

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



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Order Instituting Rulemaking to Integrate and Refine
Procurement Policies and Consider Long-Term
Procurement Plans.

R. 10-05-006
(Filed May 6, 2010)

**REPLY COMMENTS OF CALPINE CORPORATION IN RESPONSE TO
ALJ RULING OF DECEMBER 23, 2010**

Matthew Barmack
Director
Market and Regulatory Analysis
Calpine Corporation
4160 Dublin Blvd.
Dublin, CA 94568
Telephone: (925) 557-2267
E-mail: barmackm@calpine.com

Avis Kowalewski
Vice President
Government and Regulatory Affairs
Calpine Corporation
4160 Dublin Blvd.
Dublin, CA 94568
Telephone: (925) 557-2284
E-mail: kowalewskia@calpine.com

January 26, 2011

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

Order Instituting Rulemaking to Integrate and Refine
Procurement Policies and Consider Long-Term
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**REPLY COMMENTS OF CALPINE CORPORATION IN RESPONSE TO ALJ
RULING OF DECEMBER 23, 2010**

Pursuant to the December 23, 2010 *Administrative Law Judge's Ruling Requesting Post-Workshop Comments, Updating Standardized Planning Assumptions, and Providing Lawrence Berkeley Report On Modeling Issues* ("ALJ Ruling") and the January 19, 2011 email ruling of Administrative Law Judge Allen granting all parties an extension to file reply comments by January 26, 2011, Calpine Corporation ("Calpine") offers the following Reply Comments.

Renewable integration models ("RIMs") that correctly account for the current and potential operating flexibility of existing resources are critical to an efficient and cost-effective procurement planning process. As discussed in Calpine's Opening Comments, the current models fail to adequately recognize and account for such flexibility. Opening Comments filed by a diverse cross-section of other parties in this proceeding demonstrate similar concerns. Based on these concerns, Calpine reiterates its request for workshops that will address the representation of the flexibility of the existing resources in RIMs, the appropriate determination of need for additional flexible resources, and procurement processes that tap the full flexibility of existing resources.

I. CURRENT RENEWABLE INTEGRATION MODELS IGNORE THE FLEXIBILITY OF EXISTING RESOURCES

The California Wind Energy Association (“CalWEA”) highlights important limitations of the Pacific Gas and Electric Company (“PG&E”) RIM with respect to the flexibility of the existing generation fleet:

The [Joint Lawrence Berkeley National Laboratory/National Renewable Energy Laboratory “LBNL/NREL”] Report highlights an important limitation of the PG&E model. In a commendable effort to simplify the analysis, the PG&E model looks only at the incremental change in the system’s resources between a base year (2008) and 2020. As a result, the PG&E model implicitly assumes that the existing generation units in 2008 cannot increase their ability to supply operating flexibility services in any hour of the future study period. The LBNL/NREL Report discusses at length how this design feature of the PG&E model may overestimate the resources needed to integrate a 33% RPS, because all of the incremental flexibility must come only from incremental resources.¹

The modeling deficiency identified by CalWEA applies equally to the CAISO RIM. Though the CAISO RIM explicitly models the flexibility of existing generation, it does so in a manner that ignores the possibility that the operations or physical characteristics of the existing generation fleet can change in the future to accommodate the integration of new renewable resources.

Although it initially adopted a modeling approach that ignores the flexibility of existing resources, PG&E is now taking steps to revise its model to account better for such flexibility:

PG&E recognizes that RIM does not represent the existing system’s resources. However, in response to prior questions and comments from the October 22, 2010 renewable integration workshop, PG&E indicated it is investigating ways to estimate the existing system’s integration capability either as part of or outside of RIM. PG&E is currently developing potential model changes to

¹ CalWEA Comments, 10.

quantify the existing system's integration capability in time for use in Track 1 of the 2010 LTPP.²

Furthermore, both the Division of Ratepayer Advocates ("DRA") and Pacific Environment explicitly acknowledge the latent flexibility of existing generation resources and call for further analysis of the flexibility of the existing fleet. As DRA states:

Since many of the resources in the system contain untapped flexibility, these resources should be called upon first to meet any renewable integration needs. At this stage in the renewable integration modeling exercise, it is clear more effort is required to determine what the potential operating flexibility is inherent in the existing fleet for integrating a 33% RPS.³

Pacific Environment similarly observes:

[The] CAISO's model fails to identify places where the capability of existing or planned resources could be improved to better meet integration needs.... [T]echnologies exist which can increase the capability of existing facilities. These methods have been proven to increase the flexibility of existing facilities to better integrate renewables by decreasing start times and minimum load. These types of technologies represent effective ways to increase the current capabilities of existing facilities in a way that is better for ratepayers' financial health and the environment than building new facilities.⁴

Calpine proposes workshops that will provide the Commission and the parties an opportunity to develop a RIM that appropriately accounts for the operational flexibility of existing generation resources.

II. THE COMMISSION MUST DETERMINE OBJECTIVE REQUIREMENTS FOR FLEXIBILITY THAT ALLOW COMPARISON AMONG ALL RESOURCE TYPES

Similar to Calpine, the California Large Energy Consumers Association ("CLECA") and The Utility Reform Network ("TURN") support the use of a competitive procurement process to

² PG&E Comments, 11.

³ DRA Comments, 4.

⁴ Pacific Environment Comments, 7-8 (footnotes omitted).

satisfy renewable integration needs that considers all resources types, including existing resources. CLECA recommends:

[T]his LTPP cycle focus instead on determining what types of flexibility the CAISO needs and then authorizing a "no-regrets" plan to procure that flexibility under contracts of suitable duration. By doing so, the Commission will avoid burdening ratepayers with the cost of new resources that may be used only infrequently. Resource owners and developers will compete to provide only those services the CAISO needs, and they may do so by any cost-effective combination of new build, upgrades to existing generating plants and demand response.⁵

In addition, TURN specifically notes that the same resources that are used to satisfy the planning reserve margin ("PRM"), including existing resources, may provide the flexibility required for renewable integration:

One key change that should be made to the CAISO and PG&E renewable integration methodologies – and particularly to the Commission’s thinking about resulting “resource needs” – is the expression of such needs in terms of “MW above PRM” (that is, the quantity of additional gas-fired resources needed above the resources to be built to meet the Planning Reserve Margin). As TURN has explained before and will expand upon below, this expression is an artifact of past resource planning methods and should not be part of the *lingua franca* of renewable integration studies. Instead, a better conceptual approach is to estimate the amount of “flexible capacity” that will be needed within the CAISO system, which capacity might be available without building resources in excess of the PRM.⁶

In order to allow appropriate comparison between various types of resources—and include existing resources in that comparison—the Commission must specify objective requirements for flexibility that allow for such a comparison.

⁵ CLECA Comments, 6 (emphasis in original) (footnote omitted).

⁶ TURN Comments, 2.

III. CONCLUSION

Given the importance that numerous parties place on the correct accounting of the current and potential operating flexibility of existing resources, the appropriate determination of need for additional flexible resources, and procurement processes that tap the flexibility of existing resources, Calpine recommends more focused attention on those issues. Calpine also reiterates its recommendation for a series of workshops to be held before the flexibility requirements determined through any RIM help form the basis for procurement.

Respectfully submitted this January 26, 2011 at Dublin, California

By: _____ /s/
Matthew Barmack
Director
Market and Regulatory Analysis
Calpine Corporation
4160 Dublin Blvd.
Dublin, CA 94568
Telephone: (925) 557-2267
E-mail: barmackm@calpine.com

By: _____ /s/
Avis Kowalewski
Vice President
Government and Regulatory Affairs
Calpine Corporation
4160 Dublin Blvd.
Dublin, CA 94568
Telephone: (925) 557-2284
E-mail: kowalewskia@calpine.com

CERTIFICATE OF SERVICE

I, Yvette Stahr, certify:

I am employed in the City and County of San Francisco, California, am over eighteen years of age and am not a party to the within entitled cause. My business address is 505 Montgomery Street, Suite 800, San Francisco, California 94111-3834.

On, January 26, 2011, I caused the following to be served:

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via electronic mail to all parties on the service list R.10-05-006 who have provided the Commission with an electronic mail address and by First Class mail on the parties listed as “Parties” and “State Service” on the attached service lists who have not provided an electronic mail address.

Executed on January 26, 2011 in San Francisco, California

/s/

Yvette Stahr

VIA U.S. MAIL AND EMAIL

ALJ Peter V. Allen
CPUC
505 Van Ness Avenue
San Francisco, CA 94102

Commissioner Michael Peevey
CPUC
505 Van Ness Avenue
San Francisco, CA 94102

Sydney Manheim Davies
California Independent System Operator
151 Blue Ravine Road,
Folsom, CA 95630

VIA EMAIL

douglass@energyattorney.com; liddell@energyattorney.com;
kristin@consciousventuresgroup.com; janreid@coastecon.com; smartinez@nrdc.org;
tam.hunt@gmail.com; AMSmith@SempraUtilities.com; lwisland@ucsusa.org;
martinhomec@gmail.com; nrader@calwea.org; abraham.silverman@nrgenergy.com;
mpieniazek@drenergyconsulting.com; mdorn@mwe.com; jim_p_white@transcanada.com;
jamenta@calpine.com; b.buchynsky@dgc-us.com; jbloom@winston.com;

Don.Vawter@AES.com; deana.ng@sce.com; mary@solutionsforutilities.com;
DAKing@SempraGeneration.com; mtierney-lloyd@enernoc.com; ek@a-klaw.com;
mdjoseph@adamsbroadwell.com; nao@cpuc.ca.gov; josh@brightlinedefense.org;
mflorio@turn.org; tj1@a-klaw.com; dbehles@ggu.edu; bcragg@goodinmacbride.com;
Greenwald, Steven; Gray, Jeffrey; lcottle@winston.com; CRMd@pge.com; ssmyers@att.net;
service@spurr.org; JChamberlin@LSPower.com; wbooth@booth-law.com;
achang@efficiencycouncil.org; jwiedman@keyesandfox.com; pcort@earthjustice.org;
slazerow@cbecal.org; wrostov@earthjustice.org; gmorris@emf.net; jansar@ucsusa.org;
agerterlinda@gmail.com; tomb@crossborderenergy.com; michaelboyd@sbcglobal.net;
jsanders@caiso.com; kelly@votesolar.org; burtt@macnexus.org; cmkehrein@ems-ca.com;
abb@eslawfirm.com; kmills@cfbf.com; deb@a-klaw.com; apligavko@firstsolar.com;
beth@beth411.com; drp.gene@sbcglobal.net; jleslie@luce.com; sahm@fitcoalition.com;
nlong@nrdc.org; e-recipient@caiso.com; SFOCPUCDockets; mrw@mrwassoc.com;
cynthia.brady@constellation.com; dgilligan@naesco.org; jna@speakeasy.org;
Melissa.Schary@sce.com; mokeefe@efficiencycouncil.org;
steven.huhman@morganstanley.com; wchen@ecsgrid.com; steve.weiler@leonard.com;
vlauterbach@mwe.com; myuffee@mwe.com; kjsimonsen@ems-ca.com;
ccollins@energystrat.com; jfarr@Energystrat.com; Cynthiakmitchell@gmail.com;
fmobasheri@aol.com; amber.wyatt@sce.com; case.admin@sce.com;
Melissa.Hovsepian@sce.com; rich.mettling@sce.com; GBass@SempraSolutions.com;
JPacheco@SempraUtilities.com; WKeilani@SempraUtilities.com; sue.mara@rtoadvisors.com;
rcox@pacificenvironment.org; chh@cpuc.ca.gov; kpp@cpuc.ca.gov; marcel@turn.org;
mang@turn.org; matthew@turn.org; abeck@cpv.com; AxL3@pge.com;
RegRelCPUCCases@pge.com; GxZ5@pge.com; Gloria.Smith@sierraclub.org; filings@a-
klaw.com; Kcj5@pge.com; lwilliams@ggu.edu; MWZ1@pge.com; mpa@a-klaw.com;
will.mitchell@cpv.com; abrowning@votesolar.org; swang@pacificenvironment.org;
devin.mcdonell@bingham.com; jsqueri@goodinmacbride.com; jfilippi@nextlight.com;
rafi.hassan@sig.com; Gex, Bob; todd.edmister@bingham.com; Prabhakaran, Vidhya;
Diane.Fellman@nrgenergy.com; cem@newsdata.com; CPUCCases@pge.com;
arthur@resource-solutions.org; ryan.heidari@endimensions.com; wetstone@alamedamp.com;
gopal@recolteenergy.com; Sean.Beatty@mirant.com; kowalewskia@calpine.com;
barmackm@calpine.com; cpucdockets@keyesandfox.com; jbaird@earthjustice.org;
sstanfield@keyesandfox.com; dmarcus2@sbcglobal.net; rschmidt@bartlewells.com;
patrickm@crossborderenergy.com; erasmussen@marinenergyauthority.org;
philm@scdenergy.com; bperlste@pacbell.net; wem@igc.org; pushkarwagle@flynnrci.com;
dwang@nrdc.org; bmcc@mccarthylaw.com; brbarkovich@earthlink.net; bill@jbsenergy.com;
brian.theaker@dynegy.com; mary.lynch@constellation.com; grosenblum@caiso.com;
mrothleder@caiso.com; uhelman@caiso.com; Ray_Pingle@msn.com; daniel.h.kim@me.com;
Danielle@ceert.org; david@ceert.org; ddavie@wellhead.com; jim.metropulos@sierraclub.org;
kdw@woodruff-expert-services.com; blaising@braunlegal.com; steven@iepa.com;
eddyconsulting@gmail.com; atrowbridge@daycartermurphy.com;
dsanchez@daycartermurphy.com; sas@a-klaw.com; dws@r-c-s-inc.com;
john_dunn@transcanada.com; meredith_lamey@transcanada.com; djurijew@capitalpower.com;
gifford.jung@powerex.com; AEG@cpuc.ca.gov; AEG@cpuc.ca.gov; CNL@cpuc.ca.gov;
SMK@cpuc.ca.gov; cleni@energy.state.ca.us; sap@cpuc.ca.gov; bbc@cpuc.ca.gov;
clu@cpuc.ca.gov; cce@cpuc.ca.gov; dbp@cpuc.ca.gov; dil@cpuc.ca.gov; jp6@cpuc.ca.gov;

kkm@cpuc.ca.gov; kho@cpuc.ca.gov; cho@cpuc.ca.gov; mjs@cpuc.ca.gov; nws@cpuc.ca.gov;
nlr@cpuc.ca.gov; psd@cpuc.ca.gov; phs@cpuc.ca.gov; pva@cpuc.ca.gov; rmm@cpuc.ca.gov;
wtr@cpuc.ca.gov; rls@cpuc.ca.gov; svn@cpuc.ca.gov; scl@cpuc.ca.gov; vsk@cpuc.ca.gov;
ys2@cpuc.ca.gov; claufenb@energy.state.ca.us; jwoodwar@energy.state.ca.us;
ldecarlo@energy.state.ca.us; mjaske@energy.state.ca.us; Mnyberg@energy.state.ca.us;
irhyne@energy.state.ca.us