STATE OF CALIFORNIA

Energy Resources Conservation and
Development Commission

DOCKET
07-AFC-6
DATE Jan 09 2012
RECD. Jan 09 2012

In the Matter of:)
Application for Certification for the)
Carlsbad Energy Center Project)
(CECP))
_____)

Docket No 07-AFC-6

January 9, 2012

Intervenors, City of Carlsbad and Carlsbad Redevelopment Agency,
Motion for Official Notice of CPUC comments to California ISO dated December 22, 2011

Ronald R. Ball
City Attorney for City of Carlsbad and
General Counsel for Carlsbad Redevelopment
1200 Carlsbad Village Drive
Carlsbad, CA 92008
(760) 434-2891

Allan J Thompson
Special Counsel for City of Carlsbad and
Carlsbad Redevelopment Agency
21 “C” Orinda Way, #314
Orinda, CA 94563
(925) 258-9962

STATE OF CALIFORNIA
CALIFORNIA ENERGY COMMISSION

In the Matter of Application for Certification for the Carlsbad Energy Center Project (CECP)	)))))	Docket No. 07-AFC-6

Intervenors, City of Carlsbad and Carlsbad Redevelopment Agency,
Motion for Official Notice of CPUC comments to California ISO dated December 22, 2011

At the December 12, 2011 Carlsbad Energy Center Project (CECP) Evidentiary Hearing, representatives from the California Independent System Operator (CAISO) presented portions of its December 8, 2011 presentation on the 2011-12 Transmission Planning Process study results. The City and Agency appreciated CAISO's participation at that hearing and was deeply engaged in the material that CAISO made available. Due to the draft nature of the presentation (the official report has yet to be released) and the lack of its availability to the Intervenors prior to the hearing, the City and Agency had some difficulty in fully exploring the study and its limitations.

However, as provided in CAISO's request for comments on its December 8 presentation, a number of agencies and entities have responded. Attached is a copy of the comments provided by the California Public Utilities Commission (CPUC) on that report, dated December 22, 2011. The City and Agency request that the CECP Siting Committee take official notice of this document.

The relevancy of the CPUC document to these proceedings is that these comments highlight a number of serious questions and concerns related to CAISO's presentation and draft results. The CPUC's comments deal directly with the information presented by CAISO at the Evidentiary Hearing, and clearly show the draft nature of CAISO's findings and the need for further analysis which includes a broad range of stakeholders and ultimately a decision by the CPUC.

Finally, the CPUC questions CAISO's assumptions, an example of which is contained on Page 11 of the December 22, 2011 CPUC comment letter:

> "The 2010 LTPP identified a CAISO-wide reserve margin that was 40% in excess of a 17% planning reserve margin in 2020. This resource capacity remains above the 17% planning reserve margin even with 4000 MW higher load under a 1-in-10 demand forecast. While CPUC Staff is aware than a 1-in-

> 10, N-1, G-1 criterion is utilized for local area reliability, the application of a 1-in-10 combined with the 15-17% PRM, without including any incremental demand-side load reduction measures presents an overly conservative assessment of conditions in California."

While other parties have filed similar comments to that of the CPUC, and the City and Agency do not object to the CEC taking official notice of those documents, the City and Agency believe that the CPUC's December 22, 2011 comments adequately capture the "work in progress" nature of CAISO's study and echoes the call for an ongoing dialogue and collaboration as the various agencies try to develop a cleared understanding of the long term energy demands facing California.

These comments are relevant to these proceedings and good cause exists for their official notice since the CAISIO study, which required this request, was not introduced into evidence for the Commission's consideration until the evidentiary hearings of December 11, 2011.

Respectfully Submitted: /s/ Ronald R. Ball

Ronald R. Ball
City Attorney for City of Carlsbad and General Counsel for Carlsbad Redevelopment Agency

CALIFORNIA ISO
2011/2012 TRANSMISSION PLAN

COMMENTS OF THE STAFF OF THE

CALIFORNIA PUBLIC UTILITIES COMMISSION

ON DECEMBER 8, 2011 PRESENTATION MATERIALS AND DISCUSSION

*** * * * * * ***

December 22, 2011

Introduction

The Staff of the California Public Utilities Commission ("CPUC Staff") appreciate this opportunity to provide comments on the California Independent System Operator's ("ISO") 2011-2012 Transmission Planning Process (TPP) study results presented at the December 8, 2011 stakeholder meeting. These results clearly represent a large volume of work reflecting the magnitude of California's energy goals and challenges as well as the ISO's considerable efforts. CPUC Staff especially welcome the ISO's focus on several 33% RPS cases (alternative renewable resource portfolios) provided from the CPUC's Long Term Procurement Plan ("LTPP") proceeding, including informative and perhaps unprecedented transmission analysis of a distributed renewable generation scenario representing an alternative path of considerable interest for reaching energy goals.

The extent and detail of studies and information presented in a 296-slide presentation on December 8 make it impossible to fully assess and comment by the time comments are due. Therefore, CPUC Staff expect to continue to review and discuss these studies leading to a 2011-2012 Transmission Plan, beyond the current comment deadline. We both request and expect that there will be additional opportunities to clarify and comment, especially regarding the draft Transmission Plan to be produced in early 2012.

The areas addressed by CPUC Staff comments are as follows:

1. There should be a fuller description of base case transmission and its status.

2. Reliability study assumptions should be clarified regarding generator dispatch and other aspects of "high stress" conditions.

3. Assumptions underlying RPS deliverability studies and the differences from reliability/powerflow studies need to be more fully explained.

4. Assumptions regarding wind and PV generator characteristics and implications of these assumptions should be more fully explained.

5. The OTC study methodology and results should be clarified, and the "Summer 2021 Supply and Demand Outlook" should be treated as separate from OTC studies and reconciled with state agency (including LTPP) planning assumptions.

6. The ISO should clarify certain implications of the economic studies.

1. There Should be a Fuller Description of Base Case Transmission and Its Status

Slide 5 of the December 8 presentation "*Policy Driven Base Case and Study Assumptions"* lists new transmission "in executed LGIA[s]" included in the Base Case. In the draft Transmission Plan to be posted in early 2012 the CAISO should identify these LGIAs including resource type, location and MW associated with each of the LGIA transmission additions listed on slide 5, as well as the additional capacity on these transmission additions beyond capacity required by LGIAs. Several of the transmission additions listed on slide 5 were included in the 2010-2011 Transmission Plan as "LGIP network transmission" supporting renewable energy goals but not yet permitted, including Pisgah-Lugo 500 kV, West of Devers upgrades, Borden-Gregg reconductoring, Carrizo-Midway reconductoring, South of Contra Costa (is this still a reconductoring?), and Coolwater-Lugo 230 kV; the CAISO should identify if the assumed configuration and capacity of any of these additions/upgrades has changed from what was identified in the 2010-2011 Transmission Plan. We would also like to confirm that Base Case transmission upgrades/additions do not include any part of the upgrades/additions identified in the "GIPP_TPP_Phase_2_List" document published in August, 2011, i.e., (1) "Lugo – Mohave 500kV line looped into Pisgah 500kV substation, add series cap banks on Nipton – Pisgah 500kV line and Mohave – Pisgah 500kV line" (2) "New Red Bluff – Valley 500kV line" and (3) "New Red Bluff – Colorado River No. 3 500kV line."

Slide 6 from the above-noted December 8 presentation indicates that the Base Case also includes "Firm transmission upgrades in other areas to interconnect and deliver renewable generation in 33% RPS portfolios"— identified as Path 42 (IID –SCE), and IID Imperial Valley (IID –SDGE). The CAISO should identify the endpoints, voltage, capacity, ownership and approval/development status of these other transmission additions in the Base Case.

The CAISO's December 8 presentation includes transmission line flow plots indicating low projected 8760 hours per year utilization of several transmission additions included in the Base Case but not yet permitted. These additions include Pisgah-Lugo 500 kV lines 1 and 2 with projected utilization of 9-10% for the Base and Trajectory resource cases, and only 6-7% for the Environmental and Time-Constrained resource cases. Projected utilization of the West-of-Devers reconductoring is only 8% under the Environmental and Time-constrained cases, and 11-18% across the other cases. It should be clarified whether (as we assume) this represents utilization of the *marginal* capacity increase due to reconductoring, as opposed the existing plus added capacity. Additionally, projected utilization of the Coolwater-Lugo 230 kV addition is about 15% for four of five cases, including the Base Case. The above low levels of projected utilization under the planning cases calls into question whether the above transmission additions will be needed or economic, at least in their assumed configurations, particularly if developments move significantly if not fully towards a more distributed renewable energy future such as represented by the Environmentally Constrained resource case. This question should be left open for further assessment in the next planning cycle.

2. Reliability Study Assumptions Should be Clarified Regarding Generator Dispatch and Other Aspects of "High Stress" Conditions

It was stated and also displayed (particularly in slide 14 of the above-referenced December 8 presentation) that development of reliability studies used production cost simulation results as a "reference" for stressed patterns, without particular attention to backing down OTC units, and with application of engineering judgment based on historical data and local reliability requirements. Beyond this, it is important to provide more specific quantitative information regarding what generator dispatch and imports were assumed for "high stress" peak and off-peak conditions including clarification of

how these assumptions compare with particular production simulation hourly results used as a "reference", and also enabling a comparison with historical conditions and with conditions assumed or modeled in other studies such as deliverability and renewables integration studies.

More generally, various renewables development scenarios and other planning uncertainties lead to a range of possible system operating conditions very different from historical experience. Thus, fuller explanation of what conditions particularly regarding generator dispatch are being assumed for reliability and other studies is essential. In its TPP comments on April 21, 2011 CPUC Staff similarly asked for such reliability/deliverability study clarification at the outset of the ISO's 2011-2012 TPP studies.

More specific questions regarding modeling of intermittent renewables in reliability/power flow studies are as follows. First, CPUC Staff requests more detailed description of the off-peak cases that lead to a number of modeled reliability issues at mostly lower-voltage transmission especially under the Environmentally Constrained case. Did these modeled off-peak conditions in fact represent realistic weekend mid-day combinations of low loads plus high solar generation, and what specific level of distributed PV output (relative to Pmax) was assumed? (Or, did these studies represent other conditions, and what were those conditions?) More generally: what levels of wind and solar output (relative to Pmax) were assumed for both the on-peak and off-peak reliability studies, and what underlying set of wind and solar profiles did this emerge from, including source and year for the profiles, as well as geographical granularity and number of separate profiles used statewide and in individual reliability study areas?

Continuing with specific questions regarding the reliability studies, CPUC Staff call attention to slide 15 of the above-referenced December 8 presentation, showing "new renewable output" for peak and off-peak reliability studies under the different RPS resource cases. We wish to confirm whether "new renewable output" represents the new renewable generation additions summing to the roughly 54,000 GWh of net short additions being modeled. For the Environmentally Constrained case in particular, why is the renewable output so much higher off-peak vs. on-peak (17650 MW vs. 9748 MW),

and what explains the magnitude of modeled Path 66 (COI) off-peak flow reversal to more than 1000 MW in the S-N direction? An improved understanding and appreciation of study results would be better achieved with fuller disclosure and explanation of dispatch/import assumptions, and of what the modeled peak and off-peak "stress" conditions intuitively represent.

A high-DG case will continue to be an important, informative part of future transmission and resource planning. The ISO's draft Transmission Plan should include or be accompanied by deeper explanation of how simulated reliability issues were driven by particular aspects of the Environmentally Constrained (high DG) case such as generator locations and sizes, as well as their output levels coincident with particular system load, imports and conventional generator dispatch (including local area requirements). Combined with other DG-relevant information such as the evolving status of DG procurement, interconnection and development, this could constructively inform the next iteration of RPS resource cases, consistent with the intent that transmission and resource planning mutually inform one another.

Finally, with regard to the reliability/power flow studies, CPUC Staff request clarification regarding whether modeling DG as interconnecting at transmission buses such as at 60-115 kV has the potential to overstate transmission impacts in some situations if DG output would in reality be absorbed by nearby loads at distribution voltages to a greater extent than is being captured. We do understand that the CAISO's methodology would automatically net DG output with loads being modeled as interconnecting at the *same* transmission bus, and that there might also be "real world" distribution system impacts not modeled in CAISO studies. However, it would be valuable to obtain clarification on the question of whether local loads have the potential to mute DG impacts on transmission beyond what is being modeled.

3. Assumptions Underlying RPS Deliverability Studies, and the Differences from Reliability/Powerflow Studies, Need to be More Fully Explained

The December 8 stakeholder meeting presentation on "*Policy Driven Planning Deliverability Assessment Assumptions*" states that the RPS deliverability assessment was performed for the base resource portfolio and that generation dispatch and imports

differed from those assumed for power flow [presumably reliability] studies, but that Base Case transmission and loads remained the same. It would be very helpful for the ISO to explain more specifically and quantitatively how and why the dispatch and import assumptions for RPS deliverability studies differed from those assumed in the reliability study, and what situation (for deliverability) this intuitively represents. If non-renewable resources were assumed to be dispatched at the most recent NQC level as stated, this would appear to produce potential excess dispatch when combined with renewable resource additions, and this should be clarified. It should be clarified whether assuming wind and solar output at 50% (low level) and 20% (high level) exceedance during "summer peak load hours"[1] refers to determining this exeedance level for all hours used to calculate resource NQC, or only for the load hour(s) used to model deliverability. Furthermore, these exceedance levels appear to give substantially higher wind and solar output levels than would NQCs based on 70% exceedance, and the ISO should confirm whether this is in fact the case, and if so should explain why this does not produce an overly conservative deliverability assessment.

For the SCE area RPS deliverability studies, it is unclear and should be clarified if the stated "1500 target MIC for imports from IID"[2] (slide 4 of the SCE deliverability results presentation) is determined to be met by (1) existing transmission or (2) existing transmission plus upgrades assumed in the Base Case including upgrades assumed to occur in the IID area.

While the ISO's tariff assigns a central role to a single "base" case, the different RPS resource cases studied all have unique and informative roles within resource planning and also provide important insights for robust transmission planning beyond what is provided by a single base case. The Environmentally Constrained case emphasizing distributed renewable generation provides especially important perspective

---

[1] On slide 6 of the December 8 presentation *Policy Driven Planning Deliverability Assessment Assumptions & SCE's Results.*

[2] On slide 4 of the December 8 presentation *Policy Driven Planning Deliverability Assessment Assumptions & SCE's Results* d

in this regard. Assessment of the deliverability needs and benefits of this or similar distributed resource cases will be essential going forward.

The December 8 presentations of RPS deliverability studies included various sensitivity studies for the SCE, SDG&E and PG&E areas, with these sensitivities being identified as "minimum OTC generation initially dispatched" (SCE area), "sensitivity study – OTC retirement" (SDG&E area), and "OTC sensitivity study" (PG&E area). The rationale for these sensitivities appears to be to decrease assumed "snapshot" (instantaneous power flow) generation at OTC unit sites in the coastal areas thus requiring more imports to the coastal areas. There should be a clearer explanation of the OTC sensitivities, such as a side-by-side tabular comparison of what generation was assumed to be in place and how it was modeled to be dispatched, for the base versus OTC sensitivity deliverability studies. This is another example of where fuller and more explicit disclosure of the dispatch assumptions used for deliverability (or reliability) studies would clarify the methodology and help stakeholders appreciate the significance of the results.

4. Assumptions Regarding Wind and PV Generator Characteristics, and Implications of These Assumptions, Should be More Fully Explained

Slide 9 of the December 8 presentation "*Policy Driven Planning Base Cases & Study Assumptions*" states that the dynamic characteristics of new renewable generators were modeled based on "representative GIP study data if an equivalent resource could be matched," and beyond this, via use of "generic model and data" including Type 3 for wind generators and Type 4 for solar PV.

The ISO should clarify and explain (1) the extent of power factor/reactive power control as well as curtailment capability that is attributed to the types of wind and solar generators being assumed, (2) the assumed aggregate makeup (with regard to these capabilities) of the wind and PV generation fleet under the different RPS resource cases after assignment of both "representative GIP study" and "generic" characteristics, and (3) the implications of this fleet makeup for ability to provide amounts of power factor/reactive power control and renewable generation curtailment needed to mitigate

the various modeled thermal overload and voltage issues identified in the reliability studies.

5. The OTC Study Methodology and Results Should be Clarified, and the "Summer 2012 Supply and Demand Outlook" Should be Treated as Separate from OTC Studies and Reconciled with State Agency (Including LTPP) Planning Assumptions

Regarding the OTC plant studies portion (slides 1-16) of the December 8 presentation *"Once-Through Cooling & AB 1318 Study Results"*, the ISO should clarify:

- whether "OTC Gen Needs" on slides 12 and 14 refers to generation calculated to be needed at existing OTC plant locations and/or electrically equivalent generation – including a description of the area assumed to be electrically equivalent;

- whether this includes total generation at OTC sites, including any generation that has already been repowered or replaced at those sites;

- whether OTC need was calculated via peak and off-peak power flow studies in which existing OTC generation was assumed to still be in place, but then was progressively turned down or off and replaced by increased imports until violations occurred, or if not, what other study approach was used;

- whether the important "bottom line" results regarding OTC plant (or electrically equivalent generation) need are represented by the MW ranges in the rows labeled "LA Basin-OTC Range (slide 12) and "Western LA OTC Range" (slide 14);

- whether these ranges are based on the characteristics of the present generators at OTC sites rather than of new replacement generation, and how use of the latter would influence results;

- what are the corresponding OTC need ranges for the other areas identified in slide 12 (Big Creek/Ventura, Western LA as a subset of LA Basin, and San Diego);

- the magnitude of "OTC need" in the Ellis substation area under the sensitivity assessment , and whether this specifically requires generation at the Huntington Beach power plant site, or where else needed generation could be located;

- how retaining OTC generation, despite retirement dates established by the State Water Resources Control board, is in compliance with

the state's OTC policy, or if OTC units were used as a proxy for new generation then how the OTC unit characteristics compare with both Combined and Simple Cycle Gas Turbines;

- for slide 13, what amount of additional CHP was assumed under the sensitivity case versus the ISO's base case OTC studies; and
- how much demand response was assumed to be located in the different OTC areas studied, under the base and sensitivity OTC study cases.

Beyond the above, CPUC Staff have several concerns regarding the "Preliminary Summer 2012 Supply & Demand Outlook" tables included as slides 17-20 in the OTC/AB 1318 Study Results portion of the ISO's December 8 presentation. First, these tables and the issues they represent are *separate* from OTC and AB 1318 studies and issues, and this should be made clear. Second, the CAISO should clarify why the report tables are based on the Trajectory and Time Constrained cases (RPS portfolios), especially since the Transmission Planning Process (TPP) base resource case (based on the CPUC's Cost-Constrained RPS case) and Environmentally Constrained case represent the most prominent and contrasting cases for purposes of the CAISO's overall TPP studies utilizing CPUC-provided RPS resource cases. Presenting all four scenarios would provide a more complete and comprehensive picture.

Third, CPUC Staff have several concerns with the divergence of assumptions underlying the Supply and Demand tables (slides 17-20) from resource planning assumptions developed in state agency (CPUC and CEC) processes including the LTPP process. Several of those concerns are summarized below, focusing on the ISO's slides 17 and 18 which are based on the Trajectory resource portfolio. In the following discussion, all procurement planning numbers are drawn from the 2010 LTPP standardized planning assumptions.[3]

Existing Generation

The 2012 NQC values shown on the ISO's slides 17 and 18 are about 2000 MW lower than the 2011 NQC values utilized in the LTPP. While this is a departure from the

[3] http://www.cpuc.ca.gov/PUC/energy/Procurement/LTPP/LTPP2010/2010+LTPP+Tools+and+Spreadsheets.htm

LTPP values, the approach appears consistent with the methodology utilized in the LTPP. However, the ISO should identify the source of profiles used to compute NQC for future wind and solar generation.

Retirements

OTC units totaling 12079 MW were assumed retired in the 2010 LTPP, approximately 3000 MW more than the "potential retirements" shown in the ISO's December 8 presentation. An additional 1300 MW of non-OTC retirements were identified in the 2010 LTPP.

Fossil Additions

Fossil additions totaling 7555 MW are identified in the 2010 LTPP, whereas slide 17 has 6056 MW. CPUC Staff are aware that there have been some project changes, and limited double counting of a few resources, but there is a discrepancy of nearly 1500 MW between the LTPP additions and those identified in the ISO's presentation. The CAISO should clearly identify the changes made and the justifications for the changes including MW for each facility.

Net Interchange

CPUC Staff notes that ISO-wide and NP26 historical net interchange levels shown in the ISO's tables are substantially lower than the RA values shown in the tables, whereas for SP26 the ISO's table values are substantially higher than the RA values. These discrepancies require further explanation.

DR & Interruptible Programs

The ISO presentation identifies 2,581 MW of demand response and interruptible programs. The 2010 LTPP planning assumptions give 5,145 MW. This reflects a 50% decrease in the values associated with demand response programs, relative to the LTPP values. Unlike some of the above-noted discrepancies that may reflect evolution of events and information since the 2010 LTPP, this derating of demand response and interruptible programs reflects a significant departure from the 2010 LTPP assumptions.

Demand Forecasts

The Demand Forecasts presented are correct in that they reflect the 2010-2020 California Energy Demand forecasts for 1-in-10 and 1-in-2 load (ISO slides 17 and 18 respectively). However, they do not include many demand side reductions included for LTPP and other purposes, such as energy efficiency programs in the uncommitted period or incremental demand-side combined heat and power (CHP). This totals an increase in demand of 6506 MW, i.e., 819 from the CHP forecast in the 2010 LTPP and 5687 MW from energy efficiency. However, CPUC Staff does note that the forecast discrepancy appears to be only approximately 4000 MW, not the full 6500 MW.

Summary

Collectively the above differences call into question the ISO December 8 presentation's assertion on slide 21 that the entire ISO BAA is in need of additional new generation under 1-in-10 stressed conditions. The 2010 LTPP identified a CAISO-wide reserve margin that was 40% in excess of a 17% planning reserve margin in 2020. This resource capacity remains above the 17% planning reserve margin even with 4000 MW higher load under a 1-in-10 demand forecast. While CPUC Staff is aware than a 1-in-10, N-1, G-1 criterion is utilized for local area reliability, the application of a 1-in-10 combined with the 15-17% PRM, without including any incremental demand-side load reduction measures presents an overly conservative assessment of conditions in California.

6. The ISO Should Clarify Certain Implications of the Economic Studies

The finding that upgrades to Path 26 are not economically justified but may need to be reassessed considering the future impact of Whirlwind (Tehachapi area) substation upgrades on Path 26 should be clarified, e.g., what is this potential future impact and how would it be assessed? The ISO's December 8 presentations stated in several instances that potential Midway-Gregg-Tesla transmission upgrades are complex, large and require additional information, and so will be studied in the 2012-2013 Plan cycle. However, potential transmission additions in the Delany-Colorado River, Inyo and Greater Bay

areas were stated to also require further study without specific reference to the 2012-2013 Plan cycle. CPUC Staff request clarification whether the ISO intends to conduct further studies of the latter three areas in the coming month as part of the 2011-2012 Plan cycle for inclusion in the draft Transmission Plan to be released early in 2012, or how these three areas will otherwise be studied and how the results will be posted.

Potential Imperial Valley 500 kV transmission requested for study in the 2011-2012 Plan cycle was found to not be economic. CPUC Staff request clarification of whether this transmission addition was proposed for RPS policy purposes, how the economic benefits were calculated, and if such transmission was found to not be economic because it was not needed to deliver RPS resources in the different RPS resource cases and/or if it was found to not be economic for other reasons.

The 8760-hour production simulation studies of economic congestion indicated dump energy for renewables in the Pisgah area only under the Trajectory (RPS resource) case. CPUC Staff request clarification whether that dump energy occurred during the peak load hours for which resource adequacy and deliverability are assessed, and whether the alternative solution "open up Pisgah-Cima and Pisgah-Eldorado 230 kV lines" could be appropriate if the Trajectory case renewable amounts actually develop in this area and if congestion occurs only for a few hours per year.

Contacts:

Keith White, kwh@cpuc.ca.gov
Nat Skinner, nws@cpuc.ca.gov

DECLARATION OF SERVICE

I, Robin Noschy, declare that on, 1.9.2012, I served and filed copies of the attached Motion for Official Notice of CPUC Comments dated 1.9.2012. The original document, filed with the Docket Unit or the Chief Counsel, as required by the applicable regulation, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: **[www.energy.ca.gov/sitingcases/carlsbad/ index.html]**.

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(Check all that Apply)

For service to all other parties:

X Served electronically to all e-mail addresses on the Proof of Service list;

____ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked "hard copy required."

AND

For filing with the Docket Unit at the Energy Commission:

X by sending an original paper copy and one electronic copy, mailed with the U.S. Postal Service with first class postage thereon fully prepaid and e-mailed respectively, to the address below (preferred method); ***OR***

____ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 07-AFC-6
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

X Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
mlevy@energy.state.ca.us

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Robin Noschy

*indicates change

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE *CARLSBAD ENERGY CENTER PROJECT*

Docket No. 07-AFC-6
PROOF OF SERVICE
(Revised 11/29/2011)

APPLICANT
Jennifer Hein
George Piantka, PE.
NRG Energy, Inc., West Region
5790 Fleet Street, Ste. 200
Carlsbad, CA 92008
jennifer.hein@nrgenergy.com
george.piantka@nrgenergy.com

APPLICANT'S CONSULTANTS
Robert Mason, Project Manager
CH2M Hill, Inc.
6 Hutton Centre Drive, Ste. 700
Santa Ana, CA 92707
Robert.Mason@ch2m.com

Megan Sebra
CH2M Hill, Inc.
2485 Natomas Park Drive, Ste. 600
Sacramento, CA 95833
Megan.Sebra@ch2m.com

COUNSEL FOR APPLICANT
John A. McKinsey
Stoel Rives, LLP
500 Capitol Mall, Suite 1600
Sacramento, CA 95814
jamckinsey@stoel.com

INTERESTED AGENCIES
California ISO
e-recipient@caiso.com

INTERVENORS
Terramar Association
Kerry Siekmann & Catherine Miller
5239 El Arbol
Carlsbad, CA 92008
siekmann1@att.net

City of Carlsbad
South Carlsbad Coastal
Redevelopment Agency
Allan J. Thompson
21 "C" Orinda Way #314
Orinda, CA 94563
allanori@comcast.net

City of Carlsbad
South Carlsbad Coastal
Redevelopment Agency
Joseph Garuba,
Municipals Project Manager
Ronald R. Ball, Esq., City Attorney
1200 Carlsbad Village Drive
Carlsbad, CA 92008
Joe.Garuba@carlsbadca.gov
ron.ball@carlsbadca.gov

California Unions for Reliable Energy (CURE)
Marc D. Joseph
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080
gsmith@adamsbroadwell.com
mdjoseph@adamsbroadwell.com

Center for Biological Diversity
c/o William B. Rostov
EARTH JUSTICE
426 17th Street, 5th Floor
Oakland, CA 94612
wrostov@earthjustice.org

Power of Vision
Julie Baker & Arnold Roe, Ph.D.
4213 Sunnyhill Drive
Carlsbad, California 92013
julbaker@pacbell.net
roe@ucla.edu

Rob Simpson
Environmental Consultant
27126 Grandview Avenue
Hayward, CA 94542
rob@redwoodrob.com

April Rose Sommer
Attorney for Rob Simpson
P.O. Box 6937
Moraga, CA 94570
aprilsommerlaw@yahoo.com

ENERGY COMMISSION – DECISIONMAKERS
JAMES D. BOYD
Vice Chair and Presiding Member
jboyd@energy.state.ca.us

KAREN DOUGLAS
Commissioner and Associate Member
kldougla@energy.state.ca.us

Galen Lemei
Adviser to Commissioner Douglas
glemei@energy.state.ca.us

Tim Olson
Adviser to Vice Chair Boyd
tolson@energy.state.ca.us

Paul Kramer
Hearing Officer
pkramer@energy.state.ca.us

ENERGY COMMISSION STAFF
Mike Monasmith
Siting Project Manager
mmonasmi@energy.state.ca.us

Dick Ratliff
Staff Counsel
dratliff@energy.state.ca.us

ENERGY COMMISSION – PUBLIC ADVISER
Jennifer Jennings
Public Adviser's Office
publicadviser@energy.state.ca.us

*indicates change