

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



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Order Instituting Rulemaking to Consider Smart Grid Technologies Pursuant to Federal Legislation and on the Commission's own Motion to Actively Guide Policy in California's Development of a Smart Grid System.

R.08-12-009
Filed December 18, 2008

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
ON ORDER INSTITUTING RULEMAKING ON CALIFORNIA'S
DEVELOPMENT OF A SMART GRID SYSTEM**

Donald C. Liddell
DOUGLASS & LIDDELL
2928 2nd Avenue
San Diego, California 92103
Telephone: (619) 993-9096
Facsimile: (619) 296-4662
Email: liddell@energyattorney.com

Counsel for the
CALIFORNIA ENERGY STORAGE ALLIANCE

February 9, 2009

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Pursuant to Ordering Paragraph Number 3 of the Order Instituting Rulemaking, R.08-12-009, issued December 18, 2008 ("OIR"), and Rules 1.4(a) and 6.2 of the California Public Utilities Commission ("Commission") Rules of Practice and Procedure, the California Energy Storage Alliance ("CESA")¹ hereby submits these comment on the Order Instituting Rulemaking to Consider Smart Grid Technologies Pursuant to Federal Legislation and on the Commission's own Motion to Actively Guide Policy in California's Development of a Smart Grid System. CESA supports the scope of the proceeding set forth in the OIR, and concurs in the Commission's preliminary (i) classification of the proceeding as quasi-legislative, and (ii) the determination that hearings should not be needed. CESA also responds in general terms on certain of the questions posed in Section 4.1.3 of the OIR.

I. INTRODUCTION.

In these comments, CESA commends the Commission for acting to implement the requirements of the Energy Independence and Security Act of 2007 ("EISA"), and expresses its strong interest in, and support for, the Commission's determination to fully implement the EISA, and actively consider setting policies, standards and protocols to guide the development of a smart grid system and integration of new technologies for California. In this proceeding, CESA intends to advocate for maximum focus on the benefits of energy storage and peak shaving

¹ The California Energy Storage Alliance consists of Chevron Energy Solutions, Ice Energy, Inc., StrateGen Consulting and ZBB Energy Corporation.

technology in its many forms, including battery and thermal energy storage, as an integral, indeed central, part of the smart grid.

II. THE COMMISSION CORRECTLY EMPHASIZES THE IMPORTANCE OF ENERGY STORAGE AND PEAK SHAVING TECHNOLOGY TO THE SUCCESS OF THE SMART GRID IN THE GOALS OF THE OIR.

CESA applauds the emphasis on energy storage that is evident throughout the OIR. “The proceeding will consider setting policies, standards and protocols to guide the development of a smart grid system and facilitate integration of new technologies such as distributed generation, storage, demand-side technologies, and electric vehicles.” (OIR, at page 2). Of course, the Commission’s broad policy objective picks up directly from EISA’s preamble: “Since ‘smart grid’ is a new concept, EISA describes what constitutes a smart grid and what it can do. Section 1301 goes on to state:

... and to achieve each of the following, which together characterize a Smart Grid:

...

- (7) Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.” (OIR, at pages, 4-5).”

The Commission goes on to appropriately link California’s research and implementation efforts that are targeting integration of generation and storage technologies with those taking place at the national level as a key enabler of the smart grid: “The Department of Energy (DOE), pursuant to § 1303(a) of EISA, has created a Smart Grid Task Force to ensure the successful implementation of EISA. The DOE through its Electric Advisory Committee has also recently created a smart grid subcommittee as required by EISA § 1303(b). The Smart Grid Task Force has adopted a working definition of smart grid to have the following characteristics:

...

- Accommodating all generation and storage options.” (OIR, at pages 10-11).

Finally, the Commission properly emphasizes the distributed nature of storage and related integrating technology:

“We believe that it is important to set policies to ensure functionality and interoperability with technologies such as distributed generation, plug-in hybrid and electric vehicles, and distributed storage.” (OIR, at pages 13-14).

Rapid deployment of distributed energy storage has numerous positive attributes that can contribute significantly to several of the state and nation’s energy reliability and environmental goals, including:

- driving transformational improvements in electric system efficiency and reliability;
- enhancing power plant capacity utilization factors relieve upward pressure on rates from T&D capex;
- reducing CO2 and NOx emissions from utility generation;
- helping integrate variable renewable power into the grid and greatly enhancing the value of renewables;
- dampening system volatility by shifting power demand from peak to off-peak periods; and
- increasing reliability and power quality for end use customers.

“Smart” distributed energy storage is deployable in utility-scale capacity as a strategically critical resource in the evolution of the smart grid. Distributed energy storage in its several forms provides an immediate opportunity to address several energy challenges faced by California and the Nation.

III. CESA’S INITIAL RESPONSES TO THE SPECIFIC QUESTIONS POSED IN THE OIR.

CESA responds very briefly here to a few of the specific questions posed by the OIR. The fact that all of the questions are not addressed should not, however, be taken as lack of interest, because the CESA may comment more extensively on the responses of other parties to these and other questions in replies to initial comments that are currently due to be filed with the Commission on March 9.

“Principles and Criteria”

Question 1. Does the following list include the appropriate principles and criteria to guide the Commission’s decisions in this proceeding regarding the possible development of a smart grid in California? Explain any modifications you propose.

CESA response: CESA supports utility ownership of smart grid technology, including energy storage, and recommends adding an additional principle of “free market competition and open standards”, particularly for those components of the Smart Grid that will integrate with utility distribution systems. This global principle supports economic development in California, as well as the efficacy of interoperability and cost effectiveness.

“State of the Smart Grid in California”

Question 11. What progress has each utility made toward establishing a smart grid? In answering this question, please provide details on progress related to each of the ten characteristics identified in EISA § 1301 and repeated below:

...

g. Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.” (OIR, at page 17).

CESA Response: The Commission is by no means beginning with a clean slate in this OIR², and it is clear that the California investor owned utilities have made varying degrees of progress in recent years. Each utility is certainly well equipped to (and will of course) answer the question, but CESA’s simple response is that the tip of the iceberg has only begun to appear and there is considerable progress that need be made.³

² See e.g., the Commission’s recent decision adding a \$2 /KW incentive for advanced Energy Storage in California’s Self-Generation Incentive Program (D.08-11-044, issued November 1, 2008) in *Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues* (R.08-03-008, filed March 13, 2008).

³ See e.g., California Independent System Operator, January 6, 2009, *Discussion Paper, Participation of Limited Energy Storage Resources in CAISO Regulated Electricity Markets*.

“Standards as Part of a Smart Grid”

Question 12. Are standards needed as part of a smart grid? If so, in what areas are standards needed to integrate components into the grid, e.g., interoperability standards for distributed generation, distributed storage, plug-in hybrid and electric vehicles, home area networks, in-home displays, energy management systems, etc. (OIR, at page 18).

CESA Response: It is axiomatic that standards are required to achieve integration and interoperability of all technologies that are necessary elements of the smart grid. However, as has been shown in the software and telecommunications industries, technology innovation and cost effectiveness can be optimized by the existence of *open* standards. Finally, although there are efforts underway to address load management using permanent load shifting and dispatchable demand response, the results thus far are very limited and could be greatly expanded with modest additional interagency collaboration.⁴

“Deploying a Smart Grid in California”

Question 24. How should a smart grid be deployed? What should a utility do in order to successfully deploy smart grid technology? (OIR, at page 21).

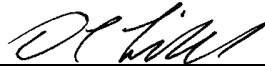
CESA Response: The answer to this question is complex and will require significant collaboration between utilities and the various stakeholders that will be involved in deploying California’s smart grid. CESA’s primary comment at this stage in the proceeding is to encourage the Commission to consider, in addition to the investor-owned utilities, the many other stakeholders needed to deploy the smart grid. CESA also encourages the Commission to consider non-traditional business models in addition to utility ownership and deployment of supply-side resources. For example, the smart grid may include microgrids that are owned and operated by third parties who will need to interface with utility distribution grids or, alternatively, demand-side resources that are owned and rate-based by utilities and the California Independent System Operator.

⁴ See e.g., California Energy Commission, November 25, 2008. *Proposed Load Management Standards - Committee Draft Report*, Docket # 08-DR-1.

IV. CONCLUSION.

CESA appreciates this opportunity to comment initially on the OIR, and looks forward to working with the Commission and other stakeholders to achieve the smart grid goals and objectives articulated in the EISA and by the Commission in the OIR.

Respectfully submitted,



Donald C. Liddell
DOUGLASS & LIDDELL

Counsel for the
CALIFORNIA ENERGY STORAGE ALLIANCE

Date: February 9, 2009

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of *Comments of the California Energy Storage Alliance on Order Instituting Rulemaking on California Development of a Smart Grid System* on all parties of record in proceeding *R.08-12-009* by serving an electronic copy on their email addresses of record and by mailing a properly addressed copy by first-class mail with postage prepaid to each party for whom an email address is not available.

Executed on February 9, 2009, at Woodland Hills, California.

A handwritten signature in cursive script that reads "Michelle Dangott". The signature is written in black ink and is positioned above a horizontal line.

Michelle Dangott

SERVICE LIST – R.08-12-009

a2mx@pge.com
ab1@cpuc.ca.gov
abb@eslawfirm.com
abesa@semprautilities.com
abonds@thelen.com
achang@nrdc.org
achuang@epri.com
aeg@cpuc.ca.gov
aeg@cpuc.ca.gov
ag2@cpuc.ca.gov
agarcia@energy.state.ca.us
agc@cpuc.ca.gov
ahmad.faruqui@brattle.com
ahsanstad@lbl.gov
aivancovich@caiso.com
akbar.jazayeri@sce.com
alan.comnes@nrgenergy.com
alex.kang@itron.com
alexm@calpine.com
alho@pge.com
allwazeready@aol.com
amber@ethree.com
amber@iepa.com
amckenna@caiso.com
ameliag@ensave.com
ames_doug@yahoo.com
andrea.horwatt@sce.com
andrew.wood3@honeywell.com
andrew_meiman@newcomb.cc
andy.goett@paconsulting.com
andy.vanhorn@vhcenergy.com
ann.kelly@sfgov.org
Ann.Peterson@itron.com
ann_mccormick@newcomb.cc
annette.beitel@gmail.com
annette.gilliam@sce.com
apetersen@rhoads-sinon.com
arg@enertechnologies.com
ashish.goel@intergycorp.com
ashley.watkins@energycenter.org
asloan@rs-e.com
atencate@rsgrp.com
atr@cpuc.ca.gov
atrial@sempra.com
atrowbridge@daycartermurphy.com
Audra.Hartmann@Dynegy.com
awatson@quest-world.com
AWilliamson@semprautilities.com
awp@cpuc.ca.gov
axl3@pge.com
barrettlarry@comcast.net
bbc@cpuc.ca.gov
bblair@thompsoncoburn.com
bboice02@yahoo.com
bboyd@aclaratech.com
bburns@caiso.com
bburt@macnexus.org
bcragg@goodinmacbride.com
bdicapo@caiso.com
bernardo@braunlegal.com
beth@beth411.com
bfinkelstein@turn.org
bgorban@treasurer.ca.gov
bhines@svlg.net
bill.c.key@fpl.com
bill@jbsenergy.com
bk7@pge.com
blaising@braunlegal.com
bmcc@mccarthyllaw.com
bmcdonnell@mwdh2o.com
bmfinkelor@ucdavis.edu
bob.ramirez@itron.com
bobbi.sterrett@swgas.com
bobgex@dwt.com
bobho@mid.org
BPrusnek@c-capital.com
brad.bergman@intergycorp.com
braun@braunlegal.com
brbarkovich@earthlink.net
brflynn@flynnrci.com
brian.hedman@quantecllc.com
brian.theaker@dynegy.com
Bruce@BuildItGreen.org
bsb@eslawfirm.com
bschuman@pacific-crest.com
bsk@cpuc.ca.gov
btang@ci.azusa.ca.us
c.greif@comcast.net
cab@cpuc.ca.gov
cadickerson@cadconsulting.biz
californiadockets@pacificcorp.com
carl.silsbee@sce.com
carla.peterman@gmail.com
case.admin@sce.com
Cassandra.sweet@dowjones.com
cbanks@complete-energy.com
cchen@ucsusa.org
CCole@currentgroup.com
cdamore@icfi.com
cec@cpuc.ca.gov
cem@newsdata.com
centralfiles@semprautilities.com
cf1@cpuc.ca.gov
cfpena@sempra.com
cft@cpuc.ca.gov
cheryl.collart@ventura.org
chh@cpuc.ca.gov
chilen@sppc.com
CHinman@caiso.com
chris.ohara@nrgenergy.com
chris@cuwcc.org
cjn3@pge.com
ckmitchell1@sbcglobal.net
clark.bernier@rlw.com
clark.pierce@us.landisgyr.com
claufenb@energy.state.ca.us
cleni@energy.state.ca.us
cln@cpuc.ca.gov
clyde.murley@comcast.net
cmartin@calpine.com
cmee@water.ca.gov
cmicsa@caiso.com
cmkehrin@ems-ca.com
cmmw@pge.com
cneedham@edisonmission.com
cpechman@powereconomics.com
cperkins@energycoalition.org
cpjoe@gepllc.com
cpuccases@pge.com
cpucdockets@keyesandfox.com
craigtyler@comcast.net
crmd@pge.com
crogers@energy.state.ca.us
crv@cpuc.ca.gov
cscruton@energy.state.ca.us
cxc@cpuc.ca.gov
Cynthia.A.Fonner@constellation.com
daking@sempra.com
dale@betterbuildings.com
danielle@ceert.org
danielle@ceert.org
dansvec@hdo.net
darmanino@co.marin.ca.us
Dave.Hanna@itron.com
dave@ppallc.com
david.gordon@efm-solutions.com
david.lloyd@nrgenergy.com
David.Pettijohn@ladwp.com
david.reed@sce.com
david.reynolds@ncpa.com
david@branchcomb.com
david@nemtzw.com
dbarker@semprautilities.com
dbeck@energy.state.ca.us
dbp@cpuc.ca.gov
dbr@cpuc.ca.gov

dbrown@energy.state.ca.us
dcarroll@downeybrand.com
dcengel@fscgroup.com
ddavie@wellhead.com
ddayton@cleanenergysol.com
deana.white@sce.com
deb@a-klaw.com
debra.lloyd@cityofpaloalto.org
dehling@kling.com
demorse@omsoft.com
dennis@ddecuir.com
DGarber@sempra.com
dgeis@dolphingroup.org
dgrandy@caonsitegen.com
dhn@cpuc.ca.gov
dhungerf@energy.state.ca.us
Diane.Fellman@nexteraenergy.com
dietrichlaw2@earthlink.net
dil@cpuc.ca.gov
dirk.vanulden@ucop.edu
djh@cpuc.ca.gov
dkolk@compenergy.com
dle@caiso.com
dmahmud@mwdh2o.com
dmahone@h-m-g.com
dmarcus2@sbcglobal.net
dmcfarlan@mwgen.com
dmg@cpuc.ca.gov
dnl@cpuc.ca.gov
don.arambula@sce.com
donaldgilligan@comcast.net
dorth@krcd.org
douglass@energyattorney.com
dpapapostolou@semprautilities.com
dpape@icfi.com
drebello@quest-world.com
dsandino@water.ca.gov
dserio@ecsgrid.com
duggank@calpine.com
dvidaver@energy.state.ca.us
dviolette@summitblue.com
dwithrow@caiso.com
dwood8@cox.net
dws@r-c-s-inc.com
dwyllie@aswengineering.com
ecrem@ix.netcom.com
ed.may@itron.com
edchang@flynnrci.com
edd@cpuc.ca.gov
edwardoneill@dwt.com
eemblem@3eintinc.net
efm2@pge.com
ehebert@energy.state.ca.us
ej_wright@oxy.com

ek@a-klaw.com
eks@cpuc.ca.gov
elaine.duncan@verizon.com
elaine.s.kwei@pjc.com
elee@davisenergy.com
ELL5@pge.com
elvine@lbl.gov
emahlon@ecoact.org
emello@sppc.com
eolson@navigantconsulting.com
eosann@starpower.net
epetrill@epri.com
epoole@adplaw.com
e-recipient@caiso.com
eric.miller@trilliantinc.com
eric@ethree.com
eric@strategyi.com
erik@erikpage.com
esprague@consol.ws
evkl@pge.com
ferguson@braunlegal.com
fhall@solarelectricsolutions.com
filings@a-klaw.com
flc@cpuc.ca.gov
fmason@ci.banning.ca.us
fmobasheri@aol.com
fred.coito@kema.com
fxg@cpuc.ca.gov
gandhi.nikhil@verizon.net
garwacrd@sce.com
gary.jordan@ge.com
garyi@enxco.com
gayatri@jbsenergy.com
gayres@energycoalition.org
gbawa@cityofpasadena.net
gdeshazo@caiso.com
george.getgen@ucop.edu
gesmith@ecsny.com
ghamilton@gepllc.com
gifford.jung@powerex.com
glbarbose@lbl.gov
glenn.haringa@ge.com
glw@eslawfirm.com
gmorris@emf.net
grant.cooke@intergycorp.com
grosenblum@caiso.com
gschott@reliant.com
gsenergy@sonoma-county.org
gstaples@mendotagroup.net
gthomas@ecoact.org
gtropsa@ice-energy.com
GXL2@pge.com
gxz5@pge.com
harry.singh@rbssempra.com

hayley@turn.org
hcf@cpuc.ca.gov
hcronin@water.ca.gov
hgilpeach@scanamerica.net
hhuerta@rhainc.com
higgins@newbuildings.org
hilary@newsdata.com
hoerner@redefiningprogress.org
hryan@smallbusinesscalifornia.org
htarpley@complete-energy.com
hvidstenj@kindermorgan.com
hxag@pge.com
HYao@SempraUtilities.com
igoodman@commerceenergy.com
ikwasny@water.ca.gov
irene.stillings@energycenter.org
irene@igc.org
ja_boothe@yahoo.com
jak@gepllc.com
janep@researchintoaction.com
janet.combs@sce.com
janreid@coastecon.com
jarmstrong@goodinmacbride.com
jay.bhalla@intergycorp.com
jay.birnbaum@currentgroup.com
jbazemore@emil.com
jbf@cpuc.ca.gov
jc8@cpuc.ca.gov
jcastleberry@rs-e.com
jcelona@sbcglobal.net
jchamberlin@strategicenergy.com
jchamberlin@strategicenergy.com
jci@cpuc.ca.gov
jcluboff@lmi.net
jderosa@ces-ltd.com
jdh@eslawfirm.com
jdr@cpuc.ca.gov
jeanne.sole@sfgov.org
Jeff.Hirsch@DOE2.com
jeff.lam@powerex.com
jeff@jbsenergy.com
jeffgray@dwt.com
JeffreyH@hellermanus.com
jellis@resero.com
jennifer.fagan@itron.com
jennifer.porter@energycenter.org
Jennifer.Shigekawa@sce.com
jerry@enemex.com
jerryl@abag.ca.gov
jesus.arredondo@nrgenergy.com
jf2@cpuc.ca.gov
jfieber@flk.com
jfuchs@padoma.com
jgeorge@water.ca.gov

jgoodin@caiso.com
jhe@cpuc.ca.gov
jhendry@sfgwater.org
jholmes@emil.com
jim.mayhew@mirant.com
jimflanagan4@mac.com
jimross@r-c-s-inc.com
jims@vea.coop
jjg@eslawfirm.com
jkarp@winston.com
jkz1@pge.com
jl2@cpuc.ca.gov
jlaun@apogee.net
jleslie@luce.com
jlin@strategen.com
jluckhardt@downeybrand.com
jm3@cpuc.ca.gov
jmcclain@caiso.com
jmcfarland@treasurer.ca.gov
jmcMahon@crai.com
jmeyers@naima.org
jmorrissey@cgsh.com
jnelson@psrec.coop
joc@cpuc.ca.gov
jody_london_consulting@earthlink.net
joe.paul@dynegy.com
john.cavalli@itron.com
john.rolle@ucop.edu
john@enactenergy.com
john@proctoreng.com
John_Newcomb@newcomb.cc
johnredding@earthlink.net
jolko@ci.colton.ca.us
jordan.white@pacificorp.com
jose@ceert.org
joshdavidson@dwt.com
joyce.leung@sce.com
joyw@mid.org
jpacheco@sempra.com
jparks@smud.org
js@clearedgepower.com
jsanders@caiso.com
jscancarelli@flk.com
jshields@ssjid.com
jsqueri@gmssr.com
jst@cpuc.ca.gov
jthorneamann@aceee.org
jtiffany@ase.org
judi.schweitzer@post.harvard.edu
judypau@dwt.com
julie.martin@bp.com
jweil@aglet.org
jwoodwar@energy.state.ca.us
jws@cpuc.ca.gov
jwwd@pge.com
jyamagata@semprautilities.com
jym@cpuc.ca.gov
k.abreu@sbcglobal.net
kalmeida@caiso.com
karen.lee@sce.com
karen@klindh.com
karl.brown@ucop.edu
kathleen.gaffney@kema.com
Kathryn.Wig@nrgenergy.com
katie@cuwcc.org
katie@iesolutionsllc.net
ka-wing.poon@sce.com
kcooney@summitblue.com
kd1@cpuc.ca.gov
kdsusel@navigantconsulting.com
kdw@cpuc.ca.gov
kdw@woodruff-expert-services.com
kea3@pge.com
keh@cpuc.ca.gov
keith.mccrea@sablax.com
kenneth.swain@navigantconsulting.com
kerry.eden@ci.corona.ca.us
kerry.hattevik@nrgenergy.com
kerry.hattevik@nrgenergy.com
kesposito@cbcatalysts.com
kevin.boudreaux@calpine.com
kfoley@sempra.com
kgrenfell@nrdc.org
kjk@kjkammerer.com
kjohnson@caiso.com
kjsimonsen@ems-ca.com
klatt@energyattorney.com
klewis@energy.state.ca.us
kmills@cxbf.com
kmkiener@cox.net
koconnor@winston.com
kowalewskia@calpine.com
kris.vyas@sce.com
ksims@siliconvalleypower.com
ksmith2@semprautilities.com
kswitzer@gswater.com
kwh@cpuc.ca.gov
kwong@semprautilities.com
kwz@cpuc.ca.gov
l_brown369@yahoo.com
larry.cope@sce.com
lau@cpuc.ca.gov
laura.genao@sce.com
laura.rooke@pgn.com
lcaentini@rsgroup.com
lcottle@winston.com
lettenson@nrdc.org
lex@consumercal.org
lguliasi@reliant.com
lhj2@pge.com
liddell@energyattorney.com
linda.sherif@calpine.com
lisa_weinzimer@platts.com
ljimene@smud.org
lkelly@energy.state.ca.us
lkostrzewa@edisonmission.com
Lkristov@caiso.com
lmarshal@energy.state.ca.us
lmh@eslawfirm.com
lms@cpuc.ca.gov
lp1@cpuc.ca.gov
lpark@navigantconsulting.com
LPaskett@FirstSolar.com
lterry@water.ca.gov
ltt@cpuc.ca.gov
luhler@riversideca.gov
LukeH@enalasys.com
lurick@sempra.com
lwisland@ucsusa.org
lwong@energy.state.ca.us
LWrazen@semprautilities.com
MAGq@pge.com
marcel@turn.org
marcie.milner@shell.com
marian.brown@sce.com
marilyn@sbesc.com
mark.s.martinez@sce.com
martinhomerc@gmail.com
mary.lynch@constellation.com
mary.tucker@sanjoseca.gov
Mary@EquipoiseConsulting.com
matt_sullivan@newcomb.cc
matthew.stclair@ucop.edu
mbaker@sbwconsulting.com
mbhunt@ucdavis.edu
mboccardo@dolphingroup.org
mc3@cpuc.ca.gov
mc4@cpuc.ca.gov
mclaughlin@braunlegal.com
mday@goodinmacbride.com
mdjoseph@adamsbroadwell.com
mdoughto@energy.state.ca.us
mflorio@turn.org
mgarcia@arb.ca.gov
mgillette@enernoc.com
mgm@cpuc.ca.gov
mharcos@rs-e.com
mharrigan@ase.org
michael.backstrom@sce.com
michael.cheng@paconsulting.com
michael.evans@shell.com
michael.gergen@lw.com

michaelboyd@sbcglobal.net
mike.montoya@sce.com
mike@calcerts.com
mimungi@energycoalition.org
mistib@comcast.net
mjaske@energy.state.ca.us
mjd@cpuc.ca.gov
mjs@cpuc.ca.gov
mkh@cpuc.ca.gov
mking@staplesmarketing.com
mkurtovich@chevron.com
mlewis@ctg-net.com
mlong@anaheim.net
mmazur@3PhasesRenewables.com
mmcguire@summitblue.com
mmcnaul@thompsoncoburn.com
mmoore@newportpartnersllc.com
mmw@cpuc.ca.gov
mniroula@water.ca.gov
mpa@a-klaw.com
mpyor@energy.state.ca.us
mramirez@sfwater.org
mrh2@pge.com
mringer@energy.state.ca.us
mrw@mrwassoc.com
mshames@ucan.org
msherida@energy.state.ca.us
msw@cpuc.ca.gov
MtenEyck@ci.rancho-cucamonga.ca.us
mterrell@google.com
mtierney-lloyd@enernoc.com
mvillar@nevpc.com
mwbeck@lbl.gov
mwt@cpuc.ca.gov
myuffee@mwe.com
NancyKRod@conSol.ws
nao@cpuc.ca.gov
nes@a-klaw.com
nfw@cpuc.ca.gov
nhernandez@isd.co.la.ca.us
nkarno@yahoo.com
nlong@nrdc.org
norman.furuta@navy.mil
npedersen@hanmor.com
nphall@tecmarket.net
nplanson@consumerpowerline.com
nprivitt@semprautilities.com
nrader@calwea.org
ntronaas@energy.state.ca.us
oren@ieor.berkeley.edu
Paul.karr@trilliantnetworks.com
paul.nelson@sce.com
paul.notti@honeywell.com
pcanessa@charter.net

pcg8@pge.com
perlism@dicksteinshapiro.com
peter.pearson@bves.com
pfoley@adamsbroadwell.com
pherrington@edisonmission.com
philha@astound.net
philm@scdenergy.com
pjacobs@buildingmetrics.biz
pmaltbaek@consumerpowerline.com
pmaxwell@navigantconsulting.com
pmiller@nrdc.org
pmills@semprautilities.com
pmschwartz@sbcglobal.net
policy.solutions@comcast.net
porter@exeterassociates.com
powerl@sonic.net
ppettingill@caiso.com
ppl@cpuc.ca.gov
psd@cpuc.ca.gov
pstoner@lgc.org
ptellegen@complete-energy.com
pvillegas@semprautilities.com
pw1@cpuc.ca.gov
pwuebben@aqmd.gov
rachel.harcharik@itron.com
rachel@ceert.org
rafi@pge.com
ralf1241a@cs.com
ralphdennis@insightbb.com
rbm4@pge.com
rcounihan@enernoc.com
RegRelCPUCcases@pge.com
regrelcpucases@pge.com
regrelcpucases@pge.com
rekl@pge.com
RemiT@hellermanus.com
remmert@caiso.com
rfox@intergycorp.com
rfreeh123@sbcglobal.net
rick_noger@praxair.com
rita@ritanortonconsulting.com
rkmoore@gswater.com
rknight@bki.com
rls@cpuc.ca.gov
rmccann@umich.edu
rmettling@bluepointenergy.com
rmm@cpuc.ca.gov
rmowris@earthlink.net
RNicholson@Semprautilities.com
rob@clfp.com
Rob@ConSol.ws
robert.keeler@sce.com
robertg@greenlining.org
rogerl47@aol.com

rogerl47@aol.com
rogerv@mid.org
ron.cerniglia@directenergy.com
rquattrini@energyconnectinc.com
rsa@a-klaw.com
rsapudar@energy.state.ca.us
rschmidt@bartlewells.com
rsmutny-jones@caiso.com
rsperberg@onsitenergy.com
RStoddard@crai.com
rwalthers@pacbell.net
rwinthrop@pilotpowergroup.com
saeed.farrokhpay@ferc.gov
salleyoo@dwt.com
Sami.Khawaja@quantecllc.com
samsirkin@cs.com
samuelk@greenlining.org
sap@cpuc.ca.gov
sara.oneill@constellation.com
sas@a-klaw.com
saw0@pge.com
sbarata@opiniondynamics.com
sbender@energy.state.ca.us
sberlin@mccarthyllaw.com
sbeserra@sbcglobal.net
sbuchwalter@icfi.com
scott.tomashefsky@ncpa.com
sculbertson@icfi.com
sdhilton@stoel.com
Sean.Beatty@mirant.com
sean.beatty@mirant.com
seb@cpuc.ca.gov
sehcc@pge.com
sem4@pge.com
sephra.ninow@energycenter.org
Service@spurr.org
sesco@optonline.net
sfirooz@firstwind.com
sford@caiso.com
Shannon@consciousventuresgroup.com
sharon.noell@pgn.com
shawn_cox@kindermorgan.com
shears@ceert.org
shess@edisonmission.com
sisser@goodcompanyassociates.com
sjameslehtonen@yahoo.com
ska@cpuc.ca.gov
skeehn@sempra.com
skg@cpuc.ca.gov
skh@cpuc.ca.gov
skihm@ecw.org
slda@pge.com
sls@a-klaw.com
smk@cpuc.ca.gov

snadel@aceee.org
snr@cpuc.ca.gov
snuller@ethree.com
sobrien@mccarthyllaw.com
southlandreports@earthlink.net
spatrick@sempra.com
srahon@semprautilities.com
srassi@knowledgeinenergy.com
srhl@pge.com
srovetti@sfgwater.org
srrd@pge.com
sscb@pge.com
sschare@summitblue.com
ssciortino@anaheim.net
ssmyers@att.net
Stacie.Schaffer@sce.com
staples@staplesmarketing.com
stephen.baker@constellation.com
stephen.morrison@sfgov.org
steve.koerner@elpaso.com
stevek@kromer.com
steven.huffman@morganstanley.com
steven.schleimer@barclayscapital.com
steven@iepa.com
steven@moss.net
sthompson@ci.irvine.ca.us
sue.mara@rtoadvisors.com
susan.munves@smgov.net
svn@cpuc.ca.gov
svs6@pge.com
swentworth@oaklandnet.com

tmcalister@flk.com
tmfry@nexant.com
tobinjmr@sbcglobal.net
tom@ucons.com
tomk@mid.org
Tony.Zimmer@ncpa.com
tory.weber@sce.com
traceydrabant@bves.com
trf@cpuc.ca.gov
trh@cpuc.ca.gov
troberts@sempra.com
tylerb@poweritsolutions.com
unc@cpuc.ca.gov
vjlw3@pge.com
vprabhakaran@goodinmacbride.com
vwood@smud.org
wamer@kirkwood.com
wblattner@semprautilities.com
wbooth@booth-law.com
wcm2@pge.com
wem@igc.org
wilkinson@es.ucsb.edu
william.ross@constellation.com
william.tomlinson@elpaso.com
wkeilani@semprautilities.com
WKR4@pge.com
wmc@a-klaw.com
wmcguire@fypower.org
wtr@cpuc.ca.gov
wvm3@pge.com
wwester@smud.org

tcorr@sempraglobal.com
tcr@cpuc.ca.gov
tcrooks@mcr-group.com
tcx@cpuc.ca.gov
tdarton@pilotpowergroup.com
tdillard@sppc.com
ted@energy-solution.com
TFlanigan@EcoMotion.us
thamilton@icfi.com
theresa.mueller@sfgov.org
thuebner@icfi.com
thunt@cecmail.org
tim.drennan@fpl.com
tim@marinemt.org
tjs@cpuc.ca.gov
tlmurray@earthlink.net
tbo@cpuc.ca.gov
tbrill@sempra.com
tburke@sfgwater.org
tcarlson@reliant.com
tconlon@geopraxis.com
ys2@cpuc.ca.gov
yxl4@pge.com
zaf@cpuc.ca.gov
zap@cpuc.ca.gov
ztc@cpuc.ca.gov
szhu@caiso.com
tblair@mwdh2o.com
wynne@braunlegal.com
ygross@sempraglobal.com