expectations will result in 15 Mw per year of new

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⁸² 588 Mw shown in the ISO OB (see previous footnote), minus 190 Mw for the lower 1-in-10 CEC forecast in 2018 which the ISO now acknowledges (see ISO, March 2008, 2009 CAISO Transmission Plan Draft Study Plan, p. 21, Table 2-4, showing 5727 Mw for SDG&E in 2018, versus the 5917 Mw shown in the ISO OB), plus 39 Mw for the rooftop solar already included in the adopted CEC forecast (<http://www.energy.ca.gov/2007publications/CEC-200-2007-015/CEC-200-2007-015-SF2.PDF>, p. 143; added in to avoid double-counting the rooftop solar on line 2 of Table V-1 of the ISO OB) equals 437 Mw.

⁸³ This issue is particularly important in light of SDG&E's claim at the 2/25/08 meeting with Commissioner Grueneich that reliability is SDG&E's primary reason for wanting to build Sunrise.

⁸⁴ DEIR, p. A-11.

⁸⁵ SDG&E, 12/6/07 press release, reported at <http://www.renewableenergyworld.com/rea/news/story?id=50766>.

⁸⁶ The DEIR does identify specific biomass project locations and sizes for potential biomass additions, but does not identify them as having contracts already, or address their likelihood of occurring with or without Sunrise.

⁸⁷ DEIR, pp. A-10, A-11 list existing and pending SDG&E resources. They list an existing wind project, but no future wind projects.

⁸⁸ ISO Deliverability Study for SCE and SDG&E, at <http://www.caiso.com/1f47/1f4791af23910.xls>.

⁸⁹ 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).

⁹⁰ DEIR, pp. C-27, -140, C-141.

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DG capacity.⁹¹ Based on the 50 percent credit for reliability used in the DEIR,⁹² that would mean new DG additions of 7.5 Mw per year on a firm capacity basis, versus the 1 Mw per year assumed by SDG&E.⁹³ But if SDG&E is underestimating DG additions by 6.5 firm Mw per year, then the understatement from 2010 to 2016 is 39 Mw, not 35 Mw, and the understatement by 2018 would be 52 Mw.

Perhaps more importantly, the 39-52 Mw understatement of DG based on the data cited in the DEIR is an understatement in the “base case” which involves business as usual. The DEIR reports that in an “Increased Incentives Case” there would be about 200 Mw of DG by 2018, which is more than 90 Mw more than SDG&E projects (on a firm capacity basis).⁹⁴ And in a “High Deployment Case” DG by 2018 reaches about 170 Mw on a firm capacity basis, more than 150 Mw higher than SDG&E projects.⁹⁵ Thus, in terms of DG potential the DEIR underestimates the actual potential shown by its own data, by at least 115 Mw. The 35 Mw of “additional reliable DG” referenced in the DEIR is what the CEC study **expects** to occur over a period of under 6 years, and the total feasible potential in the “High Deployment” case is 2.5-3 times as much.

At DEIR, p. Ap1-306 the DEIR points out, the 150 Mw of rooftop solar assumed by SDG&E in Phase I is itself less than the combined CSI/NSHP targets for the SDG&E service area. This is wrong. SDG&E’s Phase I testimony included 150 Mw of reliability value from rooftop solar capacity by 2015,⁹⁶ based on an installed capacity of 300 Mw. SDG&E based its 300 Mw figure for installed capacity on a draft CPUC decision setting an SDG&E goal of 332 Mw by 2016.⁹⁷ A very recent RETI analysis also assumes SB1 levels will be achieved, in a report vetted by SDG&E’s Linda Brown.⁹⁸ The DEIR assumes that 10 percent of the technical PV potential in the SDG&E could be developed by 2016,⁹⁹ which would correspond to over 230 Mw of firm capacity,¹⁰⁰ some 80+ Mw more than SDG&E’s modeling includes.

The DEIR also indicates that SDG&E could install rooftop PV itself as a means of further accelerating solar development.¹⁰¹ On February 19th, 2008 LADWP announced initiatives to do just that.¹⁰² Southern California Edison followed suit with an ambitious 250MW plan the

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⁹¹ DEIR, p. C-141.

⁹² *Ibid.*

⁹³ SDG&E assumes firm DG capacity grows from 11 Mw in 2010 to 17 Mw in 2016, or 1 Mw per year. DEIR, p. C-140.

⁹⁴ DEIR, p. C-141.

⁹⁵ *Ibid.*

⁹⁶ See, e.g., Ex. SD-6, p. IV-11.

⁹⁷ Ex. SD-6, p. VI-26.

⁹⁸ http://www.energy.ca.gov/reli/ssc_meetings/2008-02-27_meeting/2008-02-17_BLACK+VEATCH_PHASE_1A_STATUS_REPORT.PDF, pp. 9 (Linda Brown participation for SDG&E), 20 (assumes SB1 statewide goal of 3000 Mw installed is met by 2016, with half of installed capacity countable for RPS purposes)

⁹⁹ DEIR, p. C-70.

¹⁰⁰ DEIR, p. Ap1-306.

¹⁰¹ DEIR, pp. Ap1-306, -307.

¹⁰² http://www.latimes.com/news/local/politics/cal/la-me-green20feb20_1_1943355.story?ctrack=4&csset=true. The LADWP program calls for an investment by the municipal utility of \$270 million in rooftop solar.

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following month. SDG&E too has the ability to affirmatively influence how soon it meets, and then surpasses, the SB1 goals which has not been sufficiently considered in the DEIR.

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G. DEIR, p. C-148: DEIR UNDERSTATES DEMAND-SIDE OPTIONS

B0011-16

At DEIR, p. C-148, the DEIR concludes that SDG&E cannot achieve more than 200 Mw of load reduction from AMI and other Demand Response (DR) programs,¹⁰³ and that SDG&E has already included 595 Mw of Energy Efficiency (EE) programs (by 2015) in its “baseline peak electricity forecast.”¹⁰⁴ The DEIR is inaccurate; both the Phase I record and subsequent documents suggest that the DEIR substantially underestimates EE and DR potential.

Both SDG&E and the ISO concluded in Phase I that SDG&E can only reduce its future loads by 59 Mw using dispatchable demand response (DR), while UCAN argued that a minimum of 63 Mw of future dispatchable DR should be counted from existing contracts.¹⁰⁵ UCAN pointed out that SDG&E’s own LTPP testimony called for 139 Mw of dispatchable demand response.¹⁰⁶ Now the Commission’s LTPP decision has endorsed that number, accepting that SDG&E will have 139 Mw of dispatchable demand response in each year from 2008-16, inclusive.¹⁰⁷

The DEIR, in contrast to the LTPP decision, refers only to AMI as a form of demand response, and does not quantify any expected future capacity value for dispatchable demand response.¹⁰⁸ UCAN assumes the DEIR authors were not disputing the 59 Mw of dispatchable demand response included in the SDG&E and ISO Phase I testimony. Even so, the LTPP decision shows that the Commission expects some 80 Mw of future dispatchable demand response over and above the 59 Mw counted to date by the ISO and SDG&E.¹⁰⁹

Also, AMI, or price-responsive DR, is SDG&E’s biggest single load-reduction program. In D-07-04-043, the Commission approved over half a billion dollars of SDG&E expenditures to implement AMI. The DEIR asserts that AMI will reduce SDG&E’s peak demand by about 200 Mw, but no more.¹¹⁰ However, in D-07-12-052 the Commission quantified the expected price-responsive demand reductions for SDG&E (i.e., AMI impacts) as 233 Mw in 2010, increasing an average of 2 Mw per year to 245 Mw in 2016.¹¹¹ By 2018, the number would up to about 249 Mw. Thus the 200 Mw figure in the DEIR is some 49 Mw too low by 2018. In addition, as

¹⁰³ DEIR, p. C-148.

¹⁰⁴ DEIR, p. C-147.

¹⁰⁵ See UCAN Opening Brief in Phase I. Exhs. U-41 and U-42 provide evidence for potential DR in excess of the 139 Mw figure in SDG&E’s LTPP filing and in D.07-12-052.

¹⁰⁶ Ibid.

¹⁰⁷ Line 8 of Table SDGE-1 of D.07-12-052, available at http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/76979-01.htm#P842_189748.

¹⁰⁸ DEIR, pp. C-147, C-148.

¹⁰⁹ The UCAN Phase I Opening Brief counted 63 Mw of dispatchable demand response, so the 139 Mw figure in D.07-12-052 is also 76 Mw higher than UCAN’s Phase I number.

¹¹⁰ DEIR, p. C-148.

¹¹¹ Line 7 of Table SDGE-1 of D.07-12-052, available at http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/76979-01.htm#P842_189748. Note that there is an apparent typo in the table value for 2015, which is shown as 232 Mw even though the prior year is 240 Mw and the following year is 245 Mw. UCAN believes the intended number for 2015 was 242 Mw, not 232 Mw.

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demonstrated in the Phase I record, SDG&E has testified in its General Rate Case proceeding that its proposed incentive rates for AMI would produce even greater demand response than the numbers shown in the LTPP decision, up to a little over 300 Mw.¹¹² Thus the DEIR may be underestimating AMI impacts by a full 100 Mw.

The DEIR asserts that energy efficiency (EE) savings of 595 Mw by 2015 have been built into SDG&E's demand forecast, and that no further energy efficiency savings "is foreseeable under the No Project/No Action Alternative."¹¹³ The DEIR also concludes that "the [EE] savings goals established by the CEC are presently somewhat higher than the maximum achievable savings potential expected to be achievable in the SDG&E service territory."¹¹⁴ However, as discussed at length in the Phase I record, it is not true that the CEC's most recent demand forecast for SDG&E incorporates 595 Mw of EE savings, and it is not true that 595 Mw of EE savings exceeds the technical potential of the SDG&E service territory.¹¹⁵

Since the close of the record in Phase I, D.07-12-052 has concluded that the CEC's 2007 IEPR forecast¹¹⁶ "embeds ... committed EE and approximately 100% of uncommitted EE."¹¹⁷ However, as already discussed in UCAN's Phase I opening brief, the actual IEPR forecast strongly suggests that the post-2009 EE embedded in the CEC demand forecast is less than 100 percent of the CPUC's EE goals. The difference amounts to some 144 Mw by 2018.¹¹⁸

The 144 Mw understatement of future energy efficiency is the difference between what is in the CEC demand forecast and what would be there using the CPUC's adopted goals for future energy efficiency. But the CEC has adopted even larger goals for future energy efficiency. Since the close of the Phase I record, the CEC has formally adopted the 2007 IEPR, including a recommendation that "energy efficiency targets for 2016 equal to 100 percent of economic potential."¹¹⁹ As shown in the final staff forecast of SDG&E energy efficiency and demand response potential,¹²⁰ the technical potential by 2016 is some 418 Mw more than the cost-effective level of demand reduction.¹²¹ Just achieving the cost-effective level of demand

¹¹² See UCAN Phase I Opening Brief and Ex. U-66 (testimony of SDG&E witness Willoughby).

¹¹³ DEIR, p. C-147.

¹¹⁴ *Ibid.*, citing a 2004 CPUC decision.

¹¹⁵ See UCAN Phase I Brief, and Exs.U-67 and U-68 regarding EE

¹¹⁶ This is the same demand forecast introduced in Phase I as updated Ex. U-47.

¹¹⁷ Footnote 1 to Table SDGE-1 of D.07-12-052, available at

http://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/76979-01.htm#P842_189748.

¹¹⁸ See UCAN Phase I Opening Brief. See also <http://www.energy.ca.gov/2007publications/CEC-200-2007-015/CEC-200-2007-015-SF2.PDF>, p. 138, Table 24, which is the final version of the document included, in an earlier version, as updated Ex. U-47 in the Phase I record. Table 24 shows incremental energy conservation embedded in the adopted CEC IEPR forecast is 158 Mw from 2008 to 2013, and another 154 Mw from 2013 to 2018. In contrast, SDG&E claims that its modeling has accounted for 223 Mw of uncommitted energy efficiency from 2008 to 2013, and another 233 Mw from 2013 to 2018. See SDG&E, Ex. SD-6, p. VI-16, Table VI-1. Thus SDG&E is claiming credit for 144 Mw more energy efficiency savings than are actually contained in the adopted CEC forecast.

¹¹⁹ CEC, IEPR, 12/5, 07, Executive Summary, available at http://www.energy.ca.gov/2007_energy/policy/index.html.

¹²⁰ CEC, "Achieving All Cost-Effective Conservation For California, 12/07, publication CEC-200-2007-019-SF, available at <http://www.energy.ca.gov/2007publications/CEC-200-2007-019/CEC-200-2007-019-SF.PDF>. A draft version of this report was previously introduced in Phase I as Ex. U-67.

¹²¹ Updated Ex. U-67: CEC, "Achieving All Cost-Effective Conservation For California, 12/07, publication CEC-200-2007-019-SF, p. B-80, available at <http://www.energy.ca.gov/2007publications/CEC-200-2007-019/CEC-200-2007-019-SF>.

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reduction (and not the additional 418 Mw of technical potential), would result in a 1-in-2 SDG&E peak load of 4697 Mw in 2016.¹²² That would be only 190 Mw above the CEC demand forecast for 2007.¹²³ In other words, the CEC believes SDG&E has the ability to hold its net load growth to 190 Mw from 2007-2016,¹²⁴ and recommends that doing so should be state policy.

The CEC's 1-in-10 forecast is 8.8 percent higher than its 1-in-2 load forecast.¹²⁵ Thus the 4697 Mw of CEC-forecasted peak load with full economic energy efficiency achieved by 2016 would translate into a peak load of about 5110 Mw with 1-in-10 temperature conditions.¹²⁶ By comparison, SDG&E has assumed a 2016 peak demand of 5330 Mw.¹²⁷ Thus SDG&E has overstated its 2016 peak demand by some 220 Mw by understating demand reduction that would occur if it complies with the CEC's IEPR policy. And the DEIR is erroneous in not incorporating this most recent data into its assessment.

One example of the sort of new energy efficiency measures that are not included in the CEC baseline forecast, but are highly likely to occur in the 2008-18 period, are the Building Standard revisions which the CEC proposes to implement this year. Since the close of the Phase I record, the CEC has estimated that the 2008 Building Standard Revisions will result in a reduction in statewide peak demand growth of 131.8 Mw per year.¹²⁸ Since SDG&E represents about 7.25 percent of statewide peak load,¹²⁹ that would correspond to about 102 Mw for SDG&E over the next decade.¹³⁰ The DEIR appears to have failed to incorporate this additional peak demand reduction into its assessment.

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[SF.PDF](#). The 418 Mw is the difference between remaining technical and economic potential in 2016 (804 vs 388 Mw), showing that remaining economic potential is less than half of remaining technical potential. The 418 Mw figure also appears as the difference between the numbers in the bottom right-hand corner of the table for 2016 peak demand with all technical potential achieved (4281 Mw) and with all cost-effective potential achieved (4697 Mw).

¹²² Ibid.

¹²³ Ibid. The 2007 CEC forecast is shown as 4507 Mw on the line entitled "Baseline Demand Forecast – CEC 2007." 4507 Mw is 190 Mw less than 4697 Mw shown for 2016 on the line entitled "Demand (Mw) After All Cost-Effective."

¹²⁴ If one adds 8.8 percent to account for the difference between 1-in-2 and 1-in-10 forecasts, the load growth in the 1-in-10 forecast from 2007 to 2016 would still be only 208 Mw.

¹²⁵ Revised Ex. U-47; UCAN OB. See also <http://www.energy.ca.gov/2007publications/CEC-200-2007-015/CEC-200-2007-015-SF2.PDF>, p. 144. This is the final version of the document whose earlier drafts are in the record as Ex. U-47 and revised Ex. U-47.

¹²⁶ $4697 * 1.088 = 5110$.

¹²⁷ Ex. SD-26, Table H-1, "90/10 After CSI and Demand Response" line.

¹²⁸ CEC, 11/7/07, Impact Analysis, 2008 Update to the California Energy Efficiency Standards for Residential and Non-residential Buildings, p. 5; available online at http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF.

¹²⁹ See <http://www.energy.ca.gov/2007publications/CEC-200-2007-015/CEC-200-2007-015-SF2.PDF>, p. 5, Table ES-3, which shows SDG&E loads as 7.25% of state loads in 2008 (4568 Mw out of 62945 Mw) and 7.77% of statewide load growth in 2008-18 (695 Mw out of 8943 Mw). This is the final version of the document whose earlier drafts are in the Phase I record as Ex. U-47 and revised Ex. U-47.

¹³⁰ $131.8 \text{ Mw/year} \times 10 \text{ years} \times .0725/\text{San Diego share} \times 1.07 \text{ for associated T\&D loss reduction} = 102 \text{ Mw}$.

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H. DEIR, p. C-151: Transmission alternatives provide reliability

B0011-17

At DEIR, p. Ap1-264, the DEIR confirms that upgrading Path 44 is “technically, legally and regulatorily viable.” SDG&E has confirmed that the environmentally preferred Northern and Southern routes would each provide 3500 Mw of N-1/G-1 import capability, the same as Sunrise.¹³¹ UCAN’s has presented evidence that the Path 44 upgrade option is both a viable and a cost-effective option. This option would increase SDG&E import capacity by 350 Mw to 2850 Mw,¹³² which may well be all that is needed to meet SDG&E’s reliability requirements for many years to come, particularly if the CEC’s IEPR goals for energy efficiency can be met.¹³³ The DEIR does not appear to incorporate this fact into its assessment.¹³⁴

III. DEIR, pp. E-66, E-67: The DEIR understates the robustness of the No Action Alternative

B0011-18

The DEIR concludes that the No Project Alternative would be environmentally preferable to any of the Northern or Southern Routes, including the proposed project.¹³⁵ However, because the DEIR contains little in the way of analysis about the No Action alternative, UCAN is concerned that the DEIR may have overlooked a very robust alternative . The discussion below addresses various aspects of a No Action Alternative which are either discussed only briefly in the DEIR, or are incorrectly underestimated or rejected by the DEIR.

A. DEIR understates the reliability of the No Action Alternative

The DEIR’s first “Basic Project Objective” is to “maintain reliability in the delivery of power to the San Diego region.”¹³⁶ But the DEIR does not appear to quantify just how much

¹³¹ SDG&E, 2/15/08 response to DRA data request 17-1a, available at <http://www.sdge.com/sunrisepowerlink/discovery.shtm>. UCAN notes that a very slightly different SDG&E website for data responses, <http://www.sdge.com/sunrisepowerlink/discovery.html>, does not include this or other 2008 data responses.

¹³² UCAN Phase I Opening Brief. Note that the DEIR incorrectly describes the Path 44 Upgrade proposal as intended to increase SDG&E’s import limit by 300 Mw, not 350 Mw. DEIR, p. Ap1-263.

¹³³ As discussed above, the IEPR calls for achieving 100 percent of cost-effective EE and DR by 2016, which in SDG&E’s case would hold load growth in 2007-2016 down to only 208 Mw (or about 23 Mw per year). With load growth slowed that much, a 350 Mw increase in import capability would match the load growth over a 15 year period.

¹³⁴ Besides ignoring the degree to which a Path 44 uprating would meet Basic Projective Objective 1, the DEIR also misdescribes the Path 44 uprating option itself. The DEIR mischaracterizes the requirements for a Path 44 upgrade as including a Viejo-Chino loop-in to Talega, having unknown SCE-area upgrade requirements in addition to Barre-Ellis, increasing SDG&E’s import capability by only 300 Mw, and requiring modifications at the Del Amo substation in Los Angeles County (DEIR, p. C-151). Each of these assertions is wrong, as already shown in UCAN’s Phase 1 testimony and briefs.

¹³⁵ DEIR, pp. E-66, E-67.

¹³⁶ DEIR, p. ES-20.

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capacity would be required to do so.¹³⁷ The issue of required new capacity was a major issue in Phase I, with both UCAN and DRA arguing that SDG&E does not need **any new** resources for years to come, beyond those already in the procurement pipeline (Otay Mesa, peakers approved by the CPUC in 2007, approved in-basin renewables).¹³⁸ But the DEIR appears to simply assume that, because Sunrise would (allegedly) increase firm import capacity to SDG&E by 1000 Mw, each alternative to Sunrise must do so as well.¹³⁹ This assumption is fundamentally incorrect.

B0011-18 cont.

B. DEIR undervalues the components of its own No Project Alternative

B0011-19

1. DEIR, pp. Ap1-263 and -264: Path 44

The DEIR concludes, correctly,¹⁴⁰ that upgrading Path 44 will require upgrading the Barre-Ellis 230 KV line.¹⁴¹ The DEIR then indicates that upgrading Path 44 is one likely component of a No Action Alternative, but indicates there are “no sponsors” for doing so.¹⁴² However, the DEIR is wrong. Unbeknownst to the authors of the DEIR, SCE has proposed to the ISO to upgrade Barre-Ellis, the key to increasing the Path 44 import capacity to SDG&E, and the ISO knows it.¹⁴³ A specific method is currently under development to mitigate Barre-Ellis overloads, which will involve either increasing the capacity of the Barre-Ellis line or taking other measures to decrease flows over the Barre-Ellis line. The ISO and SCE intend to resolve the Barre-Ellis overload issue this year (2008).¹⁴⁴

Similarly, the ISO has recently identified the Felicita Tap-Bernardo 69 kV line as a limiting facility which is creating a local reliability need of 75 Mw (2010) to 86 Mw (2012) within the SDG&E area.¹⁴⁵ Thus, SDG&E now has a reliability incentive to upgrade the Felicita Tap-Bernardo 69 kV line whether or not Sunrise is built. Because SDG&E has identified this line as a

¹³⁷ See discussion above.

¹³⁸ See Phase I briefs of UCAN and DRA.

¹³⁹ See, for example, pp. C-143 and C-144, where an all solar alternative is described as a 1020 Mw alternative, with no discussion of whether a smaller sized project would also meet Basic Project Objective 1.

¹⁴⁰ But see UCAN's 6/1/07 testimony regarding Path 44 and the evidence that upgrading Barre-Ellis might **not** be required in order to upgrade Path 44.

¹⁴¹ DEIR, pp. Ap1-263 and -264. UCAN notes in passing that the description of the Path 44 upgrade option on pp. Ap1-263 and -264 appears to be in error (but not fatally so) in several respects, as can be seen from a comparison of the DEIR to UCAN's Phase I Opening Brief and Phase I testimony regarding Path 44.

¹⁴² DEIR, p. C-147.

¹⁴³ See the ISO's 2008 Transmission Plan, January 2008, at p. 63; available at <http://www.caiso.com/1f52/1f52d6d93a3e0.pdf>. The proposed on-line date for the Barre-Ellis upgrade is prior to the summer of 2012.

¹⁴⁴ ISO, 3/11/08 response to UCAN DR8-1.

¹⁴⁵ CAISO, 12/28/07, 2010-2012 Local Capacity Technical Analysis, at p. 75 of 77 at <http://www.caiso.com/1cc2/1cc2dab86fd50.pdf>.

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requirement for a Path 44 upgrade, the ISO's identification of it as a local reliability constraint increases the chance that SDG&E will upgrade the line, thereby making the Path 44 upgrade both more likely to occur and less costly.¹⁴⁶ The DEIR also fails to mention either SDG&E's or UCAN's analysis of the intra-SDG&E upgrades required for the Path 44 upgrade, let alone the ISO's identification of some of those same upgrades as desirable for other reasons.

Finally, the October 2007 fires damaged some of the same 69 kV facilities that SDG&E says would need to be rebuilt to accommodate a Path 44 upgrading.¹⁴⁷ To the extent that SDG&E has, for example, replaced burnt wood poles with new steel poles, it may already have incurred some of the costs that it claims would be needed for a Path 44 upgrading, and thus reduced the incremental cost of such an upgrading. The DEIR has no discussion of Path 44 upgrading costs and whether they are already being covered by transmission upgrades and rebuilds undertaken for other purposes (e.g., fire recovery or meeting normal load growth).

B0011-19 cont.

2. DEIR, p. C-147: Miguel substation

As discussed above, UCAN's proposed version of a No Action alternative includes modifications at Miguel which would help the No Action Alternative meet DEIR Basic Projective Objectives 1 (reduced cost) and 3 (delivery of renewables). The DEIR neither acknowledges the role that Miguel modifications could play as part of a No Action Alternative,¹⁴⁸ nor acknowledges the recent actions that SDG&E and the ISO have been taking to increase inlet and outlet capacity at Miguel. The DEIR also fails to incorporate the analysis contained in the Sempra Generation Presidential Permit Application, also discussed above, showing projected flows into and out of Miguel in excess of 2000 Mw in 2009, well above the current 1750 Mw inlet limit and 1900 Mw outlet limit.¹⁴⁹

B0011-20

¹⁴⁶ The same page of the 12/28/07 ISO analysis cited in the previous footnote also indicates that another local reliability sub-area within the SDG&E system will require the Kearny gas turbines to stay in service to meet the sub-area reliability requirements. *Ibid.*, p. 75 of 77. If the Kearny GTs are required for local reliability, then the chance they will be retired is much reduced, contradicting SDG&E's Phase I testimony (Ex. SD-15, Thomas testimony) and decreasing the size of the No Action Alternative required to meet DEIR Basic Project Objective 1. However, the DEIR has no discussion of the prospects of the Kearny units remaining in service.

¹⁴⁷ See Phase I, Ex. U-29 (Yari) re specific transmission line rebuilds SDG&E claims would be needed for a Path 44 upgrading; see SDG&E response to ED DR set 22 for tables listing the facilities damaged in the October 2007 fires.

¹⁴⁸ See DEIR, p. C-147, where the summary of the potential components of the No Project/No Action Alternative has no mention of Miguel.

¹⁴⁹ Sempra Presidential Permit Application, 12/18/07, Exhibit E. Since the Application was not filed until two weeks before the DEIR publication date, and was not noticed in the Federal Register until after the DEIR is published, UCAN is not suggesting that the DEIR's failure to reflect the data in the Application is any reflection on the authors of the DEIR.

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3. DEIR, pp. C-27, C-28, C-142, C-143, C-147, C-148: EE and DR

As discussed in greater depth above, the DEIR dramatically understates energy efficiency and demand response options,¹⁵⁰ seemingly in ignorance of the UCAN Phase I analysis, the CEC's IEPR (and supporting documents) and the CEC's 2008 Building Standard revisions analysis.¹⁵¹ These energy efficiency and demand response measures contribute directly to meeting Basic Project Objectives 1 (reliability) and 2 (cost reduction), and by reducing the need to import capacity may also free up transmission line space for use by renewables, thereby contributing to Basic Project Objective 3.

They are also at the top of the CEC/CPUC Energy Action Plan loading order. Thus, the DEIR should be revised to include quantify the incremental potential for increased EE and DR above the levels included in SDG&E's with-Sunrise case, and that incremental potential should then be included as needed and appropriate in a revised No Action Alternative. In particular, the DEIR should be revised to take account of the post-2009 energy efficiency (EE), dispatchable demand response (DR), and price-related demand response (AMI) which were discussed and described in UCAN's Phase I testimony and brief, and above in this testimony.

B0011-21

4. DEIR, p. AP1-306: In-basin solar

The DEIR assumes that 10 percent of the technical PV potential could be developed by 2016,¹⁵² which would correspond to over 230 Mw of firm capacity,¹⁵³ some 80+ Mw more than SDG&E's modeling includes. In contrast, SDG&E assumes 150 Mw of firm solar rooftop capacity by 2010, based on 300 Mw of nameplate capacity. That is less than the combined CSI/NSHP targets for the SDG&E service area.¹⁵⁴ The final EIR should continue to reflect the potential for up to 230 Mw of rooftop solar by 2016, and more thereafter, as part of a No Action alternative.

The DEIR also indicates that SDG&E could install rooftop PV itself as a means of further accelerating solar development, but suggests there may be legal obstacles to doing so.¹⁵⁵ Recent initiatives by LADWP to implement SB1 with utility-owned rooftop solar¹⁵⁶ are further evidence that the SB1 targets can be achieved, and suggest that the DEIR may be overstating the legal barriers to utility-installed rooftop solar. The DEIR should be revised to examine the LADWP program for its implications regarding SDG&E's solar options.

B0011-22

¹⁵⁰ DEIR, pp. C-27, C-28, C-142, C-143, C-147, C-148. Note that p. C-147 omits EE and DR even as **components** of a No Action alternative.

¹⁵¹ See the discussion above.

¹⁵² DEIR, p. C-70.

¹⁵³ DEIR, p. AP1-306.

¹⁵⁴ DEIR, p. Ap1-306.

¹⁵⁵ DEIR, pp. Ap1-306, -307.

¹⁵⁶ See discussion and footnote above.

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5. DEIR, pp. C-27, -140, C-141: Distributed generation

B0011-23

The DEIR states that there is the potential for about 35 Mw of new DG over and above the 17 Mw already forecasted by SDG&E for the year 2016.¹⁵⁷ However, the 35 Mw figure appears to be much too low. What the DEIR actually shows is that a “base case” based on existing incentives and expectations will result in 15 Mw per year of new DG capacity.¹⁵⁸ Based on the 50 percent credit for reliability used in the DEIR,¹⁵⁹ 15 Mw per year of nameplate capacity would mean new DG additions of 7.5 Mw per year on a firm capacity basis, versus the 1 Mw per year assumed by SDG&E.¹⁶⁰ But if SDG&E is underestimating DG additions by 6.5 firm Mw per year, then the understatement from 2010 to 2016 is 39 Mw, not 35 Mw, and the understatement by 2018 would be 52 Mw.

As importantly, the 39-52 Mw understatement of DG based on the data cited in the DEIR is an understatement in the “base case” which involves business as usual. As discussed above, the DEIR reports that in an “Increased Incentives Case” there would be about 200 Mw of DG by 2018, which is more than 90 Mw more than SDG&E projects (on a firm capacity basis).¹⁶¹ And in a “High Deployment Case” DG by 2018 reaches about 170 Mw on a firm capacity basis, more than 150 Mw higher than SDG&E projects.¹⁶² Thus, in terms of DG potential the DEIR underestimates the actual potential shown by its own data, by at least 115 Mw. The 35 Mw of “additional reliable DG” referenced in the DEIR is what the CEC study **expects** to occur over a period of under 6 years, and the total feasible potential in the “High Deployment” case is 2.5-3 times as much. The DEIR should be revised to correctly describe the underlying study.

6. In-basin generation options

B0011-24

a. DEIR, p. C-147: New in-basin renewables

At DEIR, p. C-147, the DEIR indicates that there is no known sponsor for new in-basin renewable generation projects.¹⁶³ However, there are two new in-basin projects not mentioned in the DEIR which not only have a project sponsor, they have contracts with SDG&E for their output.¹⁶⁴ In addition, the DEIR itself describes several specific biomass projects and their sponsors.¹⁶⁵ Finally, ISO queue project #32 is a 201 Mw wind project with a specific sponsor, albeit one whose name is confidential.¹⁶⁶

¹⁵⁷ DEIR, pp. C-27, -140, C-141.

¹⁵⁸ DEIR, p. C-141.

¹⁵⁹ Ibid.

¹⁶⁰ SDG&E assumes firm DG capacity grows from 11 Mw in 2010 to 17 Mw in 2016, or 1 Mw per year. DEIR, p. C-140.

¹⁶¹ DEIR, p. C-141.

¹⁶² Ibid.

¹⁶³ DEIR, p. C-147.

¹⁶⁴ See discussion above of new biomass contracts with SDG&E announced by SDG&E in December 2007.

¹⁶⁵ Envirepel and the City of San Diego; see DEIR, pp. C-73 and C-74.

¹⁶⁶ See project #32 in the 2/29/08 ISO queue, at <http://www.caiso.com/14e9/14e9ddda1ebf0.pdf>.

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b. DEIR, p. C-76: New 600+ Mw combined cycle project near Escondido, and other proposed new in-basin projects

At DEIR, p. C-76, the DEIR lists various in-basin conventional generation projects as potential components of a No Action Alternative, but rejects other projects as potential alternatives because “they may not be feasible in the 2010 time frame.”¹⁶⁷ Feasibility by 2010 should not be a precondition for inclusion in the No Action Alternative.¹⁶⁸ Even if some new resources are needed by 2010, which both UCAN and DRA strenuously deny,¹⁶⁹ no party claims that 1000 Mw of new resources are needed even by 2020 for SDG&E reliability purposes. Thus a No Action alternative can (and undoubtedly would) consist of a mix of resources from both the demand and supply side (as well as new transmission such as the Path 44 upgrade), with those resources phased in over time.

Without a 2010 on-line date as a constraint for inclusion in the DEIR, a variety of additional in-basin generation opportunities exist. For example, the CAISO interconnection queue currently includes the following 5 non-renewable projects totaling 1140 Mw within the SDG&E service area (besides those already mentioned in the DEIR):¹⁷⁰

- Queue project #90, a 93 Mw CT
- Queue project #150, a 43 Mw CT
- Queue project #190, a 330 Mw CT project at Otay Mesa
- Queue project #226, a new 620 Mw combined cycle project at Escondido
- Queue project #274, a 54 Mw combined cycle project at Palomar¹⁷¹

¹⁶⁷ DEIR, p. C-76.

¹⁶⁸ Indeed, UCAN doubts that the **proposed** project is feasible by 2010, particularly in light of the 2/25/08 statement to Commissioner Grueneich by counsel for the California State Department of Parks and Recreation that there is still an eight months to one-year permitting process with the State Parks and Recreation Commission to be gone through. SDG&E’s own analysis of mitigation costs for its proposed Sunrise route is based on a 2011 on-line date (SDG&E, 3/7 attachment to SDG&E’s 3/6/08 reply to UCAN DR35-12), and presumably doesn’t take into account the time required for an ABDSP General Plan amendment.

¹⁶⁹ See UCAN and DRA Opening Briefs in Phase I.

¹⁷⁰ CAISO, 2/29/08 interconnection queue, at <http://www.caiso.com/14e9/14e9ddda1ebf0.pdf>.

¹⁷¹ This project is listed with a 2008 on-line date. UCAN suspects it is the capacity increase at the existing Palomar combined cycle plant previously discussed in UCAN’s Phase I direct testimony and Opening Brief. Whether it is or not, it is not mentioned in the DEIR, but should be. It is either part of the base case (projects that will be built no matter what happens in this proceeding), in which case it reduces the needed size of the No Action Alternative, or else it is a potential component of the No Action Alternative.

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IV. DEIR alternative 4 -- UCAN proposes a modification to this alternative which is on cost grounds, equal with regard to reliability, and superior environmentally

B0011-26

The DEIR presents a specific Southern Route (ESSRA) identified as DEIR Alternative 4. UCAN has looked at the alternative routes described in the DEIR and believes that it hasn't considered a variation on this alternative which would meet SDG&E's likely objections to the Environmentally Superior Southern Route while having fewer environmental impacts than the proposed project, lower cost than the proposed project, and be feasible to construct. The "UCAN route" is quite a few miles shorter than the ESSRA (DEIR alternative 4), and thus should be quite a bit cheaper.¹⁷²

UCAN's specific Southern Route alternative is described below and should be used as the benchmark against which SDG&E's Preferred Route is measured. UCAN offers this alternative largely to demonstrate in very graphic terms that SDG&E's selection of its proposed route was not a considered and thoughtful selection.

UCAN also believes that the DEIR should give greater weight to the No-Option alternative contained in the DEIR; an alternative that is largely consistent with UCAN's Phase I alternative. It remains the most environmental superior and cost-effective option presented to the Commission in either phase of this proceeding.

A. Route selection criteria

1. Avoid southernmost part of modified D option because of potential reliability argument – too close (< 4 miles) to SWPL in area burned in 10/07 fires

In response to the DEIR's ESSRA, UCAN expects SDG&E to argue that the Modified D route is unacceptable because it would pass too close to the SWPL route and pose a risk of an N-2 contingency from fire. Building upon the DEIR's analysis, UCAN has identified a route whose projected burn zone after a fire near the route would not include the SWPL ROW and therefore not trigger SDG&E's objections.

2. Avoid I-8 route through Buckman Springs area

a. For the same reasons the "Environmentally preferred Southern Route" does – avoids competing uses and the "scenic Cottonwood Valley along I-8."

¹⁷² UCAN, 3/12 opening Phase 2 testimony.