# BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA AND THE CALIFORNIA ENERGY COMMISSION

Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies.

Rulemaking 06-04-009 (Filed April 13, 2006) DOCKET 07 - 011 P - 1 DATE DEC 0 7 2007 RECD. DEC 1 0 2007

Energy Commission Docket 07-OIIP-01

SUPPLEMENTAL REPLY COMMENTS OF PACIFICORP (U 901 E) ON ISSUES RELATED TO THE DISTRIBUTION OF GREENHOUSE GAS (GHG) EMISSIONS ALLOWANCES

> Kyle L. Davis PacifiCorp 825 NE Multnomah, 20<sup>th</sup> Floor Portland, OR 97232

Telephone: 503-813-6601 Facsimile: 503-813-6060

Email: Kyle.L.Davis@pacificorp.com

Date: December 7, 2007

## BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA AND THE CALIFORNIA ENERGY COMMISSION

Order Instituting Rulemaking to Implement the Commission's Procurement Incentive Framework and to Examine the Integration of Greenhouse Gas Emissions Standards into Procurement Policies.

Rulemaking 06-04-009 (Filed April 13, 2006)

Energy Commission Docket 07-OIIP-01

## SUPPLEMENTAL REPLY COMMENTS OF PACIFICORP (U 901 E) ON ISSUES RELATED TO THE DISTRIBUTION OF GREENHOUSE GAS (GHG) EMISSIONS ALLOWANCES

Pursuant to the Administrative Law Judge's Ruling Requesting Comments and Noticing Workshop on Allowance Allocation Issues dated October 15, 2007, and the Administrative Law Judges' Ruling Extending Comment Deadlines and Addressing Procedural Matters dated November 30, 2007, PacifiCorp respectfully submits these supplemental reply comments addressing opening comments and reply comments submitted by the parties in this proceeding, and raised during the joint workshop held November 5, 2007, on issues related to the distribution of greenhouse gas ("GHG") emission allowances. PacifiCorp appreciates the opportunity to provide further comments in this proceeding on these important issues.

## I. DISCUSSION

PacifiCorp has reviewed the supplemental information filed by Pacific Gas and Electric Company ("PG&E") and Southern California Public Power Authority ("SCPPA") in their November 17, 2007 reply comments, Western Resources Advocates' ("WRA") alternative allocation proposal included as part of WRA's Opening Comments dated October 31, 2007, and the South Coast Air Quality Management District's ("SCAQMD") late filed comments dated

#### A. Pacific Gas & Electric's Supplemental Information

PacifiCorp vigorously opposes GHG emission allowances be allocated based on a "benchmarking" or megawatt-hour "output-based" methodology, not only because the costs of reducing emissions under Assembly Bill 32 ("AB32") will not be borne by owners of non-emitting assets, but also because there will be no GHG emissions reduced from these assets. Allocating allowances based upon the output from non-emitting assets simply creates large wealth transfers among utilities unrelated to the overall goal of GHG emissions reduction and increases the costs of achieving GHG emission goals. It is unclear what public purpose would be served by distributing what will already be scarce GHG allowances to the owners of non-emitting assets.

Like the city of Los Angeles and the members of SCPPA, PacifiCorp is concerned about the imposition of unnecessary additional compliance costs on our customers. In its reply comments, PG&E makes the incorrect and unsupported assertion that utilities that still own higher emitting generation (i.e., fossil-fueled generation) must somehow support "a massive and inequitable shifting of costs from higher-emitting utilities to lower emitting utilities and commensurate delays in the permanent, sustained GHG reductions intended by AB32." PG&E Reply Comments at 2. PG&E then elaborates and goes on to state within the supplemental information that if California does not adopt PG&E's preferred allowance allocation approach, there will be "negative cost consequences for California consumers and businesses generally if a national GHG cap-and-trade program were to allocate emissions allowances on a "grandfathered" basis rather than based on output or sales." PG&E Reply Comments at 20 and 23-24.

First, PG&E has failed to demonstrate how allowance allocations to emitters to cover a portion of their existing emissions can directly effectuate an inequitable shifting of costs from higher-emitting utilities to lower emitting utilities. PG&E confuses the issue by ignoring

the fact that there are two separate costs that will be borne by companies and their customers in very different ways. The cost of effectuating emissions reductions will be borne by owners and customers of existing fossil-fueled generation; separately, there will be a cost of carbon realized within the marketplace as a result of carbon policy (i.e., the carbon price signal). All utilities that own or contract for electricity generated by fossil-fueled resources are expected to incur both types of costs, but owners of existing fossil-fueled resources will incur the greatest sum of the costs to effectuate actual GHG emissions reductions.

The reality is allocating GHG allowances to existing emitters based on historic emissions will not be sufficient to cover emissions from all existing fossil-fueled generation. An allocation based on historic emissions serves to bridge the significant rate impacts that would otherwise be likely as a result of a significant policy shift in the types of electric generation that the state now finds is necessary to reduce GHG emissions. It must also be acknowledged that the goal of effectuating GHG emissions reductions will become ever more challenging over time for the owners of existing fossil-fueled resources due to a declining emissions cap, increasing customer load growth and the possible transition to an auction allocation approach. An inconvenient reality PG&E ignores is that there is no commercially available GHG emissions control equipment that may be installed in the near term and a fundamental shift in the current generating portfolio of many utilities will require substantial capital investments, technology advancements, and time. It is reasonable public policy to allocate allowances to existing emitters based upon historical emissions as a means of avoiding rate shock until either emissions control equipment is commercialized, an auction is instituted, or both.

What is most troubling is PG&E's unwillingness to acknowledge that the rate impact risks to the customers of utilities that currently own fossil units are disproportionately higher compared to the customers of California utilities who have already divested themselves of fossil-fueled generation. PG&E attempts to communicate its clairvoyance in divesting itself of higher emitting generation; to be fair, it must be acknowledged that the reason several California utilities divested themselves of fossil-fueled generation is related more to California's

deregulation law Assembly Bill 1890 (1996) ("AB1890"), than carbon policy. During that process, utilities such as PG&E had the ability (and even the requirement under AB1890) to decrease their carbon-related risk by selling their generation assets and, ultimately, to contract away any carbon policy-related stranded cost risk, while also placing new construction and carbon policy risk squarely on independent generators competing for their business. Utilities, whose lower carbon portfolio manifested as a result of AB1890, received, in return for their consent in the mandatory divestiture of their fossil-fueled generation, billions of dollars in "competition transition charges" to finance upfront stranded cost recovery. The competition transition charge ("CTC") was designed to allow utilities to recover their investments on an accelerated basis or risk having an asset become stranded. Principles of equity obligate the Commission to acknowledge the underlying reasons for the different circumstances of California's utilities and not engage in backward-looking green washing.

It should also be recognized that some of these very same utilities have had historical operations and beneficial proximity to Northern California, Pacific Northwest, and Canadian hydroelectric resources, or the Pacific Ocean for inexpensive and massive supplies of once-through cooling water for nuclear projects -- these additional benefits resulted from providence, not by some conscious concern by utilities over GHG emissions. PacifiCorp strongly disagrees with PG&E's assertion that the "grandfathering" proposal would penalize their past investments in nuclear and hydroelectric projects. Utilities that built hydroelectric dams many decades ago or nuclear plants in the sixties and seventies simply did not do so to avoid GHG emissions and there is no reason to provide utilities such as PG&E with a financial windfall for their coincidental actions. These resources will already enjoy electricity production that will not carry a new carbon cost. To the extent these resources can continue to be relicensed, customers of utilities owning these resources will likely enjoy a stable electricity price even as the carbon cap declines and allowances become more expensive to reflect their increased scarcity. New

<sup>&</sup>lt;sup>1</sup> As a multi-jurisdictional utility, PacifiCorp was not required to divest its generation under AB 1890 or collect a CTC.

opportunities for energy efficiency should present themselves as opportunities further up a supply curve become more cost-effective as wholesale prices of electricity increase.

PG&E's analysis also ignores the market effect of existing higher emitting resources being retired and the manner in which the GHG emissions performance standard will effectively address GHG emissions attributable to new resources brought online to replace existing load as well as serve new load. Some regulatory combination of freely allocated allowances to existing emitters coupled with auctions can ensure equity. PacifiCorp continues to support efforts by the Commission to model and inform its decision on the appropriate levels and schedule.

It is unclear how the supplemental information provided by PG&E supports their proposal that GHG emission allowances be allocated to non-emitters based on a "benchmarking" or megawatt-hour "output-based" methodology. Utility rates are the product of various past regulatory actions and are largely unrelated to the mitigation of greenhouse gases until very recently. The excerpt from the recent U.S. Supreme Court decision regarding GHG, while a useful chronology of citations to public sources in which the risk of GHG emissions and potential actions to constrain those emissions, also demonstrates that broad knowledge regarding the potential risks posed by global climate change was not achieved until the 1990s and was largely the result of the efforts of the Intergovernmental Panel on Climate Change (IPCC), which did not publish its first comprehensive report on the topic until 1990. AB 32 was not passed until 2006 and Congress has yet to pass legislation regarding regulation of GHG emissions. Utilities struggle today to determine appropriate generation investments with the uncertainty of GHG regulation looming—clearly, utilities that built hydroelectric dams many decades ago or nuclear plants in the sixties and seventies did not peer into their crystal balls in an effort to predict the future of GHG regulation.

Finally, PG&E's argument that California would experience a loss in allowances value equal to \$2.1 billion per year, if a national program promulgated a "grandfathered" or historical emissions based allocation method, is misleading. First, PG&E analysis is incomplete.

The analysis does not account for the substantial customer costs of achieving the GHG reductions. Under PG&E's proposal, there are no additional GHG emissions reductions achieved, but there is clearly a financial windfall for non-emitters, while simultaneously increasing the compliance costs to customers of utilities that still own higher emitting generation. Second, PG&E fails to acknowledge that none of the existing federal cap-and-trade proposals envision a pure "grandfathered" or historical emissions-based allocation method. These proposals seek to find an equitable balance of significant carbon mitigation while avoiding customer rate shock as a key design principle. California should do likewise. California should promulgate a rule that allocates all allowances freely to emitters who actually need them and, short of that, consider a process for auctioning allowances to emitters that actually need them while using the auction revenues to avoid customer rate shock. Both of these approaches preserve the cap and focus on avoiding customer rate shock. The allocation of GHG emission allowances to non-emitters based on a "benchmarking" or megawatt-hour "output-based" methodology does not engender additional GHG emissions reductions, but is simply an unnecessary increase in the costs of compliance and a wealth transfer from one group of utility customers to another.

The simple fact is that after stripping away the rhetoric, non-emitting resources do not bear the burden or the direct costs of effectuating GHG emissions reductions. The decisions to build fossil fuel power plants, which were made over many decades and were intended to achieve a fuel mix, were lawful, economical, and prudent, as determined by regulatory authorities. Load serving entities and their customers should not be punished for past prudent decisions. The Commission should reject PG&E's proposal and instead allocate allowances freely to existing emitters who will have the greater sum burden of effectuating GHG emissions reductions.

#### B. Southern California Public Power Authority

For the same reasons as articulated above, PacifiCorp strongly agrees with the

supplemental information provided by SCPPA in their reply comments. The SCPPA figures illustrate the inequity of allocating allowances among retail providers on the basis of each retail provider's retail sales. Doing so would result in a wealth transfer from the retail providers that currently have a more carbon intensive resource mix to those that do not and would punish utilities and their customers for past prudent decisions. In sum, PacifiCorp agrees with SCPPA that "It would be bad public policy to allocate allowances to some regulated entities as a reward for past actions while denying an allocation of allowances to other entities as a penalty for past actions. Allocating allowances to reward some regulated entities and to penalize others would require the regulatory agency to investigate the appropriateness of the reward or penalty." SCPPA Reply Comments at 22-25.

## C. Western Resource Advocates

Upon reviewing the WRA working paper, PacifiCorp still has questions on how the proposed approach would accommodate trading of the CO2RCs. For example, if the CO2RCs are disaggregated from the output (i.e., sold off), how would the underlying power be characterized (i.e., GHG emissions for the remaining "null" power)? How are emissions characterized from generators who sell only a portion of CO2RCs? Finally, it seems unlikely that Western states that rely heavily on coal-fueled generation are unlikely to embrace the WRA allowance allocation approach which clearly disadvantages their native generation.

While PacifiCorp commends WRA for thinking outside the box in attempting to address the issue of allowance allocation, we find the WRA alternative approach to be more stringent than a "benchmarking" or megawatt-hour output-based approach and unacceptable. The WRA approach narrows the eligibility for free allowance allocations to only those resources that have an average emission rate lower than 1000 tons of CO2 per gigawatt-hour. This approach effectively transfers any freely allocated allowances that might otherwise have been granted based upon the output from higher emitting, typically coal, resources, to owners of non- and lower-emitting (i.e., natural gas) resources, leaving those who will already bear the brunt of

higher compliance costs to fend for themselves in the marketplace.

For the reasons stated in opposing PG&E's allowance allocation proposal, PacifiCorp likewise opposes the WRA proposal. Emission allowances should not be allocated on the basis of retail sales, "benchmarked" tons of CO2 per gigawatt-hour of output, population, or any other factor that does not bear a direct one-to-one correlation to a utility's actual historical emissions. Any allocation on a basis that is not correlated to emissions and the actual need of regulated entities for allowances would result in cross-subsidies and wealth transfers among retail providers and/or generators. The allocation envisioned by the WRA proposal would be inequitable and would degrade the integrity of the GHG regulatory program and represents a punitive approach toward utilities and their customers for past prudent decisions in higher-emitting resources. Efforts should be focused on how to accomplish change in a forward-looking manner.

The potential linkages with regional, national and international programs must also be considered further in the approach advocated by WRA.

## D. South Coast Air Quality Management District

PacifiCorp supports several of the conclusions and recommendations offered by the SCAQMD. First, PacifiCorp supports increasing program flexibility by including pilot credit generation rules for mobile and area source credits, akin to those included as part of the District's RECLAIM nitrogen oxide ("NOx") emissions trading program. In this context, SCAQMD notes that "[s]uch programs can provide a "safety valve" by creating the opportunity to add additional credits into the system." SCAQMD Policy Paper Part Three at III-1-2.

Second, periodic technology reviews and allocation adjustments, based upon historic emissions, with consideration of cost-effectiveness, is good public policy. SCAQMD states that "[i]n 2005, a [Best Available Retrofit Control Technology] assessment resulted in rule amendments to reduce RTCs by over 20% by the year 2011 to reflect the current level of technology available for the types of equipment in NOx RECLAIM. Such periodic assessments

would be valuable for future cap-and-trade programs." SCAQMD Policy Paper Part Three at III-1-2. The rate at which the GHG cap declines should be directly linked to the technological feasibility in achieving additional emissions reductions.

Finally, PacifiCorp supports the specific topic recommendations offered by the SCAQMD at III-1-5 through III-1-9. Adequate time must be allowed before a new program starts to allow program participants to adequately prepare. The Commission should retain authority to change the regulatory structure midstream to accommodate changes within the marketplace. It is reasonable for the Commission to require regulated entities to file periodic compliance plans coupled with a process conducted by the Commission to approve or acknowledge these plans. Enforceability must be part of the program's design to provide regulated entities with the certainty necessary to make critical compliance decisions, and as far as the trading market, provide adequate rules to deter manipulation.

The process for granting variances should also be defined as part of the initial rule to accommodate unforeseen extreme circumstances. Formal implementation guidance and training should be routinely conducted and updated to help ensure consistent interpretation and application of the program's rules. This will enhance compliance rates and address issues of staff turnover. Emissions auditing is necessary to ensure the integrity of the emissions reported, especially for sources that do not rely on automated reporting (i.e., continuous emissions monitors) or unique emissions estimation methodologies for carbon offset projects. Finally, automation in a cap-and-trade program is necessary because of the complex interaction between the regulatory components, including more stringent emissions monitoring, facility-based permitting that captures device-based data, emission credit trading, and the need to bring all elements together to confirm compliance with allocations.

## II. CONCLUSION

PacifiCorp appreciates the opportunity to submit supplemental reply comments on issues raised by the parties related to the distribution of GHG emission allowances. For all the

foregoing reasons, PacifiCorp recommends that the Joint Staff,

- reject PG&E's preferred allowance allocation approach;
- support SCPPA's proposal to allocate allowances to existing emitters based
   upon their historical emissions as a matter of equity and to avoid rate shock;
- reject the WRA proposal to establish a more discriminatory allowance allocation approach that discriminates against existing higher emitting sources of generation; and finally,
- support the design recommendations offered by the SCAQMD based upon the experiences gained from managing the RECLAIM NOx cap-and-trade program in Southern California.

PacifiCorp's preferred GHG emission allowance distribution method remains one based upon historic emissions. PacifiCorp recommends that the Joint Staff adopt PacifiCorp's preferred GHG emission allowance distribution method and, in the alternative, consider developing an allowance distribution method for small, multi-jurisdictional utilities and their unique circumstances.

Dated: December 7, 2007

Respectfully submitted,

By

Kyle L. Davis

Manager of Environmental Policy &

542 Car.

Strategy PacifiCorp

825 NE Multnomah

Portland, OR 97232

(503) 813-6601 Phone

(503) 813-7247 Fax

E-Mail: Kyle.L.Davis@PacifiCorp.com

## **CERTIFICATE OF SERVICE**

I, Melinda LaJaunie, certify that I have on this 7<sup>th</sup> day of December 2007 caused a copy of the foregoing

# SUPPLEMENTAL REPLY COMMENTS OF PACIFICORP (U 901 E) ON ISSUES RELATED TO THE DISTRIBUTION OF GREENHOUSE GAS (GHG) EMISSIONS ALLOWANCES

to be served on all known parties to R.06-04-009 listed on the most recently updated service list available on the California Public Utilities Commission website, via email to those listed with email and via U.S. mail to those without email service. I also caused courtesy copies to be hand-delivered as follows:

Commissioner President Michael R. Peevey California Public Utilities Commission State Building, Room 5218 505 Van Ness Avenue San Francisco, CA 94102 ALJ Charlotte TerKeurst California Public Utilities Commission State Building, Room 5117 505 Van Ness Avenue San Francisco, CA 94102

ALJ Jonathan Lakritz California Public Utilities Commission State Building, Room 5020 505 Van Ness Avenue San Francisco, CA 94102

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 7<sup>th</sup> day of December 2007 at San Francisco, California.

Aelinda LaJaunie

# Service List – R.06-04-009 (Updated December 6, 2007)

	, ,	•	
ANDREW BROWN abb@eslawfirm.com	ANNETTE GILLIAM annette.gilliam@sce.com	BRIAN MCQUOWN bmcquown@reliant.com	Cathleen A. Fogel cfl@cpuc.ca.gov
ASHLEE M. BONDS abonds@thelen.com	ALVIN PAK apak@sempraglobal.com	BOB LUCAS Bob.lucas@calobby.com	Charlotte TerKeurst cft@cpuc.ca.gov
AUDREY CHANG achang@nrdc.org	ARNO HARRIS	BRIAN POTTS bpotts@foley.com	CHARLIE BLAIR charlie.blair@delta-ee.com
ADAM BRIONES adamb@greenlining.org	ALLEN K. TRIAL atrial@sempra.com	BALWANT S. PUREWAL bpurewal@water.ca.gov	CHRISTOPHER A. HILEN chilen@sppc.com
Anne Gillette aeg@cpuc.ca.gov	ANN L. TROWBRIDGE atrowbridge@daycartermurphy.c om	BARRY RABE brabe@umich.edu	CHRISTOPHER J. WARNER cjw5@pge.com
Andrew Campbell agc@cpuc.ca.gov	AUDRA HARTMANN Audra.Hartmann@Dynegy.com	BARBARA R. BARKOVICH brbarkovich@earthlink.net	CYNTHIA MITCHELL ckmitchell1@sbcglobal.net
ANN G. GRIMALDI agrimaldi@mckennalong.com	ANDREA WELLER aweller@sel.com	BIANCA BOWMAN BRBc@pge.com	CATHERINE M. KRUPKA ckrupka@mwe.com
AIMEE BARNES aimee.bames@ecosecurities.com	ELIZABETH BAKER bbaker@summitblue.com	BRENDA LEMAY brenda.lemay@horizonwind.com	CLARENCE BINNINGER clarence.binninger@doj.ca.gov
ADAM J. KATZ ajkatz@mwe.com	BUD BEEBE bbeebe@smud.org	DALLAS BURTRAW burtraw@rff.org	CLARK BERNIER clark bernier@rlw.com
AKBAR JAZAYEIRI akbar.jazayeri@sce.com	B. B. BLEVINS bblevins@energy.state.ca.us	JOSHUA BUSHINSKY bushinskyj@pewclimate.org	CLYDE MURLEY clyde.murley@comcast.net
ALEXIA C. KELLY akelly@climatetrust.org	BRIAN T. CRAGG bcragg@goodinmacbride.com	BARRY R. WALLERSTEIN bwallerstein@aqmd.gov	CAROLYN M. KEHREIN cmkehrein@ems-ca.com
ALAN COMNES alan.comnes@nrgenergy.com	BALDASSARO DI CAPO bdicapo@caiso.com	CHRIS MARNAY C_Mamay@lbl.gov	COLIN PETHERAM colin.petheram@att.com
ALDYN HOEKSTRA aldyn.hoekstra@paceglobal.com	RYAN BERNARDO bernardo@braunlegal.com	CINDY ADAMS cadams@covantaenergy.com	Eugene Cadenasso cpe@cpuc.ca.gov
ANDREW L. HARRIS alho@pge.com	BETH VAUGHAN beth@beth411.com	CATHIE ALLEN californiadockets@pacificorp.co m	CARL PECHMAN cpechman@powereconomics.co m
AMBER MAHONE amber@ethree.com	BETTY SETO Betty.Seto@kema.com	CARLA PETERMAN carla.peterman@gmail.com	CATHY S. WOOLLUMS cswoollums@midamerican.com
AIMEE M. SMITH amsmith@sempra.com	WILLIAM H. CHEN bill.chen@constellation.com	IAN CARTER carter@ieta.org	CURT BARRY curt.barry@iwpnews.com
ANDREW BRADFORD andrew.bradford@constellation.c om	BILL SCHRAND bill.schrand@swgas.com	CASE ADMINISTRATION case.admin@sce.com	CURTIS L. KEBLER curtis.kebler@gs.com
ANDREW MCALLISTER andrew.mcallister@energycenter.	BRUNO JEIDER bjeider@ci.burbank.ca.us	CATHY A. KARLSTAD cathy.karlstad@sce.com	CYNTHIA A. FONNER Cynthia.A.Fonner@constellation
org  ANDREW J. VAN HORN andy.vanhom@vhcenergy.com	BARRY LOVELL bjl@bry.com	CARMEN E. BASKETTE cbaskette@enernoc.com	.com  CYNTHIA SCHULTZ cynthia.schultz@pacificorp.com
ANITA HART anita.hart@swgas.com	BRIAN M. JONES bjones@mjbradley.com	CLARE BREIDENICH cbreidenich@yahoo.com	DANIEL A. KING daking@sempra.com
ANNABELLE MALINS annabelle.malins@fco.gov.uk	BRIAN K. CHERRY bkc7@pge.com	CLIFF CHEN cchen@ucsusa.org	DAN ADLER Dan.adler@calcef.org
ANNE-MARIE MADISON	Beth Moore blm@cpuc.ca.gov	CALIFORNIA ENERGY MARKETS	DAN SKOPEC danskopec@gmail.com
Marie_Madison@TransAlta.com	BARRY F. MCCARTHY bmcc@mccarthylaw.com	cem@newsdata.com	DAN SILVERIA dansvec@hdo.net

DAVID L. MODISETTE	DARRELL SOYARS	KAREN TERRANOVA	Henry Stem hs1@cpuc.ca.gov
dave@ppallc.com	dsoyars@sppc.com	filings@a-klaw.com	CAROL J. HURLOCK
DAVID ZONANA david.zonana@doj.ca.gov	DEAN R. TIBBS dtibbs@aes4u.com	F. Jackson Stoddard fjs@cpuc.ca.gov	hurlock@water.ca.gov
DAVID BRANCHCOMB david@branchcomb.com	DEVRA WANG dwang@nrdc.org	FRANK STERN fstern@summitblue.com	HUGH YAO HYao@SempraUtilities.com
DAVID NEMTZOW david@nemtzow.com	DON WOOD dwood8@cox.net	WES MONIER fwmonier@tid.org	Harvey Y. Morris hym@cpuc.ca.gov
DAVID REYNOLDS davidreynolds@ncpa.com	DONALD SCHOENBECK dws@r-c-s-inc,com	GARY BARCH gbarch@knowledgeinenergy.co	SUE KATELEY info@calseia.org
DOUGLAS BROOKS dbrooks@nevp.com	ED CHIANG echiang@elementmarkets.com	m GREG BLUE	JACK BURKE jack.burke@energycenter.org
DONALD BROOKHYSER deb@a-klaw.com	Ed Moldavsky edm@cpuc.ca.gov	gblue@enxco.com  GEORGE HOPLEY	JAMES W. KEATING james.keating@bp.com
DEBORAH SLON deborah.slon@doj.ca.gov	ELIZABETH WESTBY egw@a-klaw.com	george.hopley@barcap.com GARY HINNERS	JANILL RICHARDS janill.richards@doj.ca.gov
DENNIS M.P. EHLING dehling@klng.com	ELIZABETH W. HADLEY ehadley@reupower.com	ghinners@reliant.com GLORIA BRITTON	JEANNE B. ARMSTRONG jarmstrong@goodinmacbride.co m
DEREK MARKOLF derek@climateregistry.org	E.J. WRIGHT ej_wright@oxy.com	GloriaB@anzaelectric.org  GREGGORY L. WHEATLAND	JASON DUBCHAK jason.dubchak@niskags.com
DAN HECHT dhecht@sempratrading.com	EVELYN KAHL ek@a-klaw.com	glw@eslawfirm.com  GREGG MORRIS	Jamie Fordyce jbf@cpuc.ca.gov
DAVID L. HUARD dhuard@manatt.com	ELSTON K. GRUBAUGH ekgrubaugh@iid.com	gmorris@emf.net GORDON PICKERING	JOHN B. WELDON, JR. jbw@slwplc.com
DIANE I. FELLMAN Diane_Fellman@fpl.com	ED LUCHA ELL5@pge.com	gpickering@navigantconsulting. com	JENNIFER CHAMBERLIN jchamberlin@strategicenergy.co
WILLIAM F. DIETRICH dietrichlaw2@earthlink.net	EDWARD VINE elvine@lbl.gov	GREGORY KOISER gregory.koiser@constellation.co m	m Judith Ikle
Diana L. Lee dil@cpuc.ca.gov	MAHLON ALDRIDGE emahlon@ecoact.org	GRANT ROSENBLUM, ESQ. grosenblum@caiso.com	jci@cpuc.ca.gov JONATHAN FORRESTER
DOUGLAS K. KERNER dkk@eslawfirm.com	ELENA MELLO emello@sppc.com	GLORIA D. SMITH gsmith@adamsbroadwell.com	JDF1@PGE.COM  JEFFERY D. HARRIS
Don Schultz dks@cpuc.ca.gov	EDWARD G POOLE epoole@adplaw.com	GRACE LIVINGSTON- NUNLEY	jdh@eslawfirm.com JEFFREY DOLL
DOUGLAS MACMULLLEN dmacmull@water.ca.gov	CALIFORNIA ISO	gxl2@pge.com HARVEY EDER	jdoll@arb.ca.gov JEANNE M. SOLE
DARYL METZ dmetz@energy.state.ca.us	e-recipient@caiso.com  EDWARD J. TIEDEMANN	harveyederpspc.org@hotmail.co m	jeanne.sole@sfgov.org JEFFREY P. GRAY
DESPINA NIEHAUS dniehaus@semprautilities.com	etiedemann@kmtg.com  ELLEN WOLFE	HAYLEY GOODSON hayley@turn.org	jeffgray@dwt.com JEN MCGRAW
DANIEL W. DOUGLASS douglass@energyattorney.com	ewolfe@resero.com  ELIZABETH ZELLJADT	HOLLY B. CRONIN hcronin@water.ca.gov	jen@cnt.org JENINE SCHENK
DANIELLE MATTHEWS SEPERAS	ez@pointcarbon.com  FARROKH ALBUYEH	HOWARD V. GOLUB hgolub@nixonpeabody.com	jenine.schenk@apses.com  JENNIFER PORTER
dseperas@calpine.com  Donald R. Smith	farrokh.albuyeh@oati.net FIJI GEORGE	J. ANDREW HOERNER hoerner@redefiningprogress.org	jennifer.porter@energycenter.org  GERALD L. LAHR
dsh@cpuc.ca.gov	fiji.george@elpaso.com		JerryL@abag.ca.gov

JOY A. WARREN KENNY SWAIN DONALD C. LIDDELL, P.C. JESUS ARREDONDO joyw@mid.org kenneth.swain@navigantconsulti liddell@energyattorney.com jesus.arredondo@nrgenergy.com ng.com JUDITH B. SANDERS LISA SCHWARTZ jsanders@caiso.com KERRY HATTEVIK lisa.c.schwartz@state.or.us Julie A. Fitch jf2@cpuc.ca.gov kerry.hattevik@mirant.com JANINE L. SCANCARELLI LISA WEINZIMER KEVIN BOUDREAUX JULIE GILL jscancarelli@flk.com lisa\_weinzimer@platts.com jgill@caiso.com kevin.boudreaux@calpine.com JAMES D. SQUERI LAD LORENZ llorenz@semprautilities.com JOSEPH GRECO jsqueri@gmssr.com KEVIN FOX jgreco@caithnessenergy.com kfox@wsgr.com LYNELLE LUND Jeorge S. Tagnipes JEFFREY L. HAHN KASSANDRA GOUGH llund@commerceenergy.com jst@cpuc.ca.gov jhahn@covantaenergy.com kgough@calpine.com Joel T. Perlstein LYNN HAUG JAMES ROSS jtp@cpuc.ca.gov KRISTIN GRENFELL lmh@eslawfirm.com jimross@r-c-s-inc.com kgrenfell@nrdc.org JULIE L. MARTIN LORRAINE PASKETT JJ PRUCNAL julie.martin@bp.com KAREN GRIFFIN Lorraine.Paskett@ladwp.com jj.prucnal@swgas.com kgriffin@energy.state.ca.us JOSEPH F. WIEDMAN LAURIE PARK JOHN JENSEN KENNETH C. JOHNSON jwiedman@goodinmacbride.com lpark@navigantconsulting.com jjensen@kirkwood.com kjinnovation@earthlink.net JAMES W. TARNAGHAN LEONARD DEVANNA Jason R. Salmi Klotz jwmctarnaghan@duanemorris.co KEVIN J. SIMONSEN Irdevannakjsimonsen@ems-ca.com rf@cleanenergysystems.com jk1@cpuc.ca.gov JASMIN ANSAR KHURSHID KHOJA JOSEPH M. KARP Lainie Motamedi kkhoja@thelenreid.com lrm@cpuc.ca.gov jkarp@winston.com jxa2@pge.com JOSEPH R. KLOBERDANZ KAREN LINDH GREGORY KLATT STEVE RAHON karen@klindh.com lschavrien@semprautilities.com jkloberdanz@semprautilities.co klatt@energyattorney.com KARLA DAILEY KAREN NORENE MILLS LAURIE TEN HOPE JOHN LAUN karla.dailey@cityofpaloalto.org kmills@cfbf.com Itenhope@energy.state.ca.us jlaun@apogee.net KATHRYN WIG KIM KIENER Lana Tran JOHN W. LESLIE Kathryn.Wig@nrgenergy.com kmkiener@fox.net ltt@cpuc.ca.gov jleslie@luce.com KAREN BOWEN AVIS KOWALEWSKI MARCEL HAWIGER JANE E. LUCKHARDT kbowen@winston.com kowalewskia@calpine.com marcel@turn.org iluckhardt@downeybrand.com KENNETH A. COLBURN Kristin Ralff Douglas MARCIE MILNER Jaclyn Marks kcolburn@symbioticstrategies.co marcie.milner@shell.com krd@cpuc.ca.gov jm3@cpuc.ca.gov KYLE L. DAVIS MARY LYNCH KIRBY DUSEL Jacqueline Greig kyle.l.davis@pacificorp.com mary.lynch@constellation.com jnm@cpuc.ca.gov kdusel@navigantconsulting.com KYLE SILON **BRUCE MCLAUGHLIN** JODY S. LONDON KEVIN WOODRUFF kyle.silon@ecosecurities.com mclaughlin@braunlegal.com kdw@woodruff-expertjody\_london\_consulting@earthli services.com KYLE D. BOUDREAUX MARC D. JOSEPH nk.net mdjoseph@adamsbroadwell.com kyle\_boudreaux@fpl.com JOSEPH M. PAUL KEITH R. MCCREA keith.mccrea@sablaw.com MICHEL FLORIO Joe.paul@dynegy.com LARS KVALE lars@resource-solutions.org mflorio@turn.org JOHN P. HUGHES KELLIE SMITH john.hughes@sce.com kellie.smith@sen.ca.gov LAURA I. GENAO MICHELLE GARCIA Laura.Genao@sce.com mgarcia@arb.ca.gov JOHN R. REDDING KELLY BARR johnrredding@earthlink.net kelly.barr@srpnet.com LISA A. COTTLE MICHAEL A. HYAMS

BILL LOCKYER

KEN ALEX

ken.alex@doj.ca.gov

ken.alex@doj.ca.gov

Jonathan Lakritz

jol@cpuc.ca.gov

JOSEPH HENRI

josephhenri@hotmail.com

lcottle@winston.com

Idecarlo@energy.state.ca.us

leilani.johnson@ladwp.com

LEILANI JOHNSON KOWAL

LISA DECARLO

mhyams@sfwater.org

Mike@alpinenaturalgas.com

MIKE LAMOND

mjd@cpuc.ca.gov

Matthew Deal