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BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

Petition to Amend The Carlsbad Energy Center	Docket Number 07-AFC-06C

INTERVENOR ROBERT SARVEY'S COMMENTS ON THE PMPD

Introduction

CEC Chairman Robert Weisenmiller stated at the Pio Pico adoption hearing: ***"Now, we would not build peakers to replace San Onofre, you know, at all. This is not -- it is total apples and oranges."***[1] And yet that is exactly what the PMPD proposes to do build the dirtiest generation available, peakers, to replace San Onofre. The amendment is proposed to replace the environmentally superior no project alternative the licensed fast start combined cycle CECP utilizing R2C2 technology. The applicant, the CEC Staff,[2] and even CAISO[3] all agreed in 2012

[1] Chairman Weisemiller Wednesday September 12, 2012 Business Meeting Transcript of the Page 58 0f 127 Lines 8-12 www.energy.ca.gov/business_meetings/2012_transcripts/2012-09-12_transcript.pdf

[2] Exhibit 252 TN # 203953 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 2** Page 93 of 409 Lines 23-25 and Page 94 of 409 Lines 1-10 STAFF Witness WilliamWalters "in comparing this plant the other types of plants that would need essentially the roles of this plant, which is either peak or mid-merit plant, other designs could be LM6000 peaking turbines or the more efficient LM100 peaking turbines. And their efficiencies are 10,930 respectively, again quite a bit higher than 7200 BTU per kilowatt hour"

[3] Exhibit 253 TN # 203954 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 225 of 502 Lines 11-23 Witness McIntosh CAISO

11 HEARING OFFICER KRAMER: One more quick
12 follow-up.
13 In your eyes, as the system operator, is this
14 turbine machine and equipment equivalent, as far as
15 performance goes, with the older LM6000s and LS100s?
16 MR. McINTOSH: No. It's a superior machine to
17 those.
18 HEARING OFFICER KRAMER: In which ways?
19 MR. McINTOSH: Its fast-start capability, its
20 ramping capability. And I'm not sure about the heat
21 rates, but this is a very efficient unit; and all the new
22 combined cycles and the gas turbines have much better heat

that the new R2C2 technology was superior to the LMS-100 technology proposed for the ACECP. Applicants witness called the R2C2 technology "*revolutionary and ground breaking,*"[4] "*significantly more efficient than the LMS-100.*"[5] *The CECP "will provide support for extreme load conditions, such as summer peaks and emergencies, again****, through its rapid-start capability"***[6] Applicant witnesses stated the R2C2 technology *will reduce system-wide greenhouse gas emissions and will support the goals and policies of AB 32, and it will do so through its efficient design and* ***quick-start capability****."*[7] The applicants witness testified the *,"CECP "Improves San Diego electrical system reliability through* ***fast starting generating technology, creating a rapid responding resource*** *for peak demand situations and providing a dependable resource to backup less reliable renewal resources like wind generation."*[8] Further the applicant hired gun testified "*CECP's efficient design is combined with the efficiency benefits comparable to a conventional combined-cycle power plant and combines that efficiency with* ***quick-start performance of simple-cycle plants*** *resulting in the ability to provide daily cycling if necessary without the need to run overnight*." [9] The applicant's alternatives testimony stated that the licensed CECP, *"Improves San Diego electrical system reliability through* ***fast starting generating technology, creating a rapid responding resource*** *for peak demand situations and providing a dependable resource to backup less reliable renewal resources like wind generation."*[10] Applicant witness Theaker stated that the licensed CECP could meet ISO's projected substantial deficiency in flexible ramping capacity.[11] The applicants project description for the licensed CECP states, "*This unprecedented balancing of two typically opposed needs,*

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23 rates than the old LM6000 machines.

[4] **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 120 of 502 Lines 3-11

[5] Exhibit 253 TN # 203954 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 120 of 502 Lines 18-21 Witness Gary Rubenstein

[6] Exhibit 253 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** **Page 124 of 502 Lines 22-24**

[7] Exhibit 253 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** **Page 126 Lines 12-16**

[8] Exhibit 214 **Licensed CECP Exhibit 214 -- Application for Certification, Alternatives Section, 9/11/2007** **Page 2 of 12**

[9] Exhibit 253 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** **Page 124 of 502 Line 24,25 and Page 125 Lines 1-5**

[10] Exhibit 214 **Licensed CECP Exhibit 214 -- Application for Certification, Alternatives Section, 9/11/2007** **Page 2 of 12**

[11] 07-AFC-06 Transcript of 12-12-2011 Evidentiary hearing Page 85 of 350 Lines 14-17 Witness Theaker www.energy.ca.gov/sitingcases/carlsbad/documents/2011-12-12_Transcript.pdf

14 Yeah. The significance is that
15 the -- the ISO projects a substantial deficiency of flexible
16 ramping capability. CECP could meet it. These peakers
17 could meet it. Sutter could --

peaking power versus combined-cycle efficiency, makes CECP an invaluable and important contribution to power generation in California."[12]

The Final Commission Decision issued by the CEC in 2012 agreed and found that the licensed, *"CECP is environmentally preferable to other alternatives, including the "PPA Alternatives which* included the Pio Pico project which utilized the LMS-100 units proposed for the ACECP.[13] The 2012 decision found that the licensed CECP with its R2C2 technology was environmentally superior to the LMS-100 technology utilized by Pio Pico and the ACECP because the LMS -100 technology is, "*less efficient than CECP, and would have higher criteria pollutant emissions and GHG emissions per MW/hr than CECP*."[14]

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[12] 2007 AFC Project description page 1 of 51
www.energy.ca.gov/sitingcases/carlsbad/documents/applicant/afc/CECP_Volume%201/CECP_002_ProjDesc.pdf
[13] Exhibit 2012 CEC Final Commission Decision Licensed CECP page 51 of 582 FOF #12
[14] Exhibit 3002 TN # 203721 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification** page 51 of 582 FOF #10[14] Exhibit 253 TN # 203954 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 120 of 502 Lines 3-11 Witness Gary Rubenstein
"What is revolutionary and ground breaking is the integration of these components and a plant control system that is able to decouple the start up and warm up time of the combustion turbine from the time required to heat the heat recovery steam generator and the steam turbine. This enables the plant to generate 150 megawatts of power, electrical output from each independent train within ten minutes of pushing the start button; something that no combined cycle plant in California can do today."
[14] Exhibit 6011 and 6012 Applicant paid license fee of $281,903.76 CEC Consultant Fees alone were $543,175.60
[14] Exhibit 253 TN # 203954 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 120 of 502 Lines 18-21 Witness Gary Rubenstein "Advanced simple-cycle gas turbines, such as the LM6000 and LMS100, again, turbines that this Commission is quite familiar with, are significantly less efficient than CECP."
[14] Exhibit 252 TN # 203953 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 2** Page 93 of 409 Lines 23-25 and Page 94 of 409 Lines 1-10 STAFF Witness WilliamWalters
"in comparing this plant the other types of plants that would need essentially the roles of this plant, which is either peak or mid-merit plant, other designs could be LM6000 peaking turbines or the more efficient LM100 peaking turbines. And their efficiencies are 10,930 respectively, again quite a bit higher than 7200 BTU per kilowatt hour"
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20 ramping capability. And I'm not sure about the heat
21 rates, but this is a very efficient unit; and all the new
22 combined cycles and the gas turbines have much better heat
23 rates than the old LM6000 machines.
[14] Exhibit 3002 2012 Final Commission Decision. page 51 of 582 FOF #12

Now a couple of years later according to the same applicant witnesses the LMS-100 is the superior machine for grid reliability. There is no substantial evidence[15] in this record of this proceeding outside of speculation on the licensed CECP's projects operational profile which would refute the testimony of the witnesses in the 2012 proceeding or the findings of fact 10 and 12 in the alternatives section of the 2012 decision.

The PMPD fails to establish the required findings specific to an amendment. The PMPD has not found that the licensed CECP is infeasible and the licensed CECP has no significant CEQA related significant visual environmental impacts that require an override therefore the Commission cannot certify the amendment.

REQUIRED FINDINGS SPECIFIC TO AN AMENDMENT

In addition to the findings necessary to approve an initial power plant license, two additional findings are required in order to approve an amendment to a license. First the change in the project will be beneficial to the public, applicant, or intervenors. Second, "There has been a substantial change in circumstances since the original approval justifying the change or that the change is based on information which was not known and could not have been known with the exercise of reasonable diligence prior to the original approval." The PMPD fails to make either finding.

The amendment provides no benefit to the public

The public is not well served by this amendment because as the evidence shows the output of the ACECP will cost substantially more per MWh than the output from the CECP

[15] The California courts have defined "substantial evidence" to mean evidence of "ponderable legal significance," that is "reasonable in nature, credible, and of solid value such that a reasonable mind might accept it as adequate to support a conclusion." It is not synonymous with "any evidence." Thus, an agency decision will not be upheld if it relies on evidence which is "devoid of evidentiary support" or "contrary to facts [which] are universally accepted as true." Nor will an agency finding which relies solely on uncorroborated hearsay meet the substantial evidence test. The "in light of the whole record" language, "means that the court reviewing the agency's decision cannot just isolate the evidence supporting the findings and call it a day, thereby disregarding other relevant evidence in the record." Instead, it is the court's responsibility to consider all of the relevant evidence which necessarily "involves some weighing of the evidence to fairly estimate its worth."

leading to higher rates for SDG&E's ratepayers. SDG&E ratepayers are already suffering the highest rates in the state higher rates than any IOU or POU in the State of California.

Electric bills differ

A survey of electricity providers, comparing October 2014 bills at different usage levels, found that the private companies charge more than municipal utilities.

	2,000 kWh	1,000 kWh	500 kWh	200 kWh
Edison	$542.99	$255.06	$97.34	$30.63
PG&E	598.05	263.86	93.11	31.50
SDG&E	723.11	311.71	116.42	34.84
Private average	**621.38**	**276.88**	**102.29**	**32.32**
Los Angeles	$344.92	$167.56	$78.88	$29.87
Sacramento	311.33	136.03	58.30	30.52
Anaheim	379.86	182.31	83.54	29.14
Burbank	347.67	162.66	75.87	29.25
Glendale	340.86	160.70	74.01	32.94
Pasadena	396.12	195.99	88.04	33.78
Riverside	363.57	171.55	81.23	39.86
Azusa	339.71	167.67	81.65	31.68
Banning	508.63	212.42	99.80	37.81
Colton	450.79	188.01	72.71	19.58
Imperial Irrigation Dist.	250.34	127.02	65.36	28.37
Vernon	179.17	91.10	47.07	20.65
Public average	**351.08**	**163.59**	**75.54**	**30.29**

Sources: Survey by Southern California Public Power Authority, San Diego Union-Tribune Los Angeles Times

Exhibit 217 is the 2009 California Energy Commission, Comparative Costs of CA Central Station Electricity Generation report. The report provides estimates of the average levelized cost for both advanced simple cylce plants and advanced combined cycle gas plants. The report estimated the levelized cost of GE LMS-100 gas turbine for an in-service date of 2018 which coincides with the in service date of the amended CECP. The per MWh cost of the LMS-100 was estimated to be $431.66 MW/h. The 2009 report estimates the per MW/h cost of an advanced combined cycle plant like the CECP to be $158.99 MW/h.

Further evidence in the proceeding corroborates the high per MWh cost for the ACECP.[16] Carlsbad Energy has a 20 year contract with SDG&E for the output of the amended CECP.[17] According to SDG&E's July 2014 bill insert the capital cost of the PPTA will be 2.6 billion dollars over 20 years.[18] This would amount to an average of 130 million dollars a year in capacity payments. CEC staff has estimated the amended CECP has a 6% capacity factor so the project will produce 322,700 MW a year approximately. That would mean that each MW

[16] Exhibit 6002 Footnote 26 Page 7,8
[17] Exhibit 6002 Footnote 26 Page 7,8
[18] Exhibit 6002 Footnote 26 Page 7,8

produced would have a capital cost of approximately $412.[19] The PPTA with SDG&E also requires SDG&E to provide the natural gas and shoulder the GHG compliance costs.

The ACECP has a major operating constraint that affects its benefit to the public as it is not allowed to operate between midnight and 6 AM due to the settlement agreement with the City of Carlsbad and NRG. Even though the project has no significant noise impacts the City of Carlsbad has insisted that the project not operate between midnight and 6 AM. The CECP has no such operating restriction. As the evidence shows at least 20 MW of generation will be needed in the Carlsbad area before the Carlsbad Desalination Project comes on line and that load is currently served by the Encina plant.[20] The Carlsbad desalination plant has a 30 MW load around the clock load by itself.[21] The ACECP will not be available to serve that 50 MW load between midnight and 6 AM forcing plants outside the local area to provide the needed power leading to line losses and the possibility off a less efficient plant to be brought online to serve the overnight load. The limitation on operation between midnight and 6 AM also prevents the ACECP from providing the needed generation to help mitigate the degradation of deliverability of renewable wind generation in the Imperial Valley between midnight and 6 AM.

The amendment also impacts the rate paying public as Carlsbad Energy to date has shifted the cost of amendment proceeding onto ratepayers. Ratepayers and shareholders of SDG&E are further impacted by the transfer of the North Coast Service center and donation of the acreage it's located on and several other valuable ocean front properties to the City of Carlsbad.[22]

The ACECP will lead to more criteria pollutants and GHG emissions per MWh than the CECP so once again the public is blessed with additional pollution and the ratepayers are stuck with higher GHG compliance costs from this amendment.

The amendment does not benefit the applicant.

The applicant currently holds a license for a fast start highly efficient combined cycle plant. The applicant must now go through another expensive siting process that really is not

[19] Exhibit 6002 Footnote 26 Page 7,8

[20] Exhibit 3002 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification** **Page 502 of 583**

[21] ID

[22] Exhibit 1001 **PT 2 Petition to Amend Carlsbad Energy Center** **Page 28 of 397**

necessary except for the opposition of the City of Carlsbad. The applicant must now provide up to 22.5 million dollars to relocate the North Coat Service Center so the City of Carlsbad can have that site.[23] **I**n the event that ACECP becomes commercially operable and the Encina Power Station continues to operate, NRG will pay the City (on a monthly basis), a liquidated damages payment equal to $l/kW-mo. multiplied by the greater of (a) the generating capacity of the Unit or Units (in MW) remaining online past the Final Shutdown Date or (b) 300 MW.[24] NRG has also been impacted by a fossil fuel deed restriction which prevents any other generation uses on the Encina site owned by NRG.[25] If the North Coast Service Center is not relocated NRG shall be obligated to pay the City of Carlsbad the sum of $10 million ($10,000,000).[26] Clearly the applicant is better off constructing the CECP which is already licensed. Neither the 600 MW ACECP nor the 558 MW CECP has been able to obtain a PPA.

Intervenors do not benefit

The amendment did not benefit the intervenors in any way. Previous intervenors Terramar, Power of Vision, and Rob Simpson worked countless hours to improve the original CECP license and had their time thrown in the wastebasket as the project was never built. The intervenors spent countless hours in this amendment proceeding interrupting their lives and unlike the applicant, CEC Staff, and Commissioners were not compensated for their time and spent money out of their own pockets to participate. No intervenors supported the construction of six LMS-100 turbines at the project site.

Changes in the project location are not a public benefit.

The PMPD claims that the changes in project location outlined above help further the goal of the City of Carlsbad to free up portions of the EPS site west of the railroad for redevelopment to non-power plant uses. The amended project is located in the same area as the licensed CECP. Presumably if there had been a change in the projects location a new AFC would be required. The amended project also has a larger footprint than the licensed CECP.

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[23] Exhibit 1001 **PT 2 Petition to Amend Carlsbad Energy Center** Page 29 of 397
[24] Exhibit 1001 **PT 2 Petition to Amend Carlsbad Energy Center** Page 24 of 397
[25] Exhibit 1001 **PT 2 Petition to Amend Carlsbad Energy Center** **Page 26 of 397**
[26] Exhibit 1001 **PT 2 Petition to Amend Carlsbad Energy Center** **Page 30 of 397**

The ACECP footprint expands to the south, increasing the project site from 23 to 30 acres.[27] The evidence shows that the ACECP will make less land available for redevelopment of non-power plant uses.

Reduced Water Use is not a public benefit because the CECP and the ACECP use almost the same amount of water per MWh

Next the PMPD claims a benefit allegedly because the ACECP, "reduces the total amount of water used by the power plant, and specifically eliminates the use of ocean water." The evidence in the proceeding does not support this claim in the PMPD. The CEC Final Staff Assessment compares the water use of the CECP and the ACECP in Soil and Water Resources Table 3 below. A review of the table demonstrates that the water use between the two configurations is negligible.

[27] PMPD Page 3-2

Soil & Water Resources Table 3
Licensed vs. Amended CECP Features Impacting Soil and Water Resources

Feature	Licensed CECP (558 MW)	Amended CECP (632 MW)
Power production	Two one-on-one combined cycle units	Six simple-cycle combustion gas turbine generators with intercoolers
Annual capacity factor	Up to 47% (4,100 of 8,760 possible hours)	Estimated 31% (approximately 2,700 operating hours)
Project footprint	Approximately 23 acres	Approximately 30 acres
Water source for operations and wastewater discharge	Recycled water (tertiary-treated) with discharge to sewer system; or (if recycled water is unavailable) purified ocean water with discharge to existing EPS discharge channel	Recycled water (tertiary-treated) with process wastewater treated onsite using demineralizer system (no industrial wastewater discharge)
Demand for potable water	19 acre-feet per year	Three acre-feet per year
Demand for recycled water	517 acre-feet per year	215 acre-feet per year
Amount of wastewater	187 acre-feet per year	Less than 11 acre-feet per year
Area of temporary construction laydown	Ten acres	19 acres
Site preparation	Demolish above-ground fuel oil storage Tanks 5, 6, and 7	Demolish above-ground fuel oil storage Tanks 1, 2, 4, 5, 6, and 7
Encina Power Station	Retire units 1-3	Retire units 1-5 and demolish all above-ground structures
Length of construction	25 months (from site preparation to CECP plant begin operation)	64 months (from site preparation to EPS plant demolition to ground level)
Off-site linear facilities	The amended project includes a new recycled water line approximately 3,700 feet long.	

Source: CEC2012a, LL2014d, LL2014b

As table 3 reflects the CECP is estimated to use 517 acre feet a year and discharge 187 acre-feet per year to the Carlsbad municipal sewer system. The 187 acre-feet per year can then be recycled again from the Carlsbad sanitary sewer system[28] so the net use by the CECP is only 330 acre-feet a year. The ACECP will use 215 afy and will discharge 11 acre-feet a year back into the Carlsbad sewer system for a net use of 204 acre-feet a year. When you consider that the CECP water use is estimated on a 47% capacity factor and the ACECP water use is estimated on an annual capacity factor of 31% the water use per MWh is negligible. The evidence in the proceeding does not support the PMPD's claim that the ACECP will use substailly less water than the CECP in light of entire record of the proceeding.

Regardless the decision for the licensed CECP found no significant impact from the water use of the CECP. As stated in the 2012 Decision on page 7.2-14, *"The Conditions of*

[28] Exhibit 3002 2012 Final Commission Decision Page 7.2-3

Certification, below, are adequate to ensure that construction and operation of the CECP will comply with LORS and will not create significant adverse impacts to the matters addressed in the technical discipline of Soils and Water Resources."[29]

The ACECP uses more water for Construction than the CECP.

According to the 2012 decision on the licensed CECP, "*The licensed CECP would use, "An estimated 87 acre-feet would be used for dust control, 0.10 acre-feet for equipment washing and 0.4 acre-feet for hydrostatic testing.*"[30] The evidence in this amendment proceeding demonstrates that, "*The amended CECP proposes to use approximately 142.5 acre-feet of water for construction; 116.3 acre-feet of the total would be potable water and 26.2 would be recycled water."*[31] In terms of construction the ACECP uses more water than the CECP construction. This does not include the 300 acre feet of water needed for the EPS demolition as the demolition water use will occur under either project.

Ocean Water Use will cease with the retirement of the EPS and the potential CECP ocean water use would not be a significant impact.

The PMPD claims that the ACECP will, "specifically eliminate the use of ocean water." NRG has committed to the State Water Board that the Encina Plant will shut down on November 1, 2017. The City of Carlsbad has indicated that recycled water will be available for the ACECP operations and presumably now for the CECP. Regardless the 2012 Decision concludes that, "*Even if one assumes the shutdown of EPS units 4 and 5, there is no evidence that the small desalination unit's use of OTC water would have a significant cumulative impact. The City, in its EIR for the Carlsbad Seawater Desalination Project (CSDP), concluded that there would be no significant impact for using 304 mgd of OTC intake water for that project. CECP will use a maximum of 4.3 mgd, and the evidence indicates that this use will likewise not be cumulatively significant."*[32] The licensed CECP also has two potential sources of cooling water recycled water from the City of Carlsbad and desalinated ocean water. This is certainly a reliability benefit considering power plants that now are seeking to amend their projects since they have no water source like the Mariposa Project and the Tracy Combined Cycle Project.

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[29] Exhibit 3002 **Commission Decision** **CARLSBAD ENERGY CENTER PROJECT Page 7.2-14**
[30] Exhibit 3002 2012 CECP decision page 7.2-7 **Commission Decision**
[31] Exhibit 2000 Page 4.10-15
[32] Exhibit 3002 2012 CECP decision page 7.2-10 **Commission Decision**

Changes to the City of Carlsbad LORS are not a benefit of the amendment.

The PMPD touts as another benefit of the amendment, "*changes to the zoning and other land use regulations by the City of Carlsbad also eliminate almost all but one of the inconsistencies between the proposed amended project and those LORS. The remaining inconsistency is with the Agua Hedionda Land Use Plan's 35-foot height limitation."* The changes to the zoning and land use regulations are legislative acts made by the City of Carlsbad in their agreement with NRG they are not the result of the amendment. The licensed CECP was consistent with the City of Carlsbad LORS until the city changed them in an attempt to prevent the licensing of the CECP The inconsistencies that the CECP had with the City of Carlsbad LORS were created by the City on October 2011, when the City of Carlsbad amended its General Plan, the Agua Hedionda Land Use Plan applicable to the CECP site, and the zoning ordinance. Those enactments rendered the proposed CECP inconsistent with the City of Carlsbad's land use LORS.

Even with the City's land use changes the ACECP still requires a LORS override. The PMPD also fails to override the Coastal Act which does not allow visual degradation at the project site.

The Efficiency of the ACECP compared to the EPS is not relevant as the EPS is not the subject of the amendment and the evidence shows the CECP is more efficient over all operating scenarios compared to the ACECP.

The PMPD then states, *"The amended project would improve the overall thermal efficiency of the power plant due to the higher efficiency of the six new General Electric LMS100 gas turbines compared to the existing EPS boilers and gas turbine. This, along with an improved emission control system for the new gas turbines, leads to a reduction in emissions of most pollutants emitted per unit of electricity produced. The ACECP also features peaking capabilities that allow increased use of renewable resources."* The PMPD attempts to manufacture a public benefit when none exists. The amendment application is not an application to amend the Encina Power Plant it is an application to amend the licensed CECP. The evidence in the record shows that the CECP is more efficient than the ACECP. The 2007 FSA states that

the licensed, "CECP would have a net heat rate as low as 7,147 Btu/kWh and an estimated annual GHG performance factor of 0.405 MTCO2/MWh.[33] Staff's FSA testimony for the amended CECP predicts that the net heat rate for the entire year for the amended CECP is expected to be 9,473 Btu/kWh with an annual GHG performance factor of .503 MTCO2/MWh. [34] Actual performance of near identical units now in service in Southern California confirm Staff's performance expectations. NRG's Walnut Creek Energy Center utilizes 5 LMS-100 turbines in simple cycle mode an almost identical plant to the amended CECP. For 2013 the average heat rate for the Walnut Creek Energy Center was 9.6735 MM/Btu approximately 36 percent efficiency.[35] NRG also owns and operates the new El Segundo Project which utilizes the R2C2 technology (Siemens Rapid Response Combined Cycle technology) proposed for the licensed CECP. The average heat rate for the El Segundo facility for 2013 was 8.2119 MM/Btu. The El Segundo Plant achieved an average heat rate approximately 17 % better than the Walnut Creek Energy Center in actual operation.[36]

The testimony from the licensed CECP also does not support any contentions that the LMS-100 turbines are as efficient as the R2C2 technology. In 2012 CEC Staff witness Walters testified that, "*The new plant (Licensed CECP) will be somewhere around 7200 BTUs for kilowatt hour in the hierarchy value basis. Also in comparing this plant the other types of plants that would need essentially the roles of this plant, which is peak or mid-merit plant, other designs could be LM6000 peaking turbines or the more efficient LM100 peaking turbines. And their efficiencies are 10,930 respectively, again quite a bit higher than7200 BTU per kilowatt hour.*"[37] In the licensed CECP preceding the applicants witness Rubenstein testified that, "*Advanced simple-cycle gas turbines, such as the LM6000 and LMS100, again, turbines that this Commission is quite familiar with, are significantly less efficient than CECP.*"[38]

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[33] Exhibit 200 **Licensed CECP Exhibit 200 -- Commission Staff Final Staff Assessment, docketed 11/12/09** Page 141 of 839
[34] Exhibit 2000 **CECP Amendment, Final Staff Assessment** Page 173 of 111
[35]Exhibit 6002 **Alternatives-Rebuttal Testimony of Robert Sarvey** Page 6
http://www.energyalmanac.ca.gov/electricity/web_qfer/Heat_Rates.php 2013 CEC QFER heat rates.
[36]Exhibit 6002 **Alternatives-Rebuttal Testimony of Robert Sarvey** Page 6
http://www.energyalmanac.ca.gov/electricity/web_qfer/Heat_Rates.php
[37] Exhibit 252 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 2** Page 93 of 409 Lines 23-25 and Page 94 of 409 Lines 1-10 Walters
[38] Exhibit 253 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 120 of 502 Lines 18-21 Rubenstein

The ACECP emits more criteria pollutants than the CECP

The PMPD's contention that the ACECP would, "*lead to a reduction in emissions of most pollutants emitted per unit of electricity produced"* is another misleading statement that should be eliminated from the PMPD. While it may be true that the ACECP would emit less pollution than the Encina Plant it is not the Encina Plant that is the subject of the amendment. The CECP is the project that is being amended and its criteria pollutant emissions per MWh are substantially less than the ACECP's emissions. The ACECP will emit 34% more NOx emissions per MWh than the CECP.[39] The ACECP also will emit 43% more VOC emissions per MWh than the CECP.[40] In the 2007 proceeding CEC Staff witness Will Walters compared the emission from the licensed CECP project to three proposed peaking projects with PPA's. One of the peaking projects was the Pio Pico Project which utilized identical turbines to the amended Carlsbad proposal. Mr. Walters stated, "*Yes. I compared the emissions of the CECP project and the three PPA projects, both on a pound per megawatt-hour basis and a permitted basis and found that the PPA projects would admit more criteria pollutants per megawatt hour with the exception of carbon monoxide for all of the PPA projects, and that the permitted basis for the PPA projects had higher annual emissions than CECP. Also the greenhouse gas emissions for CECP are lower, due to the fact that it's more efficient use of natural gas than the other three projects.*[41] The evidence does not support the PMPD's assertions.

The ACECP has a significant impact to visual resources that is the subject of an override the CECP was found to have no significant impacts to visual resources.

The PMPD states that, "The ACECP would result in beneficial visual impacts at several public view locations due to the removal of the existing EPS during Phase IV of the construction schedule. The CECP final decision provides for removal of the Encina Power Plant. As stated in the CECP decision, "*conditions **LAND-2** and **LAND-3**, which require that the project owner commence planning and preparation for the removal of the Encina structures and redevelopment of the site, will increase the likelihood that those activities can begin as soon as the shutdown of the final units is authorized and funding for the demolition activities is obtained.*"[42] Demolition

[39] Exhibit 2000 **CECP Amendment, Final Staff Assessment** Page 137 of 1111

[41] 07-AFC-06 RT 12-12-2011 Page 24 of 350 Lines 12-21

[42] Exhibit 3002 2012 CECP decision **Commission Decision** **Page 9-4**

of existing Encina Project was fully litigated in the previous proceeding resulting in a condition of certification that required NRG to develop a closure plan in the CECP decision.[43]

The final decision for the CECP does not find that there are any significant visual impacts to visual resources from the construction and operation of the CECP. Conclusion of Law 2 in the visual resources section of the decision states, "*Construction and operation of the Carlsbad Energy Center Project will not cause any unmitigatable significant direct, indirect, or cumulative visual impacts."*[44] In contrast the PMPD for the ACECP does find visual impacts from the ACECP which require an override. As stated in the visual resources section of the PMPD, "*Due to a change in the design of the project slopes inside the lowered area of the project site which reduces the potential width of the eastern visual screening area, a significant cumulative impact may occur if it is not possible to provide adequate visual screening of the project after Caltrans completes its I-5 widening project."*[45] The PMPD's conclusion that the ACECP is a visual benefit over the CECP is not supported by the evidence the 2012 decision on the CECP or even the PMPD itself.

Project Description Changed Circumstances

There is no evidence that the ACECP conforms to current electrical needs or that it is a biter replacement for SONGS.

The PMPD states without any corroborating evidence that, *"The purpose of the proposed changes in this PTA is to make the CECP conform to current electrical energy needs for fast-response peaking generation and to better respond to the unanticipated and unprecedented retirement of the San Onofre Nuclear Generating Station [SONGS]."* There is no evidence in the record of this proceeding that the CECP does not conform to current electrical energy needs for fast-response generation or that the ACECP is needed to better respond to the unanticipated and unprecedented retirement of the San Onofre Nuclear Generating Station. CAISO would have been the appropriate witness to provide that testimony and yet CAISO made no such

[43] Exhibit 3002 2012 CECP decision **Commission Decision** **Page 9-4**
"conditions **LAND-2** and **LAND-3**, which require that the project owner commence planning and preparation for the removal of the Encina structures and redevelopment of the site, will increase the likelihood that those activities can begin as soon as the shutdown of the final units is authorized and funding for the demolition activities is obtained."

[44] Exhibit 3002 2012 CECP decision page 8.5-53 **Commission Decision**

[45] ACECP PMPD Page 8.5-12 Finding of Fact # 5

assertions in the proceeding despite being called as a witness. In 2011 Mr. Macintosh of CAISO testified when asked by Mr. Kramer, ***those.*** *"In your eyes, as the system operator is this turbine machine and equipment equivalent, as far as performance goes, with the older LM6000s and LS100s?* MR. McINTOSH replied: "***No. It's a superior machine to Its fast-start capability, its ramping capability.***"[46] Other than statements by the applicant there is no evidence that grid conditions have changed since the CECP was licensed in 2012 or that the ACECP would be a better replacement for SONGS generation. Renewable integration issues existed in 2011 and they exist now. As detailed above applicant, staff, and CAISO all testified that the R2C2 technology was ideal for integrating renewables and superior to the LMS-100 for grid operations.

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The ACECP design is an inferior design to the CECP.

Next the PMPD manufactures more changed circumstances to merit approval of the ACECP. The PMPD states, "*something that could not be anticipated, changing circumstances created an opportunity for cooperation with the City of Carlsbad. The result of that cooperation was an agreement between the City of Carlsbad and the Project Owner that allows for a much improved design that also includes full shut down of EPS Units 1 through 5.*" First the amended CECP is not an improved design. The ACECP is inferior in terms of GHG emissions, criteria pollutant emissions and cost per MWh[47] compared to the licensed CECP. The full shutdown of the Encina Project is required by the States OTC policies and NRG has committed to the State Water Board that it intends to retire the Encina Plant on November 1, 2017 regardless of whether the ACECP or CECP is constructed.[48] Demolition of existing Encina Project was fully litigated in the previous proceeding resulting in a condition of certification that required NRG to develop a closure plan in the CECP decision.[49]

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[46] Exhibit 253 TN # 203954 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 225 of 502 Lines 11-23

[47] Exhibit 6002 Page 7,8

[48] Exhibit 4007 Page 20 of 38 Footnote 17 "Carlsbad Energy Center claims that Encina has reached the end of its useful life, and states that the capital improvement planning and maintenance plans for Encina are predicated on retirement by December 31, 2017. (Carlsbad Energy Center opening brief, at 18; Ex. 3 at 8-9.)"

[49] [49]Exhibit 3002 2012 CECP decision page 7.2-10 **Commission Decision** **Page 9-4**
"conditions **LAND-2** and **LAND-3**, which require that the project owner commence planning and preparation for the removal of the Encina

The PMPD then makes a conclusion not supported by the record in this proceeding. The PMPD states that, *"In addition, changes in the electricity market favor simple-cycle, rather than combined-cycle generating units to further the integration of renewable energy sources into the system and support system reliability, especially in light of the unexpected retirement of SONGS."* There is no evidence that the electricity market favors simple cycle generating units to further renewable integration of renewable energy. The record shows that SCE is electing to procure two combined cycle units totaling 1,284 MW and only 98 MW of peaking power from their 2013 RFO conducted to replace generation lost from San Onofre.[50] CAISO has not testified that the ACECP is superior for grid operations CAISO has not testified at all in this proceeding. The evidence shows that CAISO testified that the R2C2 technology was superior to the LMS-100 for grid operations**.**[51]

Alternatives

Reduced capacity alternative

The PMPD rejects the reduced capacity alternative based on the unsupported assertion that there are not sufficient preferred resources to meet any portion of the SDG&E's LCR need represented by the Carlsbad PPTA. The PMPD ignores substantial record evidence that demonstrates that there are preferred resources and energy storage from SDG&E's 2014 RFO that are available and can meet the LCR needs in the SDG&E service territory and reduce the need for the 633 MW Carlsbad peaking facility.[52] The record shows that SCE recently concluded its 2013 RFO and presented to the CPUC for approval signed contracts over 500 MW of preferred resources.[53] The contracts included 124 MW of energy efficiency with 102.5 MW

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structures and redevelopment of the site, will increase the likelihood that those activities can begin as soon as the shutdown of the final units is authorized and funding for the demolition activities is obtained."

[50] Exhibit 6005 Page 4, Exhibit 6002 page 4 of 14

[51] Exhibit 253 TN # 203954 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 225 of 502 Lines 11-23

[52] Exhibit 4007 **PROPOSED DECISION OF Administrative Law Judge YACKNIN** Page 22 of 38 "SDG&E's RFO has produced a robust number of offers for preferred resources and energy storage which could potentially meet some, if not all, of the 300 MW to 600 MW of SDG&E's LCR need that may be procured from any source. (Ex. 20.)" see also Exhibit 6002 **Alternatives-Rebuttal Testimony of Robert Sarvey** Page 4 0f 14, see also Exhibit 6007 **Public Version of San Diego Gas & Electric Company: ,**

[53] Exhibit 6002 **Alternatives-Rebuttal Testimony of Robert Sarvey** and Exhibit 6005 **Robert Sarvey's Submittal of Southern California Edison Company's (U 338-E) Application for Approval of the Results** A14-

of energy efficiency coming from the applicant in this proceeding NRG. SCE also signed contracts for 75 MW of demand response all with NRG.

The records shows that SDG&E's recent all source RFO produced so many preferred resource offers that the ALJ presiding over the approval of the amended CECP PPTA issued a proposed decision which stated *"Furthermore, SDG&E's RFO has produced a robust number of offers for preferred resources and energy storage which could potentially meet some, if not all, of the 300 MW to 600 MW of SDG&E's LCR need that may be procured from any source."*[54] SDG&E's 2014All Source RFO[55] and SCE's application before the CPUC[56] demonstrate that large amounts of preferred resources are currently available in the SONGS service area.[57]

After reviewing the evidence from the evidentiary hearing CEC Staff agrees that the large amounts of available energy storage and renewable energy could even eliminate the need for the Carlsbad facility*, "Energy storage, as Mr. Sarvey points out, is a very good resource for providing a -- resource for providing a lot of those services and, in fact, solving some of the problems that variable generation creates. I think -- and he very well may be right that it will ultimately prove to supplant the need for Carlsbad to meet that very specific procurement authorization."*[58]

It is unfathomable in the light of overwhelming record evidence of available storage and preferred resources that the PMPD denies the existence of preferred resources and storage that **will,** not may, lower the need for the natural gas fired generation represented by the 633 MW CECP. The PMPD is right the electrical system is changing rapidly but the PMPD is wrong about how it is changing. Preferred resources and storage are now available which are reducing the need for natural gas fired generation not creating a need for new underutilized peaking facilities.

No Project Alternative

11-012 Southern California Edison Company's Application for approval of the results of its 2013 Local Capacity Requirements Request for offers for the Western Los Angeles Basin.

[54] Exhibit 4007 TN # 203789 **PROPOSED DECISION OF Administrative Law Judge YACKNIN** A. 14-07-009 Finding of Fact Number 7 page 35 of 37

[55] Exhibit 6007 **Public Version of San Diego Gas & Electric Company:**

[56] [56] Exhibit 6005 TN # 203877 **Robert Sarvey's Submittal of Southern California Edison Company's (U 338-E) Application for Approval of the Results** Page 5 of 16

[57] Exhibit 6002 **Alternatives-Rebuttal Testimony of Robert Sarvey** and Exhibit 6005 A14-11-012 Southern California Edison Company's Application for approval of the results of its 2013 Local Capacity Requirements Request for offers for the Western Los Angeles Basin. Exhibit 6007 **Public Version of San Diego Gas & Electric Company: ,**

[58] **Transcript of April 2, 2015 Evidentiary Hearing Page 172 Lines 8 -14**

The PMPD eliminates the no project alternative for several reasons. First the PMPD states that the CECP would not**, "**retire all of the EPS boilers." Retirement of the Encina Boilers will occur on November 1, 2017 with or without the ACECP. Circumstances have changed since the 2012 decision that the PMPD fails to account for. In the 2012 proceeding the project applicant intended to use the Track 2 compliance method for units 4 and 5 and retire units 1-3 upon commercial operation of the CECP. On November 7, 2013 Cabrillo Power owners of the EPS committed to retire all of the EPS boilers 1-5 by the compliance date November 1, 2017. As Cabrillo Power stated in the November 7, 2013 letter to the State Water Board:

> Cabrillo continues to pursue Track 1 compliance for Units 1, 2, and 3. Cabrillo intends to achieve Track 1 compliance through the California Energy Commission (CEC) approved license for the Carlsbad Energy Center Project (CECP) (Docket 07-AFC-06)(Decision). The CECP entails the retirement of steam boiler Units 1, 2 and 3 and the construction of 558 megawatts (MW) of air-cooled combined cycle electrical generation at the EPS site. Units 1, 2, and 3 would retire when the new generation comes online, or by December 31, 2017 – the current Policy compliance deadline for EPS. Cabrillo also plans to retire Units 4 and 5 by Policy compliance deadline.

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The PMPD needs to recognize Cabrillo Power is now committed to shut down all of the EPS Boilers with or without the CECP. Those are changed circumstances which the PMPD fails to recognize.

Next the PMPD claims that**, "**California's energy marketplace does not appear to be choosing the option of the CECP approved in 2012." The evidence in the proceeding is that the City of Carlsbad is making the technology choice. SCE chose 1,284 MW of fast start combined cycles and only 96 MW of peaking units in their 2013 RFO to replace OTC generation retirement.[60]

Next the PMPD states**, "***While advanced combined-cycle turbines can start relatively quickly (within approximately 12 minutes to reach 100 percent rated capacity of the gas turbine generator), they may need as much as two hours to reach full combined cycle output (combined output of gas turbine and steam turbine generator). While operating in simple cycle mode (while waiting for the steam system to warm up), fast-start combined-cycle units will have efficiencies that are no better than, and are likely worse than, those achieved with advanced simple-cycle*

[59] www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/powerplants/encina/docs/encina_2013.pdf Page1

[60] Exhibit 6005

turbines such as the GE LMS100. Further, such units cannot perform up to four starts per day, as required for the amended CECP project, without substantially shortening the life of the unit."

The PMPD's conclusion that the licensed CECP starts to slow, is less efficient than the ACECP during startup and cannot perform 4 starts a day for the project is not supported by substantial evidence in the proceeding, Public Resources Code Section 21082.2 provides that substantial evidence shall include "facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts." The statute further provides that "argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly inaccurate or erroneous, or evidence of social or economic impacts which do not contribute to, or are not caused by, physical impacts on the environment, is not substantial evidence." There is substantial evidence already in the proceeding that the licensed CECP can in fact start fast, ramp fast, and is more efficient in all operating modes than the amended CECP. The applicant provides absolutely no evidence that the licensed CECP would be required to start 4 times a day. The applicant, CEC Staff, CAISO, and the 2012 final commission decision on the licensed CECP raved about efficiency and the fast starting capabilities of the licensed CECP for 5 years. The PMPD's conclusions are incompatible with the evidence in the proceeding: Gary Rubenstein the applicants witness testified,

> "*CECP's efficient design is combined with the efficiency benefits comparable to a conventional combined-cycle power plant and combines that efficiency with* ***quick-start performance of simple-cycle plants*** *resulting in the ability to provide daily cycling if necessary without the need to run overnight*." [61]
>
> Carlsbad Energy's alternatives witness Gary Rubenstein was adamant about the licensed CECP fast start capabilities in the 2017 proceeding, *"What is revolutionary and ground breaking is the integration of these components and a plant control system that is able to decouple the start up and warm up time of the combustion turbine from the time required to heat the heat recovery steam generator and the steam turbine.* ***This enables the plant to generate 150 megawatts of power, electrical output from each independent train within ten minutes of pushing the start button.****"*[62]

[61] Exhibit 253 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3 Page 124 of 502 Line 24,25 and Page 125 Lines 1-5**

[62] Exhibit 253 TN # 203954 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 120 of 502 Lines 3-11

Applicant witness Gary Rubenstein testified that the licensed CECP *"facilitates the addition of renewable resources to the California grid by providing* ***efficient quick-response backup generation capability****".*[63]

The applicant's alternatives testimony stated that the licensed CECP, *"Improves San Diego electrical system reliability through* ***fast starting generating technology, creating a rapid responding resource*** *for peak demand situations and providing a dependable resource to backup less reliable renewal resources like wind generation."*[64]

Applicant's witness Gary Rubenstein testified that the licensed CECP's, "*project design meets several criteria in the greenhouse gas framework report for California's future gas-fired generation. First, it provides intermittent generation support, meaning it provides support for intermittent renewable resources, such as wind and solar,* ***with fast-start and rapid-ramping capability."***

Rubenstein further testified, *"The plant will provide grid operation support, in particular provide support for grid operations* ***through fast-start and rapid-ramping capability****, voltage regulation, spinning and non-spinning reserve."*[65]

Carlsbad Energy alternative witness Rubenstein testified that the licensed CECP *"will provide support for extreme load conditions, such as summer peaks and emergencies, again****, through its rapid-start capability"***[66]

Carlsbad Energy also testified that, *"finally taking into account the first two factors, CECP will reduce system-wide greenhouse gas emissions and will support the goals and policies of AB 32, and it will do so through its efficient design and* ***quick-start capability****."*[67]

Applicant witness Theaker stated that the licensed CECP could meet ISO's projected substantial deficiency in flexible ramping capacity. [68]

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[63] Exhibit 253 TN # 203954 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 121 of 502 Lines 17-24 Rubenstein

[64] Exhibit 214 **Licensed CECP Exhibit 214 -- Application for Certification, Alternatives Section, 9/11/2007 Page 2 of 12**

[65] Exhibit 253 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3 Page 124 0f 502 Lines 17-21**

[66] Exhibit 253 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3 Page 124 of 502 Lines 22-24**

[67] Exhibit 253 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3 Page 126 Lines 12-16**

[68] 07-AFC-06 Transcript of 12-12-2011 Evidentiary hearing Page 85 of 350 Lines 14-17 Witness Theaker www.energy.ca.gov/sitingcases/carlsbad/documents/2011-12-12_Transcript.pdf

14 Yeah. The significance is that
15 the -- the ISO projects a substantial deficiency of flexible
16 ramping capability. CECP could meet it. These peakers

> The project description for the licensed CECP states, "This unprecedented balancing of two typically opposed needs, peaking power versus combined-cycle efficiency, makes CECP an invaluable and important contribution to power generation in California."[69]

The PMPD's conclusion that the licensed CECP doesn't start fast enough for grid reliability and renewable integration is not very credible after reviewing the CAISO testimony from the CECP proceeding. In the CECP proceeding CAISO witness Macintosh was asked directly by the hearing officer Mr. Kramer to compare the licensed CECP technology to the LMS-100 for its grid performance.

> Mr. Macintosh of CAISO stated when asked by Mr. Kramer, *"In your eyes, as the system operator is this turbine machine and equipment equivalent, as far as performance goes, with the older LM6000s and LS100s?* MR. McINTOSH replied: "***No. It's a superior machine to those. Its fast-start capability, its ramping capability.*"** [70]

> CAISO's Mr. Peters confirmed that the licensed CECP has the generating characteristics to balance the Grid in the presence of 33 % renewables "*First, consistent with the testimony presented in this proceeding last January by the ISO witness Jim McIntosh on behalf of the CEC staff, the electric generating characteristics of the proposed* ***Carlsbad Energy Center will help the ISO balance the grid as the State of California works to meet its 33 percent renewables portfolio standard.***"[71]

> Mr. Peters of CAISO also stated that the grid needs facilities like the licensed CECP to maintain a balance between supply and load *"The Presiding Member's Proposed Decision correctly acknowledges that intermittent resources like wind and solar create large system ramps and dispatchable resources that can compensate for renewable intermittency will help the ISO maintain a balance between supply and load. To achieve its renewable goals,* ***California will need electric generating facilities such as the Carlsbad Energy Center****."*[72]

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17 could meet it. Sutter could --

[69] 2007 AFC Project description page 1 of 51
www.energy.ca.gov/sitingcases/carlsbad/documents/applicant/afc/CECP_Volume%201/CECP_002_ProjDesc.pdf

[70] Exhibit 253 TN # 203954 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 225 of 502 Lines 11-23

[71] 07-AFC-06 Committee Conference and Evidentiary Hearing Transcript 5-19-2011 Page 30 of 324 Lines 3-9
www.energy.ca.gov/sitingcases/carlsbad/documents/2011-05-19_Transcript.pdf

[72] 07-AFC-06 Committee Conference and Evidentiary Hearing Transcript 5-19-2011 Page 30 of 324 Lines 10-17
www.energy.ca.gov/sitingcases/carlsbad/documents/2011-05-19_Transcript.pdf

> Mr. Peters of CAISO also stated "*Finally, as the Presiding Member's Proposed Decision recognizes, the greater San Diego area requires a certain amount of local generation resources. The ISO assesses how much local generation is needed pursuant to the federal reliability standards under which we must plan our system operations. The proposed Carlsbad Energy Center would help ensure more reliable electric system in the San Diego area."*[73]

CEC Staff also testified in the 2007 licensing that the R2C2 technology was superior compared to the to the LMS-100 turbines proposed for the amended CECP:

> Staff witness Walters agreed with CAISO that the R2C2 technology would be superior to the LMS-100 stating "*in comparing this plant the other types of plants that would need essentially the roles of this plant, which is either peak or mid-merit plant, other designs could be LM6000 peaking turbines or the more efficient LM100 peaking turbines. And their efficiencies are 10,930 respectively, again quite a bit higher than 7200 BTU per kilowatt hour.*"[74]
>
> CEC Staff witness Mr. Khoshnashrab testified that the Siemens R2C2 technology "*has the speed of the traditional peaker with higher capacity and greater efficiency*."[75]
>
> Dr. Moore of the SDAPCD stated that the licensed CECP, " *Based on the number of hours of operation, it has certain features that are similar to peaking units that can start very rapidly as opposed to most baseload combined cycle turbines."*[76]

The 2012 Final Commission Decision on the licensed CECP based solely on the evidence in the record was in agreement with the testimony cited above:

> The 2012 Final Decision states the "*CECP is an intermediate or "mid-merit" facility that would provide* ***flexible, dispatchable, and fast start power.*** *(Ex. 222, p. 4.1-101.)"*[77]
>
> The 2012 decision also states that, *"The Siemens SCC6-5000F turbine generators employ Rapid Response Combined Cycle technology*

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[73] 07-AFC-06 Committee Conference and Evidentiary Hearing Transcript 5-19-2011 Page 31 of 324 Lines 6-13 www.energy.ca.gov/sitingcases/carlsbad/documents/2011-05-19_Transcript.pdf

[74] Exhibit 252 TN # 203953 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 2** Page 93 of 409 Lines 23-25 and Page 94 of 409 Lines 1-10 Walters

[75] Exhibit 252 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 2** Page 226 of 409 Lines 20-24

[76] Exhibit 252 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 2** Page 128 of 409

[77] 2012 Licensed CECP Final Decision Final Commission Decision. Page 143 of 582

(R2C2 technology), which ***combines the fast start capability of simple cycle gas turbine technology and the efficiency of combined cycle technology.***"[78]

Further the 2012 Decision states, *"Power-plants with the* ***operational flexibility of and offering the ancillary services provided by the CECP are needed by California to meet its renewable energy policy goals.****"*[79]

The 2012 Decision also provides "*The project will benefit the state's electrical system by* ***providing peaking power and base load services in the most efficient manner practicable.***" [80]

The 2012 decision on the licensed CECP states "*According to Applicant and Staff,* ***the quick ramp-up and base load capability of the CECP will allow it to compete favorably, run at high capacity, and replace less efficient power plants.****"*[81]

The PMPD claims that, "*While operating in* ***simple cycle mode*** *(while waiting for the steam system to warm up), fast-start combined cycle units will have efficiencies that are no better than, and are likely worse than, those achieved with advanced simple cycle turbines such as the LMS100.*" The evidence in the record simply does not support these claims.

The 2007 FSA states that the licensed, "CECP would have a net heat rate as low as 7,147 Btu/kWh and an estimated annual GHG performance factor of 0.405 MTCO2/MWh.[82] Staff's FSA testimony for the amended CECP predicts that the net heat rate for the entire year for the amended CECP is expected to be 9,473 Btu/kWh with an annual GHG performance factor of .503 MTCO2/MWh. [83] Actual performance of near identical units now in service in Southern California confirm Staff's performance expectations. NRG's Walnut Creek Energy Center utilizes 5 LMS-100 turbines in simple cycle mode an almost identical plant to the amended CECP. For 2013 the average heat rate for the Walnut Creek Energy Center was 9.6735 MM/Btu approximately 36 percent efficiency.[84] NRG also owns and operates the new El Segundo

[78] 2012 Licensed CECP Final Decision Final Commission Decision. Page 98 of 582
[79] 2012 Licensed CECP Final Decision Final Commission Decision. Page 148 of 582
[80] 2012 Licensed CECP Final Decision Final Commission Decision. Page 98 of 582
[81] 2012 Licensed CECP Final Decision Final Commission Decision. Page 97 of 582
[82] Exhibit 200 **Licensed CECP Exhibit 200 -- Commission Staff Final Staff Assessment, docketed 11/12/09** Page 141 of 839
[83] Exhibit 2000 **CECP Amendment, Final Staff Assessment** Page 173 of 111
[84] Exhibit 6002 **Alternatives-Rebuttal Testimony of Robert Sarvey** Page 6
http://www.energyalmanac.ca.gov/electricity/web_qfer/Heat_Rates.php 2013 CEC QFER heat rates.

Project which utilizes the R2C2 technology (Siemens Rapid Response Combined Cycle technology) proposed for the licensed CECP. The average heat rate for the El Segundo facility for 2013 was 8.2119 MM/Btu. The El Segundo Plant achieved an average heat rate approximately 17 % better than the Walnut Creek Energy Center in actual operation.[85]

The testimony from the licensed CECP also does not support any contentions that the LMS-100 turbines are as efficient as the R2C2 technology in any operating mode. In 2012 CEC Staff witness Walters testified that, "*The new plant (Licensed CECP) will be somewhere around 7200 BTUs for kilowatt hour in the hierarchy value basis. Also in comparing this plant the other types of plants that would need essentially the roles of this plant, which is peak or mid-merit plant, other designs could be LM6000 peaking turbines or the more efficient LM100 peaking turbines. And their efficiencies are 10,930 respectively, again quite a bit higher than7200 BTU per kilowatt hour.*"[86] In the licensed CECP preceding the applicants witness Rubenstein testified that, "*Advanced simple-cycle gas turbines, such as the LM6000 and LMS100, again, turbines that this Commission is quite familiar with, are significantly less efficient than CECP.*"[87]

Finally the PMPD claims that the licensed CECP cannot perform up to four starts per day as required for this project. First there is no evidence in the record other than unsubstantiated opinion of the applicant that the ACECP or the CECP will ever be required to start four times a day. The record demonstrates that the licensed CECP's air permit (FDOC) allows for more starts per day or annually for the licensed CECP than the amended CECP. The licensed CECP is permitted for 1,460 startup periods per year per turbine which is an average of 4 starts a day per turbine and a total of 2,920 starts per year for the project.[88] In comparison the amended CECP has a limit of 400 starts per turbine per year for an average of 1.10 starts per day per turbine a day and a total of 2,400 starts per year for the project. The licensed CECP has more daily and annual starts provided in its air permit.

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[85]Exhibit 6002 **Alternatives-Rebuttal Testimony of Robert Sarvey** Page 6
http://www.energyalmanac.ca.gov/electricity/web_qfer/Heat_Rates.php

[86] Exhibit 252 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 2** Page 93 of 409 Lines 23-25 and Page 94 of 409 Lines 1-10 Walters

[87] Exhibit 253 **Official Notice Document: 2010 CECP Evidentiary Hearing, Day 3** Page 120 of 502 Lines 18-21 Rubenstein

[88] Exhibit 201 Page 106 of 119 "Condition 47. For each combustion turbine, the number of startup periods occurring in each calendar year shall not exceed 1460. [Rules 1200 and 21]"

Outside of the licensed CECP having more flexibility to start in its air permit it is highly unlikely that the licensed CECP would be started four times a day. The most likely operational scenario for the licensed CECP is a 6X16 scenario. The CEC 2012 Decision and the Staff FSA both anticipate the licensed CECP to operate in a 6X16 scenario as the CECP will, "*operate in daily cycling duty (plant shutdown 8 hours). In this mode, the CECP will be able to reach full load and operate at a combined cycle efficiency of approximately 48 percent in about 45 minutes for a hot start and about 125 minutes for a cold start.*"[89] The 2007 Application for Certification confirms that, *"CECP will be primarily operated as an intermediate duty unit, on daily cycles especially during summer months, of higher system demands. There may be off-peak periods when the CECP will be shutdown due to lack of dispatch*."[90] The 2007 AFC estimates that the, *"number of startup and shutdown cycles is expected to range between zero and 300 per year per CTG."*[91] The 2009 FDOC for the licensed CECP states, "*The Applicant estimates that there will be 300 typical startups per turbine per year and 300 typical shutdowns per turbine per year.*"[92] The evidence from the 2007 licensing proceeding indicates that the licensed CECP would start less than 300 times per year.

In this proceeding the applicant and Staff witness would not offer an estimate of the number of starts for the licensed CECP. The only witness who evaluated the licensed CECP's estimated number of starts was Dr. Moore. Dr. Moore of the SDAPCD estimated 160 starts per year for the licensed CECP based on his review of the startups for the El Segundo Project[93] which employs the R2C2 technology. Dr. Moore stated that the El Segundo Project which employs the exact same configuration as the licensed CECP performed only 160 starts last year.

The applicant and staff provided no production simulation that would indicate that the licensed CECP would start four times a day. [94] There is a production simulation in the record by CAISO that simulates how the licensed CECP would perform in the absence of the Encina Units.[95] The production simulation is called "A Case of Local Capacity to Replace OTC

[89] 2012 licensed CEC Final Decision Final Commission Decision. Page 96 of 582
[90] 2007 AFC CECP Project description Section Page 33 of 51
www.energy.ca.gov/sitingcases/carlsbad/documents/applicant/afc/CECP_Volume%201/CECP_002_ProjDesc.pdf
[91] 2007 AFC CECP Project description Section Page 33 of 51
www.energy.ca.gov/sitingcases/carlsbad/documents/applicant/afc/CECP_Volume%201/CECP_002_ProjDesc.pdf
[92] Exhibit TN # 204017 **Licensed CECP Exhibit 201 -- SDAPCD's Final Determination of Compliance (FDOC), posted 8/4/09** 201 Page 11 of 119
[93] **Transcript of April 2, 2015 Evidentiary Hearing Page 75 of 283 Lines 15-17**
[94] **Transcript of April 2, 2015 Evidentiary Hearing Page 70 of 283 Lines 17-23**
[95] Exhibit 6009 TN # 203985 **Appendix F California ISO Renewable Integration Study**

Resources" which simulates the operation of a flexible 373 MW CCGT in SDG&E's service territory in the absence of Encina with SONGS still in operation.[96] The simulation estimated that the flexible 373 MW CCGT would have a capacity factor of 57.1%[97] and would perform an annual average of 19 starts.[98]

Exhibit 6009 also provides a production simulation which is based on systems operations in Southern California the absence of SONGS.[99] The simulation for SDG&E's service territory assumes operation of a 520 MW combined cycle plant in SDG&E's territory and four 100 MW combustion turbines similar to the Pio Pico project.[100] The new 520 MW combined cycle has an estimated capacity factor of 62.4% but no estimates of startup are provided. At a 62.4% capacity factor the new CCGT would spend a considerable time in baseload operation which would preclude multiple starts and stops a day.

The 2009 FDOC states, "The Applicant estimates that there will be 300 typical startups per turbine per year and 300 typical shutdowns per turbine per year.[101] CEC Staffs expert Mr. Walters testified during the December 12, 20111 evidentiary hearing on the licensed CECP, "*Well, again, I think I answered this question earlier. Number one, this project would – would be dispatched first, and therefore it would be -- the other projects would be dispatched with -- with -- with a different kind of frequency and probably have more short term operation, which would influence their efficiencies in -- in a more adverse way than this project."*[102]

Energy Resources

The evidence demonstrates that the amended CECP could create significant adverse impacts on energy resources if alternatives could reduce the project's use of fuel.[103] CEC staff did not conclude that there was a significant impact to energy resources in the FSA because the staff concluded that alternative resources were not available to meet the LCR needs in SDG&E's

[96] Exhibit 6009 TN # 203985 **Appendix F California ISO Renewable Integration Study** Pages 9-14 of 19
[97] Exhibit 6009 TN # 203985 **Appendix F California ISO Renewable Integration Study** Page 10 of 19
[98] Exhibit 6009 TN # 203985 **Appendix F California ISO Renewable Integration Study** Page 13 of 19
[99] Exhibit 6009 TN # 203985 **Appendix F California ISO Renewable Integration Study** Pages 16-19 of 20
[100] Exhibit 6009 TN # 203985 **Appendix F California ISO Renewable Integration Study** Page 16 of 20
[101] Exhibit 201 TN # 204017 **Licensed CECP Exhibit 201 -- SDAPCD's Final Determination of Compliance (FDOC), posted 8/4/09** Page 11 of 119
[102] 07-AFC-06 Transcript of 12-12-2011 Evidentiary hearing Page 176 of 350 Lines 8-14 Witness Walters www.energy.ca.gov/sitingcases/carlsbad/documents/2011-12-12_Transcript.pdf
[103] Exhibit 2000 **CECP Amendment, Final Staff Assessment Page 764 of 1111**

service territory.[104] It is clear that now that preferred resources and storage will make up a minimum of 300 MW of SDG&E's 800 MW's procurement authority.[105] The PMPD fails to recognize the significant impact that will occur should Carlsbad Energy construct a 633 MW peaking facility when there are preferred resources that are not only available but required by CPUC proposed decisions. The PMPD needs to include this significant impact in the override section or declare that the reduced capacity alternative as the environmentally preferred alternative.

The evidence also shows that the reduced capacity would also, "*reduce the visual impact of the site."*[106] Utilization of preferred resources for a portion of the capacity of the amended CECP would provide reductions in GHG emissions and also comply with the states loading order. CEC Staff agrees that the reduced capacity alternative in conjunction with preferred resources would lead to a reduction in GHG emissions.[107]

Override

The Commission may not certify a facility subject to an override under 20 CCR § 1755 (d) (1) unless it specifically finds (1) That specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the application proceeding. The no project alternative the CECP is certainly feasible as it already has a CEC license and can be constructed immediately. The no project alternative is also environmentally preferable as it requires no override of any CEQA related significant impacts on the environment.[108] The final decision for the CECP does not find that there are any significant visual impacts to visual resources from the construction and operation of the CECP. Conclusion of Law 2 in the visual resources section of the decision states, "*Construction and operation of the Carlsbad Energy Center Project will not cause any unmitigatable significant direct, indirect, or cumulative visual impacts."*[109]

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[104] Exhibit 2000 **CECP Amendment, Final Staff Assessment** **Page 765 of 1111**
[105] Exhibit 6007, 6002 Page 2,3, Exhibit 4007 Page 36 of 38 Finding of Fact Number 7
[106] **Transcript of April 2, 2015 Evidentiary Hearing** **Page 147 Of 283 Lines 9-16**
[107] **Transcript of April 2, 2015 Evidentiary Hearing** Page 113 of 283 Lines 19-22 "So basically if this were a smaller project, say, this was 400 megawatts and then the other 200 was renewables, wouldn't that be less GHGs? MR. VIDAVER: Yes"
[108] PMPD Override Finding of Fact Number 2 Page 9-8
[109] Exhibit 3002 2012 CECP decision page 8.5-53 **Commission Decision**

In contrast the PMPD for the ACECP does find visual impacts from the ACECP which require an override. As stated in the visual resources section of the PMPD, "*Due to a change in the design of the project slopes inside the lowered area of the project site which reduces the potential width of the eastern visual screening area, a significant cumulative impact may occur if it is not possible to provide adequate visual screening of the project after Caltrans completes its I-5 widening project."*[110]

Not only is the CECP feasible and environmentally preferred because it has no CEQA impacts it provides more public benefits than the ACECP as the record evidence provides. In override finding of fact number 3 (a) the PMPD finds as a public benefit, "The project will Provide 632 MW of generation in a subarea of the San Diego load area for which the CAISO has identified a need. The ACECP will no longer be providing 632 MW of generation it will now provide only 500 MW or less.[111] While the applicant attorney has provided unsworn statements and briefing indicating the Carlsbad Energy intends to construct six turbines and utilize one turbine on the sport market there is no sworn evidence in the proceeding to support that conclusion. The only sworn evidence on merchant generators operating a project in the spot market is provided by staff who testified that, *"It is not expected that developers of new capacity, such as the developer of the amended CECP facility, would bring a project to completion without a long-term PPA with a utility that would guarantee recovery of the investment of several hundred million dollars. Only one so-called "merchant plant" has been developed since the energy crisis (2000 – 2001) without a PPA, and the conditions that led to that merchant plant are specific to that one facility.* [112]

Further there is no Encina subarea in the San Diego load pocket any more as it has been eliminated by transmission solutions. The CECP as the no project alternative also provides 558 MW of peaking power and energy at a much lower cost than the ACECP on a per MW basis saving SDDG&E ratepayers substantial amounts of money lowering their electrical bills as explained above.[113] The evidence shows the output of the ACECP will cost substantially more per MWh than the output from the CECP leading to higher rates for SDG&E's ratepayers.

[110] ACECP PMPD Page 8.5-12 Finding of Fact # 5
[111] Exhibit 401
[112] Exhibit 2000 page 167 of 1111
[113] Exhibit 200 **Licensed CECP Exhibit 200 -- Commission Staff Final Staff Assessment, docketed 11/12/09**

Further the goals of the State's OTC policies by facilitating the closure of the EPS.

The CECP, the no project alternative, was also found in the 2012 decision to, *"Further the goals of the State's Once Through Cooling Policies by facilitating the closure of the Encina Power Station.*"[114] Circumstances have changed since the 2012 decision as now Cabrillo Power has committed to the State water Board that it intends to close all five Encina Units on November 1, 2017. *"Last year, NRG informed the State Water Board that it still plans to replace Units 1-3 with the Carlsbad Energy Center but it no longer intends to pursue Track 2 compliance options and will retire Units 4 and 5 no later than the final compliance date for Encina of December 31, 2017."*[115] The PMPD must recognize these changed circumstances.

Override finding of fact 3 c of the PMPD finds that the ACECP will, "Reduce the effects of climate change from GHG emissions by displacing generation from more GHG intensive resources when it is operated.'

The 2012 decision on the CECP (no project alternative) also concluded that the CECP will , *"Reduce the effects of climate change by supporting the integration of renewable energy resources into the electricity system and reducing, on average, the greenhouse gas emissions of the generating system."*[116] As discussed earlier the evidence in the record shows that the CECP will reduce the effects of climate change to a greater extent than the ACECP as it is more efficient under any operating scenario than the ACECP. No one has provided any evidence otherwise.

Override Finding of Fact 3 d. states that the ACECP will, "Reduce the effects of climate change by supporting the integration of renewable energy resources into the electricity system and reducing, on average, the greenhouse gas emissions of the generating system.

The evidence in the proceeding demonstrates that the CECP will also reduce the effects of climate change by integrating renewable resources into the system. The 2012 decision on the CECP concluded that, *"Intermittent renewable generation needs flexible, fast-ramping*

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[114] Exhibit 3002 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification Page 506 of 583**

[115] **Report of the Statewide Advisory Committee on Cooling Water Intake Structures March 2014 Page 7 of 12 www.swrcb.ca.gov/water_issues/programs/ocean/cwa316/saccwis/docs/saccwis_report_2014_approved.pdf**

[116] Exhibit 3002 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification Page 506 of 583**

dispatchable generation, such as the CECP, in order to be integrated effectively into the electricity system in quantities necessary to meet the State's Renewable Portfolio Standard."[117] Further the 2012 Decision on the CECP found that, *"The CECP's quick start and fast ramping capabilities will help integrate additional renewable generation into the electricity system, which is necessary to further reduce system GHG emissions from the electricity generation system."*[118]

The evidence also shows that the ACECP will not be available to integrate intermittent wind resources or other renewable resources between the hours of midnight and six AM. The CECP has no such restrictions. The ACECP will also not help with the degradation of the deliverability of renewable wind resources in the Imperial Valley from midnight to 6 AM.

Override finding of Fact 3 e. of the PMPD finds that the ACECP will, " Facilitate the redevelopment of the ocean-front portion of the EPS site and replace the existing generator with modern, efficient, less obtrusive generating units, placed below grade on the portion of the site that is furthest from the shoreline."

The 2012 decision also found that, "With the imposition of Conditions **LAND-2** and **LAND-3** requiring the planning and permitting (by the CECP project owner) and financing (by the redeveloper) of the eventual removal and redevelopment of the existing EPS power plant, the CECP serves a substantial, though not an extraordinary public purpose, as required under, the South Carlsbad Coastal Redevelopment Area Plan.[119]

The final decision for the CECP does not find that there are any significant visual impacts to visual resources from the construction and operation of the CECP. Conclusion of Law 2 in the visual resources section of the decision states, "*Construction and operation of the Carlsbad Energy Center Project will not cause any unmitigatable significant direct, indirect, or cumulative visual impacts."*[120]

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[117] Exhibit 3002 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification Page 149 of 583 GHG finding of Fact Number 12**

[118] Exhibit 3002 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification Page 149 of 583 GHG finding of Fact Number 13**

[119] Exhibit 3002 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification Page 505 of 583 Override finding of Fact Number 1 d.**

[120] Exhibit 3002 2012 CECP decision page 8.5-53 **Commission Decision**

In contrast the PMPD for the ACECP does find visual impacts from the ACECP which require an override. As stated in the visual resources section of the PMPD, "*Due to a change in the design of the project slopes inside the lowered area of the project site which reduces the potential width of the eastern visual screening area, a significant cumulative impact may occur if it is not possible to provide adequate visual screening of the project after Caltrans completes its I-5 widening project."*[121] The PMPD's conclusion that the ACECP is a visual benefit over the CECP is not supported by the evidence, the 2012 decision on the CECP, or even the PMPD itself.

The PMPD Override finding of fact 3 f. concludes that the ACECP will , "Reduce California's dependence on fossil fuels."

Because the CECP will be more efficient the CECP will reduce California's dependence on fossil fuel to greater extent than the ACECP another reason why the CECP is the superior environmental alternative.

PMPD Finding of fact 3 g. finds that the ACECP Reuse existing infrastructure for fuel delivery and transmission is a public benefit.

The 2012 decision for the CECP also finds that the CECP will "Reuse existing infrastructure for fuel delivery and transmission."[122]

PMPD finding of fact 3 h. finds that a public benefit occurs because the ACECP will, "Boost the local economy due to the purchase of major equipment, payroll, and supplies, and increased sales tax revenue. Additional indirect economic benefits, such as indirect employment, and induced employment, will result from these expenditures as well.

The 2012 Decision finds that the CECP will also, "Boost the economy due to the purchase of major equipment, payroll, and supplies, and increased sales tax revenue. Additional indirect economic benefits, such as indirect employment, and induced employment, will result from these expenditures as well."[123]

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[121] ACECP PMPD Page 8.5-12 Finding of Fact # 5

[122] Exhibit 3002 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification Page 506 of 583 Override finding of Fact Number 12**

[123] Exhibit 3002 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification Page 507 of 583 Override finding of Fact Number 5 (g)**

The PMPD finds that the ACECP will, " Provide construction jobs for an average and peak workforce of 95 and 279, respectively, and approximately 18 jobs during operations. Most of those positions will require highly trained workers.

The 2012 CECP decision found that the CECP provides greater jobs benefit than the ACECP as it will, *"Provide construction jobs for an average and peak workforce of 237 and 357, respectively, and approximately 140 jobs during operations. Most of those jobs will require highly trained workers."*[124] According to the 2012 decision the CECP provides 122 more jobs for operations and 78 more jobs during construction.

LORS Override

As the PMPD states on page 9-1, "The commission may not certify a facility contained in the application when it finds, pursuant to subdivision (d) of Section 25523, that the facility does not conform with any applicable state, local, or regional standards, ordinances, or laws, unless the commission determines that the facility is required for public convenience and necessity and that there are not more prudent and feasible means of achieving public convenience and necessity.

As the evidence provides and detailed above the no project alternative CECP is a more prudent and feasible means for achieving the pubic convenience and necessity. The CECP emits less GHG emissions, criteria pollutants, and hazardous air pollutants per MWh than the ACECP. The cost of the CECP generation to the rate paying public is much lower per MWh than the ACECP. The 2012 decision on the CECP found that the CECP has no CEQA impacts to visual resources or any CEQA related significant impacts. The 633 MW CECP could also not meet the project objective of PPTA since D. 15-01-051 rejected the 633MW project and associated PPTA for a smaller project. In light of the entire record of the proceeding it is conclusive that the CECP is the less expensive, environmentally preferred alternative.

Reduced Capacity alternative.

[124] Exhibit 3002 **May 31, 2012 Commission Decision approving the Carlsbad Energy Center Application for Certification Page 507 of 583 Override finding of Fact Number 5 (h)**

The impacts of the reduced capacity alternative and the ACECP are similar in many respects. The evidence demonstrates one significant difference between the reduced capacity alternative and the CECP. The evidence demonstrates that the amended CECP would create significant adverse impacts on energy resources if alternatives could reduce the project's use of fuel.[125] CEC staff did not conclude that there was a significant impact to energy resources in the FSA because the staff concluded that alternative resources were not available to meet the LCR needs in SDG&E's service territory.[126] D. 15-05-051 requires that SDG&E reduce the capacity of the Carlsbad PPTA to 500 MW so it is clear now that preferred resources and storage will make up a minimum of 300 MW of SDG&E's 800 MW's procurement authority.[127] The PMPD fails to recognize the significant impact that will occur should Carlsbad Energy construct a 633 MW peaking facility when there are preferred resources that are not only available but required by CPUC proposed decisions. The PMPD needs to include this significant impact in the override section or declare that the reduced capacity alternative as the environmentally preferred alternative.

The evidence also shows that the reduced capacity would also, "*reduce the visual impact of the site."*[128] Utilization of preferred resources for a portion of the capacity of the amended CECP would provide reductions in GHG emissions and also comply with the states loading order. CEC Staff agrees that the reduced capacity alternative in conjunction with preferred resources would lead to a reduction in GHG emissions.[129]

Override Conclusion of Law Number 4

Conclusion of Law Number 4 in the PMPD states that there are, "*There are no feasible alternatives which would avoid or substantially lessen the significant cumulative visual impact."* The PMPD ignores the no project alternative had no visual impacts unlike he ACECP does. Visual resources finding of fact number 4 states, *"The 2012 Decision found that the CECP would conform with all applicable LORS and that, with the implementation of the Conditions of Certification, the project would not have any significant direct, indirect, or cumulative visual*

[125] Exhibit 2000 **CECP Amendment, Final Staff Assessment Page 764 of 1111**
[126] Exhibit 2000 **CECP Amendment, Final Staff Assessment Page 765 of 1111**
[127] Exhibit 6007, 6002 Page 2,3, Exhibit 4007 Page 36 of 38 Finding of Fact Number 7
[128] **Transcript of April 2, 2015 Evidentiary Hearing Page 147 Of 283 Lines 9-16**
[129] **Transcript of April 2, 2015 Evidentiary Hearing** Page 113 of 283 Lines 19-22 "So basically if this were a smaller project, say, this was 400 megawatts and then the other 200 was renewables, wouldn't that be less GHGs? MR. VIDAVER: Yes"

impacts."[130] The PMPD does not comply with Section 1755 which requires that , *"The commission shall not certify any site and related facilities for which one or more significant adverse environmental effects have been identified unless the commission finds (d) (1) That specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the application proceeding.*" The commission has not found that the licensed CECP is infeasible and the licensed CECP has no significant CEQA related significant environmental impacts that require an override therefore the Commission cannot certify the amendment.

Uncontested topics

The PMPD states in several topics that no one contested the topic or the evidence. That occurred because the committee chose to exclude myself and Rob Simpson from participating in any other topics outside of air quality, public health, GHG emissions, and alternatives. Other intervenors Terramar and Power of vision were not held to the same standard. The Committee set the bar so high for Mr. Simpson and me it was impossible to participate in any other uncontested topics.[131] Allegedly the other intervenors were to represent the public in those uncontested topics but that was not the case.

The committee chose to limit my participation and the participation of Rob Simpson in an arbitrary and capricious manner. Mr. Rob Simpson was limited to air quality, public health, and GHG emissions despite his previous intervention, contributions, and participation in all topics in the licensed CECP proceeding. I was limited to air quality, public health, GHG emissions, and alternatives despite previous proceedings before Commissioner Douglas where she freely admitted that I had done a good job contributing in all topics.[132]

I appealed the limitation of my participation to the full commission and it was heard on December 10, 2014. The meeting was conducted with only four Commissioners two of whom were the same committee members who limited my participation. To my surprise the presiding

[130] PMPD Page 8.5-12

[131] TN 203296 Page 3 of 4 Petitioner has not demonstrated that the project would affect any personal interest he has or that he would bring information or expertise that would help the Presiding Member render a proposed decision beyond the above four topic areas. The existing scope permits him to introduce relevant evidence and conduct cross-examination in topic areas whose impacts can extend beyond the project vicinity.

[132] Commission Business Meeting Transcript December 10 , 2014 Pages 38,39 see also TN 203342

member who limited my participation was the chair of the meeting. This does not constitute due process in any legitimate legal forum and is clearly unconstitutional.

The limitation on intervention was used as a tool to prevent discovery by Mr. Simpson by both the applicant[133] and staff[134]. It was used to prevent Mr. Simpson from providing valuable testimony on the topic of biology. Even though Mr. Simpsons comments on compliance and closure in the original proceeding was referred to the IPER policy committee Mr. Simpson was not allowed to participate in the evidentiary hearing on the topic of financial closure assurance in the evidentiary hearing.

The intervention limitation was used to prevent me from even submitting testimony or filing a motion on financial closure assurance in the topic of compliance and closure even though I had raised the issue in my appeal to the full Commission to allow me to participate more fully in the proceeding.[135] The Committee stated that, "*Mr. Sarvey is not admitted as an intervener on a topic germane to the Motion. He did not ask to expand the scope of his participation. It is therefore appropriate to consider the Motion and earlier-filed Closure Testimony as public comment, not as a motion or as testimony.*"[136] The Committee then declared it was a policy issue and invited the other parties to provide evidence and policy and legal advice on a policy matter. As the Committee ordered, *"To aid the Committee in responding to this and any similar comments, the Committee seeks the evidence and policy and legal advice of the parties who are admitted to speak as parties on the topic of project closure. This issue appears to be primarily a policy matter. While most of the evidence is likely already contained in the evidence proposed by the parties, we are adding time to the schedule to allow the parties to present any additional relevant evidence. We then invite the parties to make their legal and policy arguments in their post-hearing briefs."*[137] I was the only one who provided any evidence on the matter of importance to the Committee but they declared the evidence public comment and my motion to provide financial closure assurance as well. Every other party who submitted

[133] TN 203322 Page 3 of 14 "The specific responses and objections to the data requests set forth below generally note that the information sought is beyond the scope of the Energy Commission Order on Petition to Intervene

[134] TN 203332 Page 3 of 15"Furthermore, many of Mr. Simpson's requests exceed the scope of his limited intervention."

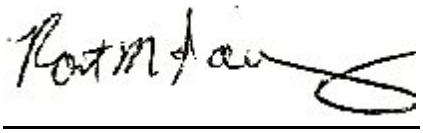
[135] TN 203342 Page 6 of 12

[136] TN 203958 Page 3 of 4

[137] TN 203958 Page 3 of 4

no testimony as I did was allowed to testify and submit evidence on my own testimony and motion.

The arbitrary and capricious manner in which these proceedings were conducted is contrary to CEQA as CEQA allows participation in all aspects of a proposed project. My civil rights under the California and United States constitution were violated by the arbitrary and capricious manner in which the application was processed. This was all done to prevent participation in the proceeding not manage the proceeding as the Committee represented.



Robert Sarvey 7/9/15