

Application of San Diego Gas & Electric
Company (U 902 E) for Authority to enter into
Purchase Power Tolling Agreements with
Escondido Energy Center, Pio Pico Energy Center
and Quail Brush Power.

Application 11-05-023
(Filed May 19, 2011)

Application: A.11-05-023
Exhibit No.: _____

**REBUTTAL TESTIMONY OF
ROBERT ANDERSON
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY
IN SUPPORT OF APPLICATION OF SAN DIEGO GAS & ELECTRIC COMPANY
(U 902 E) FOR AUTHORITY TO ENTER INTO PURCHASE POWER TOLLING
AGREEMENTS WITH ESCONDIDO ENERGY CENTER, PIO PICO ENERGY
CENTER AND QUAIL BRUSH POWER**

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

OCTOBER 21, 2011



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1 SDG&E to plan ahead to develop and deploy those resources in sufficient time, and further, to
2 acknowledge and factor into account various scenarios and uncertainties during the planning
3 horizon. Thus, in assessing the need and planning for future resources, resource planning
4 necessarily includes the identification and management of uncertainties through the use of
5 reasonable planning assumptions. As discussed in more detail in this testimony, SDG&E's
6 analysis of resource uncertainties does not mean, as some intervenors would contend, that
7 SDG&E should "do nothing," or worse, assume that only a particular scenario will occur that
8 would obviate the need to procure more resources. Instead, my analysis and its conclusions are
9 based on a full and realistic reckoning of a wide range of scenarios for supply-side and demand-
10 side resources. SDG&E is mindful that it – and not the parties who claim that SDG&E's
11 Application is ill-founded or premature -- is accountable for abiding by the Commission's orders
12 and for maintaining resource adequacy. At the same time, SDG&E is no less mindful of the
13 potentially costly impacts on ratepayers if that objective is not achieved in a timely manner.

14 SDG&E has reviewed testimony submitted by Division of Ratepayer Advocates (DRA),
15 NRG Energy (NRG), City of Carlsbad (Carlsbad), Utility Consumers Action network (UCAN),
16 and the joint testimony of the Alliance for Retail Energy Markets (AREM), the Direct Access
17 Customer Coalition (DACC) and the Western Power Trading Forum (WPTF) (collectively, the
18 Protesting Parties). SDG&E's analysis remains fully supported and valid with respect to
19 SDG&E's resource need for the three contracts presented in the Application. In this Rebuttal
20 Testimony, SDG&E responds to various statements and issues raised by these parties.

21 **II. SUMMARY OF SDG&E'S REQUEST**

22 SDG&E's distribution service area is treated as a single load pocket for determining the
23 area's resource adequacy. To determine its Local Capacity Requirement (LCR), and in turn the
24 need for the PPTA contracts, SDG&E developed assumptions and calculated an LCR table based

1 upon SDG&E’s current outlook regarding resources in its distribution service area, including the
2 expected on-line date of mid-2012 for the Sunrise Powerlink, and a conservative estimate of
3 about 1% load growth,² after energy efficiency, over the planning period.

4 Table 1 below shows that the San Diego LCR area will have a total local area need
5 (“Local Resource Need”) of 2440 MW in 2017 and 2713 MW in 2020. It estimates net local
6 capacity – *i.e.*, the local capacity that San Diego area LSEs may rely upon to satisfy their LCR
7 for the San Diego LCR area – of 1878 MW in 2017-2020. This produces a local capacity
8 shortfall (“need amount”) of 653 MW in 2017, growing to 839 MW in 2020. The Table shows
9 how a portion of this capacity need amount might be met each year through “Proposed
10 Resources” – *i.e.*, resources that are uncertain in that they do not exist today, or alternatively, that
11 exist today, but may be eliminated in the future. Even after adding these proposed resources,
12 however, the Table shows a local capacity shortage of 213 MW beginning in 2018, increasing to
13 319 MW in 2020.

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² The load growth assumption of 1 percent per year is conservatively low because, as is explained below in Section III, SDG&E load growth has averaged about 2% per year over a 10-year planning horizon.

1

Table 1

Peak Load Calculations (MW):	2012	2013	2014	2015	2016	2017	2018	2019	2020
Forecast Peak-Hour 1-in-2	4438	4536	4615	4696	4772	4851	4930	5014	5099
Forecast Peak-Hour 1-in-10	4882	4990	5077	5166	5249	5336	5423	5516	5609
Transmission Capability (-)	2500	3500	3500	3500	3500	3500	3500	3500	3500
Generation Contingency (+)	604	604	604	604	604	604	604	604	604
Losses (+)	4	4	4	4	4	4	4	4	4
Local Resource Need	2990	2098	2185	2274	2357	2444	2531	2624	2717
Existing Local Supply Resources	1894	1894	1894	1894	1894	1894	1894	1894	1894
Existing OTC	960	960	960	960	960	960	960	960	960
Small Hydro	4	4	4	4	4	4	4	4	4
Pumped Hydro	40	40	40	40	40	40	40	40	40
Existing CHP	137	137	137	137	137	137	137	137	137
Local Renewable Energy	26	26	26	26	26	26	26	26	26
Total: Existing Capacity	3061								
OTC Retirement	0	0	320	320	320	320	960	960	960
Other Retirements	35	35	223	223	223	223	223	223	223
Net Local Capacity	3026	3026	2518	2518	2518	2518	1878	1878	1878
Capacity (Need) or Surplus	36	929	334	244	161	74	-653	-745	-839
Proposed Resources									
Additional Demand Side CHP	0	2	3	5	7	12	14	16	17
Uncommitted EE	0	34	60	87	126	169	213	251	284
Demand Response	158	196	205	208	210	212	214	217	219
Total Assumed Additions	158	232	268	300	342	394	440	483	520
Capacity (Need) or Surplus	194	1160	602	544	504	468	-213	-262	-319

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Resource planning involves inherent uncertainties regarding the future level of loads and the availability of resources, as reflected in Table 1. However, it does not follow – and would be

1 unduly risky – to infer from these uncertainties that the resource need in SDG&E’s service area
2 through the year 2020 is “zero,” as some intervenors have stated. The difficulty inherent in
3 accurately predicting the load and resources that will be available several years into the future
4 reinforces the need for an adequate cushion of capacity above the “bare minimum” that would be
5 needed in the most optimistic scenarios. Further, this cushion is necessary to allow for resources
6 that are not ultimately realized, given the long lead-time to develop new capacity. Moreover, the
7 presentation of PPTAs representing individual generators with capacities of 50 MW, 100 MW,
8 and 300 MW reflects the expected “lumpiness” of resources additions, i.e., power plants tend to
9 come in various size blocks, and the Independent Evaluator-supervised process by which
10 SDG&E picked the lowest cost offers in its Commission-approved RFO. Indeed, it is mainly in
11 the “Proposed Resources” category, and in particular in Energy Efficiency (EE) and Demand
12 Response (DR), where most of the disagreements exist. SDG&E discusses these and other issues
13 in more detail, below.

14 As was described in SDG&E’s Prepared Direct Testimony and further discussed in this
15 Rebuttal testimony, to ensure resource adequacy, the Commission should authorize SDG&E to
16 enter into these three PPTAs. SDG&E acknowledges that this request would, if approved,
17 provide somewhat more capacity than the “minimum” need calculated in the table. However,
18 this incremental capacity is necessary for prudent resource planning and could easily be needed
19 should load growth increase from the long term growth rate for just one or two years. Again, this
20 request is needed and justified for resource adequacy purposes.

21 As noted and approved in ALJ Yackin’s October 17, 2011 Ruling, DRA and SDG&E
22 agreed to a short delay in evidentiary hearings to allow for the “efficient resolution” of issues in
23 common both to this proceeding and the Long Term Procurement Planning Track 1 issues in

1 Rulemaking 10-05-006. However, SDG&E emphasizes the brevity of the delay and, to be clear,
2 maintains that these three contracts should be approved to ensure resource adequacy through
3 2020 for the SDG&E area.³

4 **III. RESPONSE TO VARIOUS INTERVENORS' CONTENTIONS**

5 **A. Contrary to DRA's Testimony, There is a Need For Local Resources After** 6 **Accounting for the Contribution of the Sunrise Powerlink to the San Diego-** 7 **Area Resource Adequacy Calculation.**

8 DRA's testimony states⁴ that having Sunrise Powerlink on-line in 2012 eliminates all
9 resource adequacy need. However, this is not true. As can be seen, SDG&E's Table 1 takes into
10 account Sunrise coming into service in time to reduce the need for local resources by increasing
11 the transmission capability from 2500 MW to 3500 MW in 2013. Thus, SDG&E's need analysis
12 fully takes into account the Sunrise Powerlink. However, even with Sunrise, SDG&E has
13 identified a need. Without Sunrise, the need would be even higher. In addition to the
14 Commission's directives in the 2006 LTPP case, SDG&E's current analysis indicates that at least
15 319 MW are needed to meet the minimum requirements.

16 Thus, SDG&E disagrees with both claims that SDG&E's current resource need is "zero"
17 as well as its analysis which appears neither to have a sound analysis to support its "zero need"
18 position as well as its treatment of the mandates from prior, applicable Commission orders as
19 well as a considered analysis. On the latter, DRA on the one hand, relies on the 2006 LTPP case
20 to argue that no new power is needed; on the other hand, DRA argues, as indicated below, that
21 the 2006 LTPP case should be disregarded because the issuance of the new LTPP is imminent.

³ Accordingly, SDG&E finds moot the DRA's statements from its testimony regarding DRA's "recommendation" that "SDG&E's application [should be] denied without prejudice and that SDG&E [should] be granted leave to submit an amended Application after, and in conformance with, a Commission decision in the 2010 LTPP docket..." (DRA at 1, emphasis in the original). DRA has agreed that the instant case will proceed, with evidentiary hearings, on January 31, 2012, without an amended application.

⁴ DRA at 5-6.

1 Despite the views of intervenors that might push for a finding of “zero” need, SDG&E believes
2 that the Commission should and must look at the facts contained in its analysis which are
3 reflected in Table 1.

4 DRA’s testimony also claims that “the Commission will issue a decision this year in the
5 2010 LTPP proceeding” (R.10-05-006) and further argues that no need exists for proposed new
6 resources.⁵ However, DRA’s main source for its “no need” conclusion appears to be its own
7 brief, not the expected decision in the case.⁶ As noted above, DRA and SDG&E have agreed to
8 a postponement in evidentiary hearings to allow for the issuance of a decision in R.10-05-006
9 and, at the same time, not jeopardize the viability of the PPTAs.

10 Additionally, DRA’s conclusion in the 2010 LTPP was based on a limited set of
11 assumptions. As is shown later in this testimony, the load forecast DRA is relying on is an
12 extreme case and not supported by historical load growth figures or by the latest forecast of
13 energy efficiency released by the California Energy Commission (CEC) staff.

14 **B. DRA’s Reliance on the 2010 LTPP Scoping Memo Assumptions is Misplaced.**

15 DRA’s testimony further relies extensively on the 2010 LTPP Scoping Memo Trajectory
16 Case, which is based on assumptions provided by Energy Division, not by SDG&E or the
17 Commission through the adjudicatory process. DRA argues that there is no need based on the
18 assumption using the Trajectory Case in the 2010 LTPP scoping memo. However, that one
19 single set of assumptions is not an adequate basis for making a decision on the need for these
20 units. As DRA knows, the assumptions in the 2010 LTPP Scoping Memo are 2 to 3 years old
21 and in many cases more recent data, as is explained below, shows them to be incorrect.

⁵ DRA at 6-7.

⁶ DRA at 7, footnotes 16, 17.

1 **C. Sole Reliance on the 2010 Scoping Memo Assumptions is Unjustified Due to**
2 **Its Extremely Low Load Growth Projection.**

3 One of the key assumptions in the 2010 LTPP Scoping Memo is that there will be no load
4 growth after accounting for committed and uncommitted energy efficiency through 2020. Zero
5 load growth in the San Diego area is one possible scenario, but many facts exist that question
6 whether it is likely or reasonable. A review of historical load growth clearly shows that zero
7 growth in electric load is not a likely case. In fact, SDG&E has never seen zero load growth
8 over a ten-year planning period. Even during the periods when the Commission has been
9 aggressively pursuing cost-effective energy efficiency, SDG&E has experienced positive load
10 growth. As was pointed out in my Prepared Direct Testimony, the historical load growth rate
11 over a ten-year period, after EE and demand-side generation is taken into account, has averaged
12 approximately 2% annually since 1990.⁷

13 The 2% San Diego-area growth rate is not an extreme load growth scenario but reflects
14 the average rate. It is the actual observed average 10-year load growth for the 10-year periods
15 ending in 2000 through 2010 (*i.e.*, the average of 10 separate 10-year periods). The single lowest
16 growth experienced over a ten-year period during that time was 1.1%, and that relatively low rate
17 occurred during the extraordinary event of the energy crisis. Indeed, SDG&E has observed 10-
18 year growth rates as high as 2.9 percent. In shorter intervals, growth rates have been even
19 higher.

20 In the pending LTPP proceeding, as well as the instant proceeding, SDG&E developed a
21 new load forecast that was based a short-term CEC load forecast to capture the current down turn
22 not captured in the 2010 LTPP scoping memo assumptions.⁸ This forecast reflects a load growth

⁷ SDG&E's Prepared Direct Testimony of Robert Anderson at 16.

⁸ Assigned Commissioner and Administrative Law Judge's Scoping Memo and Ruling, A.10-06-006 (December 3, 2010).

1 rate of about 1.1 percent from 2012 to 2020 – a rate similar to the lowest 10 year load growth
2 that the San Diego area has experience in the past 30 years.

3 In addition, since the 2010 LTPP was filed, the CEC staff has released its latest load
4 forecast, the *Preliminary California Energy Demand Forecast 2012-2022*⁹. This forecast
5 included three scenarios: a high, a middle and low forecast. As part of this report, the CEC
6 staff’s provided adjustments for potential amounts of uncommitted energy efficiency not
7 included in the base forecasts. After subtracting the CEC scenarios for uncommitted energy
8 efficiency, the CEC projected San Diego-area load growth rates of 0.7%, 1.1% and 1.9%,
9 respectively, for the low, middle and high growth scenario.¹⁰ Of note, none of the CEC Staff’s
10 forecasts shows a zero load growth, contrary to the assumptions DRA relies on. The CEC Staff’s
11 middle case forecast closely matches the SDG&E’s 2010 LTPP load forecast.

12 Table 2, below, shows and compares the expected and adverse weather peak load
13 expected for the year 2020 based on the 2010 LTPP Scoping Memo assumption (as is supported
14 by DRA), the comparable assumption used by SDG&E in the 2010 LTPP proceeding, the CEC’s
15 most recent load forecast, and a forecast prepared by SDG&E reflecting the SDG&E area’s
16 historical average growth, as discussed earlier in this testimony.¹¹

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⁹ The report can be found at <http://www.energy.ca.gov/2011publications/CEC-200-2011-011/CEC-200-2011-011-SD.pdf>

¹⁰ The growth rates for the CEC forecasts were calculated using the same 2011 value as the SDG&E load forecast used in the 2010 LTPP and the CEC’s 2020 peak loads.

¹¹ The “adverse peak” used for grid planning is based on a 1 in 10 weather event occurring. For all the forecasts SDG&E used the CEC’s ratio of a 10% increase to the expected forecast to develop the adverse weather forecast.

Table 2 – 2020 Peak Load Forecasts

	2020 Average Peak Load	Adverse Peak Load	Delta from 2010 LTPP Scoping Memo (MW)
2010 LTPP Scoping Memo	4555	5011	N/A
CEC – Low Growth	4622	5084	73
CEC - Middle Growth	4762	5238	227
SDG&E 2010 LTPP Forecast	4826	5308	298
CEC – High Growth	5120	5632	621
Historical 2% Growth	5200	5720	709

What Table 2 shows is that DRA’s position is a bookend in a range of need. If the Commission were to rely on such a low load forecast, SDG&E would likely have to resort to procuring “just-in-time” resource additions or not allow older generation units subject to once through cooling to retire, or both. As compared to SDG&E’s forecast which is similar to the CEC Middle Growth case. Also if either the CEC’s High Demand case or SDG&E’s historical load growth occurs, SDG&E’s system will need additional capacity above what is being proposed in this Application. Thus, SDG&E respectfully and strongly disagrees with DRA’s assessment of the electricity load growth for the San Diego area that should be factored into the resource planning assumptions.

D. Discounting of Energy Efficiency in SDG&E LTPP Filing was Reasonable.

As SDG&E points out above, the San Diego area’s requirements for resources should be based on a plausible (or preferably, likely) load growth forecast after taking into account energy efficiency impacts. SDG&E’s Application incorporates reasonable assumptions for both underlying growth and the impacts of energy efficiency.

1 However, DRA¹² and UCAN¹³ both raise issues with the level of energy efficiency
2 savings included in SDG&E's 2010 LTPP proceeding load forecast. SDG&E finds that their
3 assumed energy efficiency figures are overstated for resource planning purposes. First, as
4 SDG&E pointed out in the 2010 LTPP, the Commission must consider whether a utility's
5 proposed procurement takes into account energy efficiency measures that are reasonably
6 expected to occur.¹⁴ Also, Public Utilities Code § 454.5 makes clear that the IOUs' procurement
7 plans should include only those energy efficiency resources “. . . that are *cost effective, reliable*
8 *and feasible*.”¹⁵ There were no facts presented in the LTPP, or in DRA or UCAN's testimony,
9 that show that all of the assumed uncommitted EE that they believe should be relied upon is cost
10 effective, reliable and feasible.

11 Second, both DRA and UCAN ignore that the CEC heavily qualifies the assumptions that
12 were used in the LTPP Scoping memo. The Scoping Memo's uncommitted EE values were from
13 the CEC's *Incremental Impacts Report*.¹⁶ In a section of the Report entitled “Caveats”, it states
14 that “there is no assurance that efficiency savings from any of the three scenarios will be
15 realized. Even the low case requires that various state and federal entities continue to pursue
16 energy efficiency activities under their jurisdiction in what historically is considered an
17 aggressive approach.”¹⁷ The *Incremental Impacts Report* notes that “the effort to continue

¹² DRA at 14.

¹³ UCAN at 3-6.

¹⁴ See R.10-05-006, July 1 Track 1 Testimony of Robert Anderson at 6.

¹⁵ Pub. Util. Code § 454.5(b)(9)(C) (emphasis added).

¹⁶ *Incremental Impact of Energy Efficiency Policy Initiatives Relative to the 2009 Integrated Energy Policy Report Adopted Demand Forecast*, CEC-200-2010-001-CTF, May 2010
<http://www.energy.ca.gov/2010publications/CEC-200-2010-001/index.html>

¹⁷ *Id.* at p. 53 (emphasis added).

1 increasing efficiency may grow more difficult through time as future initiatives exhaust the
2 low-hanging fruit.”¹⁸

3 The Report specifically addresses application of the scenarios in the context of resource
4 planning, cautioning that “[w]hile the *Energy Action Plan* loading order emphasizes
5 cost-effective energy efficiency as California’s first choice to meet demand growth, relying
6 solely on these resources for long-term resource adequacy is uncharted territory.”¹⁹ It notes
7 further that “[i]f decision makers postpone decisions to invest in supply-side resources and
8 energy efficiency fails to deliver as forecasted, then serious reliability (and cost) consequences
9 could result, unless such shortfalls have been anticipated and contingency actions identified.”²⁰
10 Thus, in accordance with the Commission’s obligation to “remain cognizant of our responsibility
11 to ensure the reliability of our system,”²¹

12 Third, the CEC staff itself has scaled back on the future impacts that uncommitted EE
13 may have on its forecasts. Due to changes the CEC made between what standards were included
14 as committed verses uncommitted between the LTPP scoping memo forecast and the
15 *Preliminary California Energy Demand Forecast 2012-2022*, a comparison of the total
16 uncommitted EE impacts is not easily done.²² However, a comparison can be made between the
17 assumed impacts in two major areas: Utility Programs and BBEES. In the Middle Case for the
18 year 2020 in SDG&E service area, the CEC reduced the impact of utility programs by 73 MW or
19 27%, and reduced the impact from the BBEES from 140 MW to 60 MW or by 59%. These

^{18/} *Id.* at 54.

^{19/} Incremental Impacts Report, *supra*, note 42 at 55 (emphasis added).

^{20/} *Id.*

^{21/} Energy Action Plan, 2008 Update at 15.

²² A discussion of uncommitted energy efficiency impacts is included in Chapter 8 of the CEC load forecast.

1 reductions may not exactly match the reductions SDG&E made, but they show that reliance
2 should not be placed on the full amounts included in the LTPP uncommitted EE assumptions.

3 In addition, DRA makes the unsupported claim that failing to include high projections of
4 EE in this proceeding will remove any incentive to achieve future energy efficiency savings.²³
5 DRA offers no substantiation for this spurious comment, which would conflict with years' worth
6 of directives and actual energy saving achieved by SDG&E through energy efficiency programs.
7 The level of energy efficiency adopted by the Commission in the EE proceedings is not impacted
8 by whether SDG&E's local resource adequacy is long or short on capacity. DRA's suggestion
9 that SDG&E will not pursue or achieve cost-effective energy savings if there are adequate
10 supply-side resources available to meet local reliability obligations is simply illogical and at odds
11 with both SDG&E's and the Commission's approach to achieving both full resource adequacy
12 and all cost effective energy efficiency savings.

13 **E. SDG&E's Demand Response Assumption is Reasonable.**

14 In my Prepared Direct Testimony, I indicated in Table 2 that for the years 2012 through
15 2020, SDG&E forecasted that SDG&E's demand response programs would provide, each year,
16 an increasing amount of demand response ranging from 158 MW to 219 MW. As explained
17 herein, the demand response forecast contained in my Prepared Direct Testimony reflects the
18 current, best forecast of SDG&E's demand response programs and is valid for this proceeding.²⁴
19 The Commission does not use the LTPP Proceeding or application for specific resources to
20 litigate demand response values, both rather uses the values from those other proceedings as
21 input.

²³ DRA at 14, lines 15-17.

²⁴ SDG&E's DR forecast in this proceeding is from SDG&E's current DR proceeding, A.11-03-002, and can be found in the May 27, 2011 Chapter V Amended Testimony of Leslie Willoughby/Kathryn Smith.

1 However, in referencing certain proceedings for SDG&E’s AMI and other demand
2 response programs, UCAN claims that SDG&E has used “outdated” demand projections.²⁵
3 Instead, UCAN proposes its own forecast of demand response, which is approximately three-
4 times larger than SDG&E’s forecasted amounts.²⁶ Based on its own forecast, UCAN concludes
5 that SDG&E has presented a “significant underestimation of projected savings from energy
6 efficiency and demand response resources” and that SDG&E’s proposed new resources “would
7 present an unnecessary cost to ratepayers.”²⁷ For several reasons, UCAN’s analyses and
8 conclusions are incorrect and should be rejected.

9 First, Table 7 in UCAN’s testimony shows an AMI demand response forecast for year
10 2018-2020 of 423, 431 and 440 MW, respectively, and claims that this is the forecast “that
11 formed the basis of AMI approval.” However, the forecast in Table 7 appears to be interpolated
12 from the 2010, 2015 and 2021 demand response forecast values presented in SDG&E’s AMI
13 testimony of Steve George, filed in March 2005. Contrary to UCAN’s claims, this testimony did
14 not form the basis of AMI approval and is not part of the record of A.05-03-015. That AMI
15 testimony was replaced in full by SDG&E’s AMI testimony filed in July of 2006. The July 2006
16 testimony presented a 2015 forecast of 249 MW and a 2022 forecast of 292 MW.²⁸ But even
17 SDG&E’s lower forecast was not adopted by the Commission. The Commission’s AMI
18 Decision, D.07-04-043, adopted an even lower value.²⁹

19 Thus in its testimony, UCAN plainly misstates the record of that proceeding and so-
20 called “promises,” as well as the Commission’s conclusions related SDG&E’s AMI-related

²⁵ UCAN at 8.

²⁶ UCAN at 9.

²⁷ UCAN at 10.

²⁸ See A.05-03-015, July 14, 2006 Testimony of Steve George at SG-13, Table 6-5.

²⁹ See D.07-04-043 at 51-52.

1 demand response. SDG&E factored in the most current forecast for all demand response
2 programs for this proceeding. SDG&E’s use of this forecast is reasonable and supported.

3 The scope of this proceeding does not, however, include a detailed, new assessment of
4 demand response savings or individual demand response programs, including AMI³⁰ If UCAN
5 wishes to challenge SDG&E’s demand response values, it should do so in the Demand Response
6 proceeding, where it is an active party.

7 **F. SDG&E’s Request for Additional Capacity as a “Cushion” is Prudent**
8 **Resource Planning.**

9 DRA states that SDG&E’s request of additional new, local generation resources “far
10 exceeds its own claim of local capacity need by 2020.”³¹ DRA’s statement seems to be premised
11 on a perspective that adding any capacity above the “bare minimum” amount needed to meet
12 local grid reliability is in excess. SDG&E disagrees with this premise. As explained above, the
13 inherent, substantial uncertainty in load growth and other important variables dictates – not a “do
14 nothing” or “defer as long as possible” approach – but to incorporate additional tolerance for the
15 identified uncertainties. Thus, SDG&E believes that prudent planning means adding some
16 capacity above the minimum amount calculated.

17 As noted above, in my view as a Resource Planner, a better approach is to plan for
18 enough capacity that will allow for the time need to react to changes. Doing so would mean that
19 SDG&E would need to procure 100 to 200 MW in capacity above the load growth to deal with
20 the potential for higher load growth. This amount of capacity can accommodate a couple of
21 years higher load growth, such as load growth equal to the historical average, and allow for
22 SDG&E to conduct a new request for offer under a reasonable time frame. Or in other words,
23 given that the load growth assumption used by SDG&E in the Application reflects the lowest

³⁰ A.11-05-023, July 29, 2011 Scoping Memo and Ruling of Assigned Commissioner at 2-4.

³¹ DRA at 2.

1 historical growth, an acceptable cushion will provide flexibility if higher loads, such as loads
2 growing at the 2 percent annual average, materialize for a few years.

3 **G. The Need Should Not Assume Power Plants that Don't Exist.**

4 DRA's testimony asserts that SDG&E's need analysis does not address potential future
5 renewable energy projects, new electric storage plants, and Distributed Generation.³² In a similar
6 argument, DRA questions SDG&E's removal of some renewable and CHP resources that were
7 included in the LTPP modeling scenarios.³³ First, regarding the renewable resources, SDG&E
8 did include 68 MW of net qualifying capacity from solar resources in the LTPP case. This was
9 based on SDG&E's Renewable Auction Mechanism (RAM) Advice Letter filing, which looked
10 to favor local projects under the Commission's RAM program. However, the Commission
11 rejected that proposal in Resolution E-4414 and ordered SDG&E to "remove its local category
12 since this category is not in compliance with the Decision." Thus it is no longer likely that the
13 resources under this program will be local. While SDG&E is seeking to incorporate more
14 renewable resources in its generation portfolio, history has shown us that lower cost projects
15 exist outside the local area.

16 Regarding storage, DRA claims that SDG&E has "failed to include any contributions
17 from energy storage" and "certain distributed generation resources."³⁴ But DRA's argument
18 misses the broader point that storage and distributed generation have not been identified at this
19 time as a matter of long-term procurement planning to meet an identified resource need. A
20 detailed exploration of storage and "certain distributed generation resources" for that purpose is
21 beyond the scope and objective of the instant proceeding.

³² DRA at 7.

³³ DRA at 10.

³⁴ DRA at 7.

1 **H. SDG&E Once-Through Cooling (OTC) Facility Retirements are Reasonable.**

2 DRA argues that SDG&E overestimates the impact that OTC retirements will have on its
3 local need.³⁵ DRA states that when the Encina power plant will retire is uncertain, and NRG is
4 pursuing alternatives to extend some or all of its operation through repowering or alternative
5 compliance methods. However, SDG&E found it necessary and prudent to put before the
6 Commission the three PPTAs that will allow the State to move towards achieving its goal of
7 reducing or eliminating reliance on OTC plants. Failure to approve these PPTAs means that
8 there will not be enough local capacity to allow Encina to retire, so there will not be a choice but
9 to maintain the existing plants until a new RFO can be executed and new plants built.

10 DRA states that “The Encina Power Plant’s capacity will count towards San Diego’s
11 local capacity requirements even if Encina does not have a power purchase contract with
12 SDG&E”.³⁶ SDG&E is concerned that this statement could be interpreted to mean the San
13 Diego area will get local reliability from Encina for free. It is important to understand that the
14 only plants that the CAISO and the CPUC will recognize as meeting local reliability criteria are
15 plants that have signed contracts that require the plants to be available to the CAISO for
16 dispatch. If the total capacity under contract by all LSE’s does not meet the grid reliability
17 needs, the CAISO will enter into a contract with the plants it needs and charge customers in San
18 Diego. Since SDG&E does not serve 100% of the load in the San Diego service area, SDG&E
19 does not sign contracts with all the plants that eventually count towards local reliability. But
20 given Encina’s size of 960 MW, in an area that has a local need of about 2,700 MW, it is hard to
21 pick a scenario that does not require Encina to have a contact for some or all of its capacity
22 unless additional units are built.

³⁵ DRA at 10 -12.

³⁶ DRA at 11.

1 DRA claims that the estimated retirement of the Encina Power Plant is the “main driver
2 of SDG&E’s estimated local capacity need starting in 2018” and that repower would add
3 additional capacity.³⁷ First, the NRG repower proposal, called the Carlsbad Energy Center, has
4 yet to receive CEC approval of the Application for Certification (AFC) which is required before
5 any construction activities can begin. The facility is not under construction and, so far as
6 SDG&E knows, no contracts exist to provide the revenue stream that would be needed to move
7 the project forward. NRG testimony in this case specifically states that the Carlsbad Energy
8 Center “may not reach fruition, as the project does not currently have a long term contract
9 supporting its construction.”³⁸ The fact remains that the proposed Carlsbad Energy Center
10 remains an uncertainty for various reasons.

11 **I. SDG&E’s Proposal is Consistent with its Smart Grid Implementation Plans.**

12 Along lines similar to DRA’s earlier arguments, DRA claims that SDG&E’s Application
13 “does not appear to consider [various Smart Grid] options or the potential for the Smart Grid to
14 reduce the need to construct new power generation plants”³⁹ DRA appears to quote selectively
15 from SDG&E’s much larger Smart Grid Deployment Plan (SGDP) in support of DRA’s
16 conclusion.⁴⁰

17 However, DRA has mischaracterized SDG&E’s Smart Grid goals. Regarding DRA’s
18 reference to SDG&E’s statement in its Smart grid plan, this statement specifically describe a
19 large single-line item benefit estimate in the “Dynamic Voltage and VAR Control [for
20 Transmission reliability]” project which included in its conceptual benefits estimates the avoided
21 cost of a (roughly) Palomar-class plant. Showing such a conceptual avoided cost benefit in the

³⁷ DRA at 11 -12.

³⁸ NRG at 8.

³⁹ DRA at 15.

⁴⁰ DRA at 15, footnotes 39-42.

1 SGDP – a guidance document that is not intended to replace the GRC or special applications –
2 does not make or reinforce any statement that we will avoid ALL new generation or that it would
3 replace the generation needed to meet grid reliability criteria. The point about avoiding
4 generation is made in the context of by adding new technology and tools including large
5 synchronous condensers so that can better integrate renewables. In fact, it was not a project
6 designed to avoid generation needed for local grid reliability.

7 **J. Costs to Ratepayers.**

8 DRA raises a number of issues regarding the costs of the PPTAs.⁴¹ First, DRA questions
9 price changes that occurred between the original bid prices and final contract prices. Of course,
10 there were many negotiated terms, and the negotiation of these contracts was done under the
11 review of the independent evaluator (IE). SDG&E conferred with the IE who ensured that
12 SDG&E was not favoring one bidder over another.

13 Next, DRA claims that the costs “have become more uncertain” as a result of the
14 interconnection costs. The opposite is true. The results on the Phase II studies have put a cap on
15 the interconnection costs. It is true that the parties are working to reduce the costs, but
16 reductions only improve the economics of the projects, it does not make them more uncertain.

17 DRA’s testimony simply graphed the capacity cost of the contracts.⁴² However noting
18 that contracts have a specific amount of fixed costs is not a reason to deny them, nor does it
19 provide a complete cost benefit analysis. DRA provides no facts as to the cost to meet local
20 capacity needs in any other scenario absent these contracts. DRA provides no basis as to the
21 costs of other resources that would need to be contracted for over the same time period to meet

⁴¹ DRA at 16-24.

⁴² DRA at 17-18

1 local requirements. They basically imply that the costs in all other scenarios without the
2 contracts are zero, which is clearly not the case.

3 The values provided by DRA need to be further ignored because they only plotted
4 capacity payments. DRA ignored savings to customers from getting more efficient quick start
5 capacity than relying on existing generation. SDG&E's analysis showed that there is energy and
6 ancillary service values to customers. However, DRA ignored these values in its analysis.

7 **K. Greenhouse Gas (GHG) Implications of These Contracts**

8 DRA's testimony refers to the July 29, 2011 Scoping Memo and Ruling of Assigned
9 Commissioner in this proceeding and seeks SDG&E's positions with respect to the three GHG-
10 related topics framed in that Ruling: (a) how might future GHG regulations affect project costs,
11 operations, or financial viability; (b) does each PPTA reasonably address future GHG
12 considerations; and (c) who bears the risk of adverse events (or obtains the gains from beneficial
13 outcomes) relative to future GHG events.⁴³ SDG&E addresses each of these concerns below.

14 **1. How Might Future GHG Regulations Affect Project Costs,** 15 **Operations, or Financial Viability?**

16 SDG&E considered GHG costs in its modeling, incorporating a GHG price based on the
17 Synapse study. All electric generation will experience GHG allowances costs beginning in 2013,
18 not just these particular plants. GHG costs were factored into the evaluation process considering
19 the dispatch implications of GHG emissions costs. SDG&E was clear in the testimony in the
20 LTPP proceeding that it would include GHG in bidding resources into CAISO markets:

21 "GHG costs will be reflected in SDG&E bids submitted to the CAISO, so that
22 SDG&E's plants will only generate when they are economic (including the GHG
23 costs) compared to other resources bid into the CAISO market."⁴⁴

⁴³ DRA at 24.

⁴⁴ LTPP direct testimony, witness Ryan Miller, page 14, lines 8-10.

1 Since SDG&E is including GHG costs in bids into CAISO markets, it will recover the GHG
2 costs for all units, even Wellhead Escondido, even when it may not be needed in 2013 and 2014.
3 If the units are dispatched, the market-clearing price will cover the GHG cost.

4 DRA's testimony suggests the Commission should consider possible additional GHG
5 compliance costs for this facility.⁴⁵ Since SDG&E will be bidding this resource into the market
6 with the expected GHG cost, there should be no additional GHG costs that have to be recovered
7 from ratepayers; the GHG costs will be recovered from the electricity market. Further, DRA's
8 Table 6 is incorrect since generation less than 25,000 MT per year are included in the cap-and-
9 trade program in 2015 through natural gas charges.⁴⁶ Generating less than 25,000 MT is only a
10 windfall to ratepayers in 2013 and 2014.

11 From a portfolio perspective, these new units will replace older, less efficient resources
12 leading to GHG reductions for SDG&E's portfolio. The difference between a 9,000 btu/kWh
13 heat rate of newer generation compared to 10,000 to 12,000 heat rates of existing units can lead
14 to GHG reductions. A 2,000 Btu/kWh difference will lead to a 0.1 MT reduction for each MWh
15 produced. For 800 hours of annual operations, the GHG reduction would be 80 MT per MW; for
16 4,000 hours, the GHG reduction would be 400 MT per MW. In addition, these are quick start
17 generation units and, therefore, also generate savings as compared to long-start generation such
18 as Encina that generates substantial GHG in the long start-up process as well as significant GHG
19 emissions when forced to run at minimum load to stay online to be ready to serve load. The
20 added efficiency and quick start capability will reduce ratepayer GHG costs in the portfolio.

⁴⁵ DRA at 22.

⁴⁶ DRA at 23.

1 **2. Does Each PPTA Reasonably Address Future GHG Considerations?**

2 Each PPTA reasonably addresses future GHG considerations by having explicit GHG
3 contract provisions in the contract. The contract language is the same GHG language that has
4 been recently approved by the Commission in its Wellhead Margarita (now El Cajon) and
5 JPower Orange Grove contracts.⁴⁷ In the Air Resources Board’s (ARB’s) future cap-and-trade
6 program, the GHG compliance obligation is placed on the generator. However, SDG&E is
7 bidding the resource into the CAISO markets, so the proposed GHG language in the contracts
8 would have SDG&E be responsible for acquiring GHG allowances, and providing those
9 allowances to the generator for actual GHG emissions up to a limit based on actual dispatch.⁴⁸
10 Since SDG&E is bidding it into the market, it can include an expected GHG cost in its bids to
11 generate revenues to acquire allowances. Paying for actual GHG costs expected based on
12 dispatch is the more effective way for SDG&E to manage GHG costs for ratepayers.⁴⁹ Contract
13 provisions making SDG&E responsible for GHG allowance acquisition will also allow SDG&E
14 to control the risks and costs of its portfolio of GHG allowances and provide the Commission
15 with oversight of GHG allowance acquisition.

16 **3. Who Bears the Risk of Adverse Events Relative to Future GHG**
17 **Events?**

18 There is little added GHG cost risk from the proposed generation contracts since the
19 expected GHG costs will be covered in bids into CAISO markets, so that electricity consumers
20 should have no net added GHG obligation as a result of the PPTAs. The GHG obligation will
21 increase the more the generation units are dispatched, but funds to purchase GHG allowances

⁴⁷ D.07-09-010, as modified by D.09-03-033 and D.09-12-026.

⁴⁸ The contract language also indicates that if the generator receives any allocation of allowances, those would be used toward the compliance obligation.

⁴⁹ The alternative is to pay the generator the market price for the power, but then ratepayers would lose profits from the market in general and from GHG costs that are less than the marginal generator. For example, ratepayers will receive any dollar benefit in 2013-2014 if Wellhead Escondido does not require GHG allowances due to being under the 25,000 metric ton limit since SDG&E will bid it into the CAISO markets with an expected GHG cost.

1 will increase commensurately as GHG costs are recovered in the dispatch price. And because
2 these are new, efficient generation units, they will lower the GHG cost of the SDG&E portfolio
3 of generation when compared to old, inefficient, long-start generation. Although DRA poses the
4 question in a way that implies a risk with these contracts, the reality is customers will face more
5 risk and cost if they are forced to rely on the older less efficient steam generators than have
6 access to new more efficient quick start capacity.

7 Based on the current cap-and-trade regulations, future GHG price spikes would be
8 reflected in the electricity market, so that electricity buyers will bear the risk of future GHG
9 price spikes. As far as the PPTAs are concerned, higher GHG prices advantages efficient
10 generation resources, so that SDG&E ratepayers would benefit from the PPTAs in circumstances
11 where GHG prices were high. So, a PPTA for efficient generation would reduce the GHG costs
12 ratepayers would experience as a result of higher GHG prices. On the other hand, ratepayers as
13 electricity buyers would be disadvantaged.

14 **L. Ability to Apply a Cost Allocation Methodology (CAM) to these Contracts**

15 The Testimony sponsored by the Protesting Parties raises two general issues: (1) whether
16 the contracts are needed, and (2) “under what conditions the CAM is to be applied.”⁵⁰ My
17 Prepared and Rebuttal Testimonies explained that the three PPTAs are needed for San Diego-
18 area resource adequacy. Regarding use of the CAM, SDG&E has requested in its Application
19 for the Commission to find that the contract costs must be allocated to all benefitting customers,
20 including SDG&E’s bundled customers and San Diego-area direct access customers. The three
21 PPTAs are indeed “new generation” that should and must be afforded CAM treatment since they
22 are being added to ensure that there is adequate capacity available for all San Diego-area load
23 serving entities to meet local resource adequacy requirements through 2020 under a wide range

⁵⁰ Protesting Parties at 4-5.

1 of outcomes. SDG&E acknowledges that not all new generation is subject to the CAM, and in
2 fact, is adding other new generation for which SDG&E is not applying for CAM treatment.
3 However, these three PPTAs are being procured based on D.06-07-029 that made the utilities the
4 entities responsible for procuring new generation through long-term power purchase agreements,
5 and therefore they are resources that are subject to the CAM which is now in effect.⁵¹

6 Second, the Protesting Parties claim that SDG&E's request for CAM treatment is
7 premature because D.11-05-005 says there are more CAM details to be worked out.⁵² SDG&E
8 agrees more CAM details need to be worked out, but new generation resources determined by
9 the CPUC to be needed must be subject to the CAM, and that determination is not premature and
10 is part and parcel of the approval of this Application. Nothing in D.11-05-005 suggests that our
11 proposed resources should not be subject to the CAM or that the determination should be
12 deferred.

13 This concludes my Rebuttal Testimony.

⁵¹ D.06-07-029, Finding of Fact 19.

⁵² Protesting Parties at 6.