

**Comment 1 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) -
1st Workshop.**

First Name: Thomas

Last Name: McGuinness

Email Address: thmcguinness@earthlink.net

Affiliation:

Subject: GHG Regulations

Comment:

Many of the claims made by the IPCC have been disclaimed by a large number of scientists based on new information and careful review of the IPCC process. I would refer any member of the ARB staff to a website known as Icecap.com for a review of a wide range of articles on climate change, all of which provide references to scientific studies that discount manmade climate change due to GHG's. How does the ARB consider new information on a subject? Why not have a public hearing to consider the facts on what we really know before drastic measures are put into place?

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-06-26 07:47:12

No Duplicates.

Comment 2 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Nancy

Last Name: Comstock

Email Address: pursuit1@pacbell.net

Affiliation: Pumping Efficiency Testing Services

Subject: Energy Savings Demand Reduction with Pumping Systems

Comment:

I would like to suggest a program that provides pumping system efficiency testing, and pumping system energy efficiency improvement incentives for both water distributors and waste water systems. The incentives for improvements to pumping systems have been the CPUC's method of tracking energy savings and demand reductions. In particular a direct incentive for basic pump repairs and a more advanced Re-Commissioning Program that would include upgrading control systems and making adjustments to operations that will reduce energy and peak demand loads. The testing provided a pre improvement and post improvement scenario and documentation and gives the client information for an informed decision for improvement needs with and energy cost savings analysis.

If I can support with the development of such a program, please feel free to call.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-01 15:05:07

No Duplicates.

**Comment 3 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) -
1st Workshop.**

First Name: Peggy

Last Name: White

Email Address: pwhite@countyofglenn.net

Affiliation:

Subject: Use of wind power

Comment:

The draft plan does not identify the use of wind power as an alternative energy source. While maybe not applicable to all regions, there is a significant part of California that could benefit from wind power.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-02 14:40:07

No Duplicates.

**Comment 4 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) -
1st Workshop.**

First Name: Matt

Last Name: Rexroad

Email Address: matt@rexroad.com

Affiliation: Yolo County Board of Supervisors

Subject: Consideration of "County Smart" Program

Comment:

Local government, through its land use powers, can make a significant contribution to meeting the mandated reduction targets, but there is more we can do, lots more. Significant barriers to further action include limited funding, and the lack of a program to organize and educate individual citizens concerning what actions they can take, and how these actions, when added together with similar actions from other members of the community, produce tangible, visible results.

We are asking that you consider a program that will address both of these barriers. We have referred to it in our own discussions as "County Smart."

Attachment: www.arb.ca.gov/lists/sp-energy-ws/4-arbletter2-068__2_.doc

Original File Name: arbletter2-068 (2).doc

Date and Time Comment Was Submitted: 2008-07-04 12:42:05

No Duplicates.

**Comment 5 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) -
1st Workshop.**

First Name: David

Last Name: Bell

Email Address: seqnkc_mtwitney@sbcglobal.net

Affiliation:

Subject: Solar Panels

Comment:

I have installed solar panels on my house and received a rebate for those panels. If I want to install MORE panels on my house as I understand it I would not get a rebate on those panels.

Seems that a person is being discouraged for trying to further reduce their carbon footprint.

If I'm correct with that understanding, then how can we get it changed where we can get some help with the purchase of additional panels.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-13 12:34:14

No Duplicates.

Comment 6 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Thomas
Last Name: Bleakney
Email Address: tbleakne@keyway.net
Affiliation:

Subject: Urgency, Solar Electric accounting
Comment:

Thank you for giving me the opportunity to participate in your solicitation of public comment on July 8 in Diamond Bar. I was speaker #34. My main point:

I feel the plan does not go far enough to communicate the urgency of climate change and the sacrifice that the public will need to endure to eventually solve the problem.

I have one additional specific suggestion concerning what should be the proper accounting for solar electric installations. Recent careful studies (I believe in Arizona) show that, with current technology, it takes at least 3 years of operation of a solar electric array to pay back the energy required for the manufacture of that array. For areas of the state subject to frequent clouds, this time would be longer. This price is tolerable because the array should last for at least two decades. However, since the solar electric industry is growing in size about 30%/year, essentially all the power being generated from this source is being absorbed by the manufacturer of more solar arrays. Thus on a global basis, solar electric will only start to make a net contribution to the substitution of fossil fuels when either the solar cell technology changes or the growth curve becomes linear instead of exponential. Improvements in technology are very likely but not guaranteed, but eventually the growth curve will slow. In the meantime, however, I submit that some kind of correction factor needs to be used in counting growth in solar electric installations as part of the state's carbon-free credits.

At the very least, perhaps you should introduce a 3-year lag between when a solar array goes online and when you begin to count its energy contribution.

My source for this information, as well as the overall urgency of the problem, is an excellent lecture by Dr. Nate Lewis, professor of chemistry at Caltech. I strongly urge that one or more of your staff view the recording of this lecture, given at Caltech's Jet Propulsion Laboratory Feb 28, 2008 at web address:

<http://realserver1.jpl.nasa.gov:8080/ramgen/vod/av/2008/vk-lect/080228-vk1-WhereintheWorldWillOurEnergyComeFrom-AVC-2008-038.rv>

If the above link is garbled, you can find in on web page:
<http://jpl.nasa.gov/events/lectures/feb08.cfm>

Thank you.

Thomas Bleakney M.S. Physics
Claremont, CA

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-13 15:25:14

No Duplicates.

Comment 7 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Harvey
Last Name: Sherback
Email Address: harveysherback@yahoo.com
Affiliation:

Subject: Re: A Solar Solution To California's Water Shortages
Comment:

California Air Resources Board
ARB Board of Directors
Mary D. Nichols
Chairwoman

July 17, 2008

Dear Chairwoman Nichols, ARB Board of Directors & Staff,

Thanks for your many good works, your strong environmental stand is much appreciated. Here in California, we are told that the snow packs on our mountain tops are shrinking. There's less and less fresh water to share between our growing populations, farmers, ranchers and wildlife. Water is life.

The following article alerted me to the problem concerning the oil fired, natural gas, coal and nuclear power plants. They all use copious amounts of our nation's fresh water resource.

<http://planetsave.com/blog/2008/01/23/water-shortage-could-dry-up-nuclear-power-plants-in-southeast/>

Headline: U.S. WANTS TO CUT POWER PLANT WATER USAGE

Wed, 18 Jul 2007 20:32:16 GMT
Science Technology News
Author: Science News Editor

WASHINGTON, U.S. Department of Energy officials said thermoelectric power plants using coal, oil, natural gas and nuclear sources require significant amounts of water for cooling and are a major competitor for water resources. A 2000 study found electric power plants were the second largest U.S. user of fresh water, withdrawing 136 billion gallons of fresh water daily. Only agriculture used more water.

Energy Department officials said the goal is to achieve a "50 percent" reduction in power plant fresh water usage by 2015.

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The full article:

<http://www.earthtimes.org/articles/show/84367.html>

Solar electric roof shingles and solar electric panels use "no" water in the generation of clean renewable electricity. They have no moving parts, make no noise, cause no chemical reaction, require virtually no maintenance and are guaranteed on average for 25 years.

When one factors in the true cost of generating electricity including the use of water as well as the production of greenhouse gases and other toxic emissions, solar electricity leads the field with clean, low cost, renewable energy.

Governor Schwarzenegger has recently told us that due to climate destabilization, forest fires aren't just seasonal anymore, they're year round. This will add new competition for our already strained precious water resources.

California can improve its flexibility to cope with an uncertain water future by working to seriously reduce demand while practicing environmental stewardship.

Harvey Sherback

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-17 06:57:52

No Duplicates.

Comment 8 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Odell

Last Name: McWane

Email Address: omcwane@materialsite.com

Affiliation: McWane and Associates (materialsite.com)

Subject: Potential energy company responses to AB 32

Comment:

﻿ These comments are a heads up on what I call progressive energy companies, and nonprogressive energy companies, and their potential response to the greenhouse gas reduction requirements. Progressive energy companies are those companies committed to reducing greenhouse gas emissions and does what it takes to get the job done, including using qualified people in the appropriate disciplines. Nonprogressive energy companies on the other hand are those companies with a business as usual attitude, and make excuses why they cannot reduce greenhouse gas emissions.

What follows are some background information and details on how a progressive energy company would go about implementing the new greenhouse gas emission requirements, and how a nonprogressive energy company would respond to the requirements.

There are several techniques and technologies that can be used to reduce or eliminate greenhouse gas emissions. Some of these techniques and technologies are available today and are proven, and others are in various stages of development. What most if not all have in common is that they are limited by the availability, capability and weldability of the steels and alloys of construction. That is, the steels and alloys and their weldability are enabling technologies that make emission control techniques and technologies possible.

Progressive energy companies employ the three most important engineering disciplines for applying these enabling technologies, that is, the Mechanical Engineer, the Metallurgical/Materials Engineer, and the Welding Engineer. The mechanical engineer is responsible for the design and layout of the power plant mechanical equipment and components, which includes vessels, piping, valves, pumps, emission control equipment etc. This responsibility also includes the

design and operating temperatures and pressures of the equipment and components, the fuels used, and writing the mechanical equipment and component specifications. No one understands the design and operation of the mechanical equipment and components more than a person with a degree in Mechanical Engineering.

The metallurgical or materials engineer is responsible for the design, selection, evaluation, recommendation and application of the steels and alloys for the power plant components and emission control systems. No one understands the depth and breadth of the science and properties of steels and alloys more than a person with a degree in Metallurgical or Materials Engineering.

The welding engineer is responsible for determining the best processes, methods, and procedures to use to weld and join the steels and alloys for the power plant components and emission control systems, while maintaining the long term high temperature properties of the steels and alloys. No one understands the depth and breadth of the science of welding steels and alloys, and the complex microstructure and property changes taking place in the weld and base metal heat affected zones more than a person with a degree in Welding Engineering. Contrary to popular belief, metallurgical and materials engineering are not equivalent to welding engineering, and neither is any other engineering discipline. Welding is not a required field of study to receive the metallurgical, materials or other engineering degree.

A good example of these engineering disciplines working together correctly in a progressive energy company is that of reducing carbon dioxide emissions by increasing the power plant thermal efficiency. Increasing the thermal efficiency requires operating the steam power plant at higher temperatures and pressures which has a significant effect in reducing carbon dioxide emissions per kW of electricity produced. However operating at higher temperatures and pressures causes wear and tear on the steels and alloys of construction which can lead to premature component failures, plant outages, unreliable generation, and shorter plant life. Therefore, before adopting this emission control technique, the mechanical engineer in a progressive energy company would consult with the metallurgical or materials engineer to determine if there is a steel or alloy available that will last for the design life of the plant at the new higher temperatures and pressures proposed. If no steel is available the metallurgical or materials engineer may design the steel or alloy. Since the design of steels and alloys

can take many years, reducing emissions by improving the thermal efficiency may not be an immediately available option. Assuming a steel or alloy is available, or the steel can be designed in a shorter time period, the mechanical, and metallurgical or materials engineer would consult with the welding engineer to determine if the steel or alloy can be welded while maintaining its long term high temperature properties. If it can be welded, the thermal efficiency of the power plant can be improved, and the carbon dioxide can be reduced.

An actual real world example of nonprogressive energy companies not using these three engineering disciplines correctly, are the recent attempts of some utilities, their engineers, and designers to upgrade their plants by specifying advanced power plant steel SA335, Grade P91, 9Cr-1Mo-V steel pipe because of its long term high temperature properties. And as a result having the material fail prematurely due to improper fabrication, welding and heat treating procedures used by contractors. As a result of these failures the 2007 ASME Code was changed to include some guidelines on the proper handling of these steels. I don't think these handling guidelines will make much difference as long as nonprogressive energy companies continue the business as usual practice of using unqualified people to make welding, metallurgical and materials decisions. Only qualified people in the relevant disciplines will be able to interpret, understand and properly apply these guidelines. The ASME Code Committee is continuing to approve other high temperature steels and alloys as they become available through the design and development process. Unfortunately if the business as usual attitudes continue these newer advanced steels and alloys may not be specified and used because of a lack of understanding on how to fabricate, weld and heat treat these steels and alloys on the part of utilities, energy companies, and their engineers, designers and contractors.

When assigning greenhouse gas emission limits and investigating noncompliance to AB 32, the Air Resources Board should take into consideration whether the energy companies are using qualified people in the relevant disciplines, and are taking advantage of the high temperature properties of newer steels and alloys approved by the ASME Code to design and implement the Best Available Control Technology (BACT) for new and existing plants. In other words what are the excuses, and are they legitimate? The Best Available Control Technology is only as good as the best available qualified people in the relevant disciplines who

are designing and
implementing that technology

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-21 19:52:11

No Duplicates.

Comment 9 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: John

Last Name: Holtzclaw

Email Address: john.holtzclaw@sierraclub.org

Affiliation:

Subject: CCA and polluter pays

Comment:

. Make polluters pay for their emissions of greenhouse gases, using the resulting revenues to promote clean energy and aid low-income consumers. Limit sharply and verify any offsets. Do not link our program to any states with weaker emission standards.

. Promote and enable Community Choice Electricity Aggregation (CCA), which lets communities pool their buying power to generate clean power.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-28 17:53:50

6 Duplicates.

**Comment 10 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Carolyn

Last Name: Chase

Email Address: cdchase@sdearthtimes.net

Affiliation:

Subject: Community Choice Electricity Aggregation / Energy Independence

Comment:

Promote and enable Community Choice Electricity Aggregation (CCA), which lets communities pool their buying power to generate clean power.

Reform State regulations of utilities so that they can make as much ROI on renewable investments as they can off transmission lines that can import dirty power.

California's leadership on GHG reductions won't matter if the system is set up to allow importing of power that is emitting more GHG at the source. Ensure that any imported power into the state is mitigating for GHG or set incentives such that new transmission lines are not more profitable than energy independence investments - i.e. local solar power and wind.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-29 08:09:07

No Duplicates.

**Comment 11 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Carol

Last Name: Singleton

Email Address: quetzal4@charter.net

Affiliation:

Subject: Enable CCA

Comment:

Please promote and enable Community choice Electricity Aggregation (CCA) which lets communities pool their buying power to generate clean power.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-29 19:22:04

No Duplicates.

Comment 12 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Brent

Last Name: Eidson

Email Address: beidson@sandiego.gov

Affiliation: City of San Diego

Subject: Electricity Generation

Comment:

ETAC II. D.pp 4-6

- 1) The document is silent on distributed renewable generation, with the exception of solar PV.
- 2) A detailed discussion of the opportunities for landfill gas and wastewater treatment plant digester gas fueled electrical systems should be provided. The currently available biogas resources could provide California with approximately 950 MW of renewable electricity. The Plan should stress that the technology is fully developed. These technologies have been stymied for many the of same reasons discussed in the ETAAC Chapter 6 Agricultural Sector, Section II-A Manure to Energy Facilities starting on page 6-3. There should be a discussion of co-digestion system for garbage and/or green waste, along with wastewater treatment plant sludge.

Scoping Plan II B. 3 pg 21

- 1) This section refers to existing CEC and CPUC energy incentive programs. These programs do not provide adequate incentives for energy recovery systems that produce power or electricity. There are many examples of systems that do not fit the existing paradigm of energy conservation or self generation incentive programs, including: In-conduit hydroelectric energy recovery systems in water system piping; wastewater systems; and liquid and pressure reduction systems that produce power from utility and industrial gas piping systems. Additionally, there are not adequate incentives for creative energy conservation projects.
- 2) The disincentive for customers who use self-generated renewable electricity is that they can not receive the CPUC Public Goods supported energy efficiency incentives or grants. By allowing renewable energy users to participate in these programs would increase the availability and use of renewable energy.

Scoping Plan II B. 3 pg 25-45

- 1) Propane vehicle fuel systems did not receive the tax incentives from the air districts that the CNG and LNG received. This technology still exists and can service a large portion of the gasoline market that CNG has had trouble addressing due to its limited range and the access to CNG refueling stations.
- 2) Solar hot water systems are generally twice to three times more efficient than solar-electric systems. They are not covered in this section. The technology and its service network have been in place since 1978.
- 3) The plan is silent on landfill gas and wastewater digester gas, as well as the developing co-digestion digester gas. Only the developing agricultural manure methane producing systems are discussed.

- 4) Suggest adding the following to this table:
 - a. Renewable Energy Self Generation: including biogas, wind, in-conduit hydro and pressure reduction energy recovery stations for Self Generation applications
 - b. Renewable Energy for Sale: with the CPUC's providing the MPR for the energy sold, plus any associated costs to totally mitigate the carbon foot print for the fossil fuel avoided.
 - c. Combined Heat and Power: New system's total efficiency should exceed the delivered electrical efficiency of the State's electrical resources at the time of approval of interconnection.
 - d. Energy Recovery systems. See A: above. Additionally, there are many options for heat recovery from processes that could become cost effective once the full cost of mitigating the use a fossil fuel (nature gas) is associated with the use of the fuel though increased costs of the fuel or through incentives to conserve.
- 5) The Stationary Internal Combustion Engine Electrification section needs clarification. Many of these engines producing power have a specific purpose that can not be replaced by an electric motor. Many others, when transmission losses are taken into account, are producing power more efficiently than utility supplied electricity.
- 6) Carbon offsets should also be provided for certifiable temporary measures and installations. These could be traded to temporary uses of fossil fuels and electricity. That is, the credits generated by temporary shutting down a boiler for rehabilitation of a refinery process could be traded to the Circus who needs to heat, light and ventilate and their tents for the few months they are in town.

Scoping Plan and ETAC:

- 1) "Maximize economic benefits..." Combined Heat and Power (CHP), self generation, renewable energy (including all biogas systems) and power recovery systems can proliferate, as CHP did in the 1980s driven by the economic benefits provided by the CPUC, if the CPUC designs the rates and provides electricity buyback contracts that encourage their development. The MPR should either be substituted with a new system similar to the used in the 1980's Stand Offer Contracts, or the MPR needs to take into account the full cost of fossil fuel carbon mitigation. The investor owned utilities should not be allowed to negotiate prices lower than that set by the CPUC. Currently the utilities are encouraged to obtain a rate lower than the MPR from the renewable generator. Consequently, they have turned away many renewable electricity contract offered at the MPR.
- 2) The CPUC should redesign the electric rate structures to encourage conservation and to account for electricity's carbon foot print.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-30 11:23:07

No Duplicates.

Comment 13 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Edward

Last Name: Mainland

Email Address: emainland@comcast.net

Affiliation:

Subject: Electricity Sector -- 33%, CCA, FiT, Allowances

Comment:

- We are pleased to see CARB's recommendation for a 33% Renewables Portfolio Standard for electricity providers. This forward-thinking measure should be quickly be given the force of law for all utilities, either by regulatory action or by legislative enactment, or both.
- Community Choice Aggregation (CCA) allows city and county governments to pool the electricity-buying power of all local customers, which could help meet (or even exceed) the 33% renewable energy level. CCAs in advanced development stages, such as Marin County and San Francisco, include 51% renewable requirements in their plans. CCA is one of the most powerful GHG reduction measures available to cities and counties to comply with their responsibilities under AB 32. CARB's scoping plan should spell out CCA authority as a key tool provided under California law (AB 117, Migden) that grants local governments full power in planning for their energy supply.
- CARB should also recommend restructuring state law to allow energy price structures that are more favorable to renewable energy, such as feed-in tariffs, which ensure full compensation for renewable energy costs, plus a fair rate of profit.
 - Feed-in Tariffs (FiTs) need explicit backing in CARB's plan. FiTs are efficient tools for speeding adoption of renewable electricity generation and stabilizing market prices of new technologies. Already used in more than 37 countries, and under consideration in Michigan, Minnesota, Illinois and Rhode Island, FiTs establish a price for renewables—guaranteed for 20 years or more—based on the cost of producing that electricity plus a fair profit. These rates usually have a modest impact on customer bills compared to conventionally generated electricity. (In Germany, for example, the FiT cost to consumers equals the price of a loaf of bread per month.) FiTs allow manufacturers and renewable project developers to predict demand, and to invest with confidence. California should model its FiTs on those programs that have achieved significant growth of renewables. A FiT in California should be tied to meeting the state's goals for renewables.
- We support and remind CARB of the California Energy Commission's recommendation in the 2007 Integrated Energy Policy Report that any carbon trading system reduce allowances according to an appropriate evaluation of the effects of the renewable portfolio standard – in order to avoid over-supply of allowances.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-30 15:58:15

No Duplicates.

**Comment 14 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Telma

Last Name: Lopez

Email Address: telma.lopez@swgas.com

Affiliation: Southwest Gas Corporation

Subject: Comments of Southwest Gas Corporation

Comment:

The attached file contains the comments of Southwest Gas Corporation on the California Air Resources Board Climate Change Scoping Plan.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/19-carb_climate_change_draft_scoping_plan_comments_of_southwest_gas_corporation.pdf

Original File Name: CARB Climate Change Draft Scoping Plan Comments of Southwest Gas Corporation.pdf

Date and Time Comment Was Submitted: 2008-07-30 16:17:08

No Duplicates.

Comment 15 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: David

Last Name: Assmann

Email Address: David.Assmann@sfgov.org

Affiliation: City and County of San Francisco

Subject: City of San Francisco Comments on Electricity and Natural Gas

Comment:

The Draft Scoping Plan recognizes that some local governments are already very active in this field; however, many are not. Everything needs to be done to build the capacity of local governments to take action, not only in their own facilities, but to participate in the reduction of GHG's throughout their jurisdictions. First, Climate Change needs to be brought to the attention of local elected officials. CARB and the Governor's Office should sponsor workshops with elected officials of every city and county in California. This could be done in ten or so regional meetings. ARB, the Governor, the corresponding members of the state legislature, and local elected officials should meet to discuss the goals, the how this will impact their jurisdiction, their role, how to build their capacity in each local government, and how to build support in their jurisdictions. Second, they need assistance with the ability to take action. Technical assistance can be made available through contracts at the CEC and regional workshops and mentoring can be sponsored by ARB.

ARB expects the value of GHG emissions reduction to be determined through a market mechanism of offset trading; however, there are many activities that will not be part of the trading system due to the difficulty of documenting and monitoring 'additionality' and other necessary trading criteria. The Draft Scoping Plan stresses the need to expand energy efficiency and renewable energy programs; however, these are investment decisions that are made based on the value of those reductions. Given the vastly destructive 'potential' of Climate Change, previously calculated values are undoubtedly too low to have much impact on investment decisions. For example, the CPUC sets energy efficiency cost-effectiveness criteria that affect the investments made by PGC funded programs. That calculation must include what reductions can save in Climate Change impacts, ie avoided costs incurred on the 'adaptation' side.

New statewide requirements for existing buildings must be addressed through a combination of time-of-sale requirements as well as 'date certain' approaches. Air-sealing, ceiling and wall insulation, and solar water heating can dramatically reduce natural gas use. Development of these requirements can leverage existing experience of local ordinances and enforcement will require active participation of all local governments. Additionally, the real estate, remodeling, and repair industries should be engaged by CARB and the Governor's Office to enlist their participation. In the future, contractor or other State licensing should be contingent upon certification in GHG reduction

and monitoring of each license recipient's activity.

The State Board of Education needs to be engaged in the development and implementation of Climate Change curriculum as well as incorporation into the testing requirements. Teachers and schools are frequently overwhelmed by existing requirements and view 'new requirements' as just more work. Climate Change can be incorporated into existing work but in some cases it may mean supplanting existing activities. Teachers and schools need direction from the State Board.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-30 18:23:53

No Duplicates.

Comment 16 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Cory

Last Name: Brennan

Email Address: cory8570@yahoo.com

Affiliation: Green Leadership Consortium

Subject: Energy

Comment:

It is doubtful we will reach our energy targets unless incentives are provided for communities and individuals to step in with solutions. This means that incentives must be increased for individuals to provide their own energy needs, and communities must be given the option of pooling resources to buy green energy on the private market. Utilities are implementing solutions that are not the most sustainable solutions possible, such as burning waste, and are putting many millions into systems that will have to be redone in the future. It is vital that all sectors be allowed and encouraged to move forward with solutions and to implement them as quickly as possible. This goes against the grain of how many in government think (i.e. that only big governments and big companies can solve the problem), but that think has helped get us into this mess and at this point we need everybody to bring their solution to the table - we need big governments, we need big companies, but we also need to free, encourage and facilitate the individual and small and large communities both to act on local solutions as well. We simply will not meet our target otherwise, at the rate we're going.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-31 08:14:00

No Duplicates.

Comment 17 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Keith

Last Name: Nakatani

Email Address: knakatani@calhrc.org

Affiliation: California Hydropower Reform Coalition

Subject: Increasing Renewable Portfolio Standard requirements to 33 percent by 2020

Comment:

The California Hydropower Reform Coalition (CHRC) supports the overall objective of increasing Renewable Portfolio Standards (RPS) requirement to 33 percent by 2020, but we oppose weakening the definition of small hydro in current RPS statutes. Doing so will result in significant adverse environmental impacts. The key statute language that should be maintained is a facility that is 30 MW or less is not an eligible renewable energy resource if it will cause an adverse impact on instream beneficial uses or cause a change in the volume or timing of streamflow.

If the requirement is increased to 33 percent, purchase of out-of-state renewables will be important for entities such as PG&E. On June 20, 2008, as required, PG&E submitted a letter to the CPUC explaining why it intends to continue Phase 2 of a study assessing the physical and regulatory context for developing, purchasing, transmitting renewable energy from British Columbia (BC) for California RPS purposes. Both PG&E's letter and the Phase 1 study are attached. The key conclusions of PG&E's Phase 1 study include:

"X By 2016, BC could develop as much as 6,000 MW of small hydro.

"X BC small hydro currently would not be RPS eligible in California, because it would not meet our regulations. The study says: "The key obstacle to project success that must be modified by legislation is the definition of new small hydro generation."

"X Because current California standards "are the consensus result of a coalition effort, new efforts to qualify hydro...must be closely coordinated with those stakeholders."

CHRC is the leading organization in California addressing river and watershed restoration through the FERC hydropower relicensing process. CHRC was founded in 1997, we are a statewide coalition of more than 30 conservation, fishing, and recreation organizations, and have led efforts to secure numerous hydropower relicensing settlement agreements.

We are open to discussing efforts to achieve 33 percent, but oppose weakening the small hydro definition. We appreciate the opportunity to comment on this issue.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-31 10:27:58

No Duplicates.

**Comment 18 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Fiji
Last Name: George
Email Address: fiji.george@elpaso.com
Affiliation: El Paso

Subject: Comments from El Paso Corporation on the DRAFT Scoping Plan
Comment:

El Paso Corporation (El Paso) respectfully submits the attached comments on the Climate Change Draft Scoping Plan a framework for change (Scoping Plan) released on June 26, 2008.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/24-draft_scoping_plan_el_paso_comments_v5final_.pdf

Original File Name: DRAFT Scoping Plan El Paso Comments_v5final_.pdf

Date and Time Comment Was Submitted: 2008-07-31 11:24:02

No Duplicates.

**Comment 19 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Rory

Last Name: Cox

Email Address: rcox@pacificenvironment.org

Affiliation: Ratepayers for Affordable Clean Energy

Subject: Comments from Ratepayers for Affordable Clean Energy

Comment:

To whom it may concern,

Attached are comments respectfully submitted on behalf of Ratepayers for Affordable Clean Energy (RACE) regarding the implementation of AB32. Please feel free to contact me if there are questions or if there are problems opening the document.

Thank you for your leadership on this critical issue.

Yours,

Rory Cox
RACE Coalition coordinator

Attachment: www.arb.ca.gov/lists/sp-energy-ws/25-ab32_scoping_comments_race.pdf

Original File Name: AB32 Scoping Comments_RACE.pdf

Date and Time Comment Was Submitted: 2008-07-31 14:57:46

No Duplicates.

**Comment 20 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Jose
Last Name: Avila
Email Address: lvberlioz@hotmail.com
Affiliation: the living

Subject: electricity generation
Comment:

Dear Sirs:

It is time for this nation - and especially California, as we have always been at the vanguard of such things- to ween ourselves of this fossil fuel addiction and convert to renewable energy (i.e. wind, solar-active & passive- tidal etc.) for our electricity generation. And I don't mean some paltry goal of 30% by 2020 we should be shooting for at least 50%. And if done in conjunction with the mass production of plug in hi-breds not only do we impact the electrical generation sector, but we have a huge impact on transportation as well. This is not some pie in the sky figure, but a realistic goal, as per kilowatt hour wind power is almost as cheap as fossil fuel power is, and undoubtedly will come down even further, as will solar.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-31 20:37:01

No Duplicates.

Comment 21 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Sarah
Last Name: Hafer
Email Address: charityh@comcast.net
Affiliation:

Subject: A viable plan for a greener environment?
Comment:

August 1, 2008

Mary Nichols
California Air Resources Board
1001 "I" Street
PO Box 2817
Sacramento, Ca 95812

RE: AB 32 Scoping Plan: Sustainable and local food systems reduce
carbon emissions

Dear Chairperson Nichols and Members of the California Air
Resources Board,

I am writing on behalf of myself to urge you to take a more
comprehensive and effective approach to addressing the role of
sustainable agriculture and local food systems in the state's
strategy to reduce greenhouse gas emissions.

We call on the Air Resources Board, the California Department of
Food and Agriculture, and city and county governments to adopt a
wide range of policy, regulatory, research and funding measures
that support:

- Organic, water-and-energy-efficient sustainable farming
practices;
- Local food production, distribution and consumption, especially
to meet the needs of under served low-income communities; and
- On farm production of wind and solar energy.

These practices will reduce greenhouse gas emissions and provide
many additional benefits, including increased tax revenue for
cities and counties, better air and water quality, improved farm
worker and public health, reduced medical costs, and the creation
of local green collar jobs. Further, one recent paper concluded
that "Organic, sustainable agriculture that localizes food systems
has the potential to mitigate nearly thirty percent of global
greenhouse gas emissions and save one-sixth of global energy use."

We understand that there are a range of regulatory and market
based options available to the State Government to curb greenhouse
gas emissions. Given their lack of effectiveness in other regions,
we do not support Cap and Trade and Cap and Auction-based
approaches. We are supportive of approaches that:

- Effectively, rapidly and efficiently reduces carbon emissions in the timeframe outlined by law;
- Do not increase the emissions of other health harming pollutants;
- Have strong enforcement mechanisms, including criminal and civil consequences for entities that violate regulations, as well as large emitters of carbon pollution
- Ensure we transition completely away from a fossil-fuel based economy that disproportionately harms low-income communities and communities of color to one that is efficient and run on sustainable energy technologies;
- Are democratic, meaning that Californians have a say in all major efforts to reduce carbon emissions;
- Support early and current adopters of low-carbon practices, such as today's organic farmer and cities and counties enacting carbon action plans, and
- Do not give away free or drastically cost-reduced polluting rights to big polluters.

We look forward to an implementation of the California Global Warming Solutions Act that supports a low-carbon, sustainable and just food system with meaningful, effective and democratic regulatory approaches.

Yours Sincerely,

Sarah Hafer
Davis, CA

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-07-31 23:59:10

No Duplicates.

**Comment 22 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Garrett
Last Name: Fitzgerald
Email Address: gfitzgerald@oaklandnet.com
Affiliation: City of Oakland

Subject: Comments on Energy Sector
Comment:

Below are comments from the City of Oakland specific to the Energy section of the Draft Scoping Plan. These comments were also included in the City of Oakland's letter submitted to the General Comments section of this website.

1. Encourage Distributed Renewable Energy Generation
The Plan recommends increasing the utility renewable portfolio standard but does not address renewable distributed generation (RDG), which is typically not part of the utility portfolio. The State should extend policies that encourage RDG, such as feed-in tariffs for California Solar Initiative-eligible projects, self-service wheeling and tariffs for sale of RDG in master metered buildings, and re-opening direct access contracting to producers of clean, renewable electricity. The State should also provide incentives to local governments to achieve better than 33% use of renewable energy in their communities through a variety of mechanisms (e.g., local installations, pooled purchasing).

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-01 10:39:37

No Duplicates.

**Comment 23 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Martin

Last Name: Hopper

Email Address: msr.general.manager@gmail.com

Affiliation: M-S-R Public Power Agency

Subject: Climate Change Draft Scoping Plan

Comment:

M-S-R is pleased to have this opportunity to comment on the June 2008 Discussion Draft of the Climate Change Draft Scoping Plan. We have provided specific comments on three areas of concern: documentation of economic effects, market manipulation of carbon credit markets, and forced divestitures of existing resources. Our comments are attached in Adobe pdf format.

Attachment: [www.arb.ca.gov/lists/sp-energy-ws/29-
comments_of_msr_re_carb_jun_2008_scoping_document.pdf](http://www.arb.ca.gov/lists/sp-energy-ws/29-comments_of_msr_re_carb_jun_2008_scoping_document.pdf)

Original File Name: COMMENTS OF MSR RE CARB JUN 2008 SCOPING DOCUMENT.pdf

Date and Time Comment Was Submitted: 2008-08-01 11:48:42

No Duplicates.

**Comment 24 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Taylor
Last Name: Miller
Email Address: tmiller@sempra.com
Affiliation: Sempra Energy

Subject: Comments on Draft Scoping Plan
Comment:

Please see attached letter and detailed comments.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/30-se_draft_scoping_plan_comments_lrtm__2_.pdf

Original File Name: SE Draft Scoping Plan Comments LRTM (2).pdf

Date and Time Comment Was Submitted: 2008-08-01 12:49:13

No Duplicates.

**Comment 25 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Carol
Last Name: Misseldine
Email Address: cmisseldine@comcast.net
Affiliation: Green Cities California

Subject: Comments on Electricity and Natural Gas sector
Comment:

Comments from Green Cities California (GCC) on the Electricity and
Natural Gas sector of the AB 32 Draft Scoping plan, attached.

Attachment: [www.arb.ca.gov/lists/sp-energy-ws/31-
gcc_electricity_and_natural_gas_sector_comments.ab_32_draft_scoping_plan.doc](http://www.arb.ca.gov/lists/sp-energy-ws/31-gcc_electricity_and_natural_gas_sector_comments.ab_32_draft_scoping_plan.doc)

Original File Name: GCC Electricity and Natural Gas Sector Comments.AB 32 Draft Scoping
Plan.doc

Date and Time Comment Was Submitted: 2008-08-01 15:21:32

No Duplicates.

**Comment 26 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Laura

Last Name: Wisland

Email Address: lwisland@ucsusa.org

Affiliation:

Subject: Strong support for 33% RPS by 2020

Comment:

Please accept the attached comments from the Union of Concerned
Scientists in support of a 33% RPS by 2020.

Attachment: [www.arb.ca.gov/lists/sp-energy-ws/32-
ucs_electricity_comments_for_ab_32_draft_scoping_plan.pdf](http://www.arb.ca.gov/lists/sp-energy-ws/32-ucs_electricity_comments_for_ab_32_draft_scoping_plan.pdf)

Original File Name: UCS electricity comments for AB 32 draft scoping plan.pdf

Date and Time Comment Was Submitted: 2008-08-01 15:26:32

No Duplicates.

**Comment 27 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

This comment was posted then deleted because it was unrelated to the Workshop item or it was a duplicate.

**Comment 28 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Stephen
Last Name: Asztalos
Email Address: SJAsztalos@lbl.gov
Affiliation:

Subject: Increasing Renewable Portfolio Standards requirement
Comment:

Dear Board members,

As a physicist and concerned California resident I am writing to express support the objective of increasing Renewable Portfolio Standards (RPS) requirement to 33 percent by 2020. The science community is in general agreement that much more can be done to increase renewables in our energy portfolio, though significant breakthroughs await more dedicated Federal funds and coherent policies. I wish to inject that conservation is really the goal for the energy sector, being much more cost effective. It may be worthwhile to set a standard that achieves 33% or more, but allows for some fraction to be derived from conservation. Californians have demonstrated remarkable resourcefulness in their approach to energy conservation and surely additional inefficiencies can be overcome through intelligent conservation planning.

Dr. Stephen Asztalos
Oakland, CA

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-01 15:58:04

No Duplicates.

Comment 29 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Cathy

Last Name: Karlstad

Email Address: Cathy.Karlstad@sce.com

Affiliation: Southern California Edison

Subject: SCE's Comments on the Draft Scoping Plan

Comment:

Attached please find Southern California Edison Company's comments on the Draft Scoping Plan.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/36-sce_comments_on_carb_draft_scoping_plan.pdf

Original File Name: SCE Comments on CARB Draft Scoping Plan.pdf

Date and Time Comment Was Submitted: 2008-08-01 22:43:44

No Duplicates.

Comment 30 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Paul
Last Name: Gipe
Email Address: pgipe@igc.org
Affiliation: wind-works.org

Subject: Feed-in Tariffs Must be a Part of CARB's Plan

Comment:

If California is come anywhere near meeting it's current targets for renewable generation and reduction in greenhouse gases, it must implement a system of Advanced Renewable Tariffs immediately.

Advanced Renewable Tariffs are the moder version of electricity feed-in tariffs. They differentiate the prices paid for renewable generation (the tariffs) by technology, application, size, and resource intensity. By differentiating the tariff, development is more uniform geographically, more technologies are rapidly developed than otherwise, and more people can participate.

Advanced Renewable Tariffs are used in Germany, France, Spain, and now Switzerland. In Germany and Spain they have resulted in an astounding development of renewable energy.

Consider that in Germany alone Advanced Renewable Tariffs have resulted in the development of 70 TWh per annum of new renewable generation, that is after accounting for a modest amount of old hydro.

If California had as dynamic renewable energy market as Germany and reached the same level of development, California would now meet 25% of its electricity consumption (280 TWh/yr) from new renewables.

These advanced form of feed-in tariffs have been proven to be the most successful policy mechanism worldwide for the rapid development of massive amounts of renewable generation. And they've shown that they can do so at modest cost.

Let's do it, and do it now.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-04 09:47:02

No Duplicates.

**Comment 31 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Laura

Last Name: Wisland

Email Address: lwisland@ucsusa.org

Affiliation: Enviro, health, and renewable advocates

Subject: Broad coalition supports 33% RPS by 2020

Comment:

Please accept the following re-posted set of comments from a coalition of environmental, health, and renewable energy advocates. An earlier version of this letter was posted on Friday, Aug. 1, but it lacked one of the letter's signatories.

Thanks.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/38-group_carb_scoping_comments_33_rps.pdf

Original File Name: Group_CARB_scoping_comments_33_RPS.pdf

Date and Time Comment Was Submitted: 2008-08-04 09:52:17

No Duplicates.

Comment 32 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Joyce M

Last Name: Eden

Email Address: comment@sonic.net

Affiliation: West Valley Citizens Air Watch

Subject: Greenhouse Gas Sector 3. Electricity and Natural Gas

Comment:

GHG 3. Electricity and Natural Gas

West Valley Citizens Air Watch (WVCAW) Comments:

a. Solar: Photovoltaic. Clean, easy, almost maintenance free, lasts decades or more, good rebates. Just put it up and the sun does the rest.

The Appendices (C-54) state that 32/3 to 3/4 of electricity consumed in California is generated within state with the rest being imported from other Western states.

How much electricity does California use per year? How much total electricity do homes use per year? What is the average amount of electricity used by each home per year? What is the approximate % of owner occupied homes? What is the average income per owner occupied household? What if 20% of owner occupied homes installed photovoltaic panels on their roofs, how much electricity would be saved from the grid? What is the value of the top 20% of homes? What % of income would an average size array cost, e.g. 2.5kwh @ \$15,000? What if those with an income of \$125,000 and above had 1/2 the rebate of those making less than \$50,000 with a tiered system? The other 1/2 of that rebate could go to lower income homeowners.

If every school system in California put up one solar array on one school to start with approximately how much electricity would be saved from the grid? What if every municipality put a solar array on either their city hall or other building to start with how much electricity would be saved from the grid? Over time, it would pay for itself and greatly reduce or eliminate electric costs.

Why is it taking so long for even a million solar roofs to be installed? It is easy as the contractor works with the homeowner to decide on the size of the array based on use and budget, does the work, arranges the paper work, can directly arrange to get the rebate so the homeowner does not need to put up all the money, only the non-rebated portion, installation is relatively straightforward as is connection to the grid and does not take much time, is outside the house, so almost no interruption of every day life need take place, it is a benefit to the planet, and it brings ongoing great satisfaction.

Of course, for the majority of people cost is still the first obstacle. However, for a very large amount of Californians, based on their incomes, and the size of their houses, and southern and/or

western exposure that appears not to be an obstacle.

So it seems that most of those who could afford it are not participating. Yet most people are now aware of global climate change. Most people enjoy participating in helping out. What is the disconnect?

Our guess is that people do not understand how easy it is, and -- for those who could afford it -- perhaps do not understand that for them it is affordable. So education. Public Service Announcements (PSA with punch).

However, there is another problem. From looking at the parameters for individual and small business photovoltaic systems, it appears there would be monetary incentive from the private and/or stockholder owned corporations to keep homeowner generation down. This needs to be dealt with in this process. If the following information from the web from 2000 is still correct, the limit of the systems' size in California is 10 kWh. The limit on overall enrollment is 0.1% of 1996 peak demand. Why limit the size and amount of solar arrays? Why not have as many homeowners and small business owners and schools and cities put as much solar power on their roofs as they want? Let's generate as much solar power as people are willing to produce above what they use per year!

We note that Iowa has no limit of the size of renewable systems and no limit on overall enrollment.

Another issue is that in 2000 (and now), net metering customers are billed annually (good); however, excess generation is granted to the utility (counterproduction and disincentivizing). lses.org/netmeter.pdf Our understanding is that there was litigation settled approximately 2 years ago that now requires PG&E to pay 15¢ per kWh generated above net metering use per year and added into the grid (we do not have time to verify and document this). Better, but still not market rate. Why not incentivize people to generate extra solar electricity to put back into the grid by paying the same rate PG&E charges. On top of that, solar electricity is generated at peak daytime hours making it even more valuable both monetarily and energy-grid wise.

Right now individual home owners and others are subsidizing a giant private corporation and their stock owners. Net metering good, not getting paid retail for generating electricity and adding it to grid, unacceptable. Also disincentive. Real monetary compensation would create monetary incentive for homeowners, schools, municipalities, small businesses and small farms to install photovoltaic systems which produce electricity beyond their net metering zero out needs thus creating thousands of small generators contributing clean, renewable energy to the grid for all to use.

Those of us who generate extra electricity, above net, back to the grid are glad to contribute clean energy to the grid; however, since the electric company is a private for-profit corporation, they should pay us just compensation. No matter how much extra electricity we send to the grid per year, we still pay a charge each month to connect to the grid. It makes sense to pay to connect to the grid, but not if we are uncompensated for our contribution of clean energy to the grid.

On top of that, we'll guess that the clean energy claimed by PG&E

includes the extra electricity they get from our photovoltaic systems which we paid for ourselves (except for CA rebates -- thanks for making it possible!) and whatever infrastructure and subsidies to the utilities the taxpayers have paid for also.

Many members of West Valley Citizens Air Watch have installed solar photovoltaic systems on their own home roofs, some as long as 11 years ago.

We ask CARB to allocate a majority portion of any moneys generated by carbon fees to helping fund photovoltaic systems for homes, small businesses, schools and municipalities. Solar is a truly renewable resource abundant in California. Solar home and business installations will probably soon be able to be used to power forms of transportation such as plug-in hybrid vehicles, a convenient method of reducing GHG emissions from transportation and one which homeowners will be able to do themselves.

A significant portion of the moneys generated by carbon fees should also go towards helping fund wind turbines on the many small farms in California and rural dwellings. Of the 76,000 farms and ranches in California, it is surprising and heartening to learn that nearly half are classified in the smallest category. It is an asset to California to have and keep these farms viable. So solar and wind subsidies to these small enterprises in the middle and long run as the wind and solar investments pay for themselves (which will happen sooner as energy prices from the grid rise), will help enable them to keep them going. While, "one megawatt of solar panels installed on land can take eight acres or more, a one megawatt wind turbine would need only one acre of land." (California Institute for the Study of Specialty Crops report, Chapter 3, p. 18)

Again, it appears that the available rebates, subsidies and tax deductions are underutilized. Again, it is our guess this could be ameliorated through disseminating an understanding of the easiness of installation and connection to the grid, where possible, and the affordability based on available funding and future carbon fee fundings and pay back and especially benefit to the owner, society and the environment over the decades of use. These systems over time will appreciate in value for their owners.

The agglomeration of the energy produced from all these small installations will add up to a significant amount of reduction in GHG and toxic air emissions.

b. Natural Gas: In the short term, many if not most of the cement plants in California could substitute natural gas for the much higher CO₂ and toxic air contaminant producing fossil fuels such as coal and petroleum coke.

In a meeting with the BAAQMD and in subsequent written correspondence, the BAAQMD confirmed to WVCAW that Hanson Cement is equipped today to switch immediately from using petroleum coke to natural gas. It already has all the natural gas lines in place in the kiln and in fact currently uses a small amount of natural gas. This would greatly reduce in the short term both the CO₂ emissions (see CARB CO₂ chart) and the toxic air contaminants and small particulates.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-04 11:55:26

No Duplicates.

**Comment 33 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: SUE

Last Name: KATELEY

Email Address: INFO@CALSEIA.ORG

Affiliation: CALIF SOLAR ENERGY INDUSTRIES ASSOC

Subject: SOLAR GHG STRATEGIES

Comment:

PLEASE SEE ATTACHED

Attachment: www.arb.ca.gov/lists/sp-energy-ws/40-scoping_plan_final_comments.pdf

Original File Name: Scoping Plan Final Comments.pdf

Date and Time Comment Was Submitted: 2008-08-04 12:32:07

No Duplicates.

**Comment 34 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Tom

Last Name: Faust

Email Address: tfaust@redwoodrenewables.com

Affiliation: Redwood Renewables

Subject: Support Feed IN Tarrifs to Achieve AB32 33% Renewables Goal

Comment:

Each hour the Sun delivers to earth the amount of energy used by humans in a whole year. The Sun radiation onto earth corresponds to 120,000 TW. The Total human energy need in 2020 will be 20 TW! Solar energy is the only kind of energy that can solve the earth's energy problems and economically meet California's AB32 laws. PV will grow in the coming decades to be 100 times its current volume replacing fossil fuels, reducing climate gases and providing clean energy for California. The most effective support system, Feed in Tarrifs has already been proven to work in Germany and EU and is market tested by 450 million citizens. Attractive feed in tariffs without caps have demonstrated to be the most effective mechanisms for the rapid introduction of PV and other renewable energies. Californiq can easily meet its AB32 legal goals by adopting a Feed in Tariff law with no Caps similar to Germany.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/41-case_of_fit.pdf

Original File Name: Case of FIT.pdf

Date and Time Comment Was Submitted: 2008-08-04 12:38:57

No Duplicates.

Comment 35 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Diana

Last Name: Lee

Email Address: dil@cpuc.ca.gov

Affiliation: CPUC, Division of Ratepayer Advocates

Subject: Comments of DRA

Comment:

These comments were originally posted under Program Design; however, as they mostly address electricity-related issues, DRA is reposting them under the electricity sector comments.

If duplicative postings are removed, please remove the DRA comments under the Program Design category, and leave these comments here. Thank you.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/42-dra_comments_on_carb_draft_scoping_plan_.pdf

Original File Name: DRA_comments_on_CARB_draft_scoping_plan_.pdf

Date and Time Comment Was Submitted: 2008-08-04 14:17:16

No Duplicates.

**Comment 36 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Norman

Last Name: Pedersen

Email Address: npedersen@hanmor.com

Affiliation: Southern California Public Power Author

Subject: Southern California Public Power Authority Comment on Draft Scoping Plan
Comment:

Please find attached the Southern California Public Power Authority
Comment on Draft Scoping Plan submitted to the Air Resources Board
on 8/1/08.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/43-300226001nap08010801.pdf

Original File Name: 300226001nap08010801.pdf

Date and Time Comment Was Submitted: 2008-08-04 19:07:02

No Duplicates.

**Comment 37 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Debra

Last Name: Gallo

Email Address: cseghers@arb.ca.gov

Affiliation: Southwest Gas Corporation

Subject: Scoping Plan

Comment:

please see attached comments

Attachment: www.arb.ca.gov/lists/sp-energy-ws/45-7_30_08_southwestcorporation.pdf

Original File Name: 7_30_08_southwestcorporation.pdf

Date and Time Comment Was Submitted: 2008-08-05 11:41:28

No Duplicates.

**Comment 38 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Steven

Last Name: Kelly

Email Address: steven@iepa.com

Affiliation:

Subject: Comments of the Independent Energy Producers Association

Comment:

Comments of the Independent Energy Producers Association

Attachment: [www.arb.ca.gov/lists/sp-energy-ws/46-
iep_comments_on_carb_climate_change_draft_scoping_plan_--_final_8-6-08_.doc](http://www.arb.ca.gov/lists/sp-energy-ws/46-iep_comments_on_carb_climate_change_draft_scoping_plan_--_final_8-6-08_.doc)

Original File Name: IEP Comments on CARB Climate Change Draft Scoping Plan -- FINAL
(8-6-08) .doc

Date and Time Comment Was Submitted: 2008-08-06 11:49:58

No Duplicates.

**Comment 39 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

This comment was posted then deleted because it was unrelated to the Workshop item or it was a duplicate.

**Comment 40 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: William
Last Name: Westerfield
Email Address: wwester@smud.org
Affiliation: SMUD

Subject: SMUDs Comments
Comment:

Submitted August 1. Please contact Araceli if there are any
questions. 916 732-6447

Please use these comments for this section and not the ones
previously submitted.

Attachment: [www.arb.ca.gov/lists/sp-energy-ws/48-
smuds_complete_comments_on_ab_32_dsp.pdf](http://www.arb.ca.gov/lists/sp-energy-ws/48-smuds_complete_comments_on_ab_32_dsp.pdf)

Original File Name: SMUDs Complete Comments on AB 32 DSP.pdf

Date and Time Comment Was Submitted: 2008-08-06 15:06:26

No Duplicates.

**Comment 41 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Joy
Last Name: Warren
Email Address: joyw@mid.org
Affiliation:

Subject: Modesto ID Comments on June 2008 Discussion Draft Climate Change Draft Scoping
Plan

Comment:

Attached please find Modesto Irrigation District Comments on June
2008 Discussion Draft Climate Change Draft Scoping Plan

Attachment: [www.arb.ca.gov/lists/sp-energy-ws/49-
comments_on_carb_draft_scoping_plan__158347v1_.doc](http://www.arb.ca.gov/lists/sp-energy-ws/49-comments_on_carb_draft_scoping_plan__158347v1_.doc)

Original File Name: Comments on CARB Draft Scoping Plan [158347v1].DOC

Date and Time Comment Was Submitted: 2008-08-07 15:44:14

No Duplicates.

Comment 42 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Will

Last Name: Johnson

Email Address: will@visageenergy.com

Affiliation: Visage Energy

Subject: CCS as Climate Change Mitigation Tool for achieving AB 32 Goals

Comment:

According to AB 32 and the Executive Order S-3-05, the goal is to lower GHG emissions to 80% below the 1990 level by 2050. At what point will ARB begin to focus on CCS as a carbon mitigation tool as it was not addressed in their "Climate Change Draft Scoping Plan", June 2008 Discussion Draft? Obviously, at some point, CCS for the new and more importantly, existing electric generation will have to become one of the climate mitigation tools necessary to achieve these ambitious goals.

Projections indicate that natural gas supplies to California from the southwest and from Canada are forecasted to decline in the future; whereas, incremental electric power demand is forecasted to continue to increase. As demand continues to exceed supplies for world oil supplies, natural gas supplies will become more valuable as a feedstock for the petrochemical industry. Given the forecast for declining supplies of natural gas imported into California, has ARB contacted the National Energy Technology Laboratory about what can be done by the ARB to assist NETL with the acceleration of CCS technologies that will be available to California utilities?

California produces a large volume of gasoline; therefore, what is the substantial potential for burning petroleum coke produced in CA refineries for electricity generation for CCS projects in California. Currently, California is exporting this fuel to China and India where it is utilized and the emission footprint can be detected in CA, WA, OR, and the western Arctic a few weeks later. Given the difficulties in citing a new electric generation facility, has ARB collaborated with CEC on assisting CA utilities to formulate and develop a strategy for generation that utilized California produced petroleum coke?

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-08 09:31:20

No Duplicates.

Comment 43 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Nicole

Last Name: Smith

Email Address: nsmith@lgpatlaw.com

Affiliation: IP Attorney & Concerned Consumer

Subject: Clean Energy for our Grid

Comment:

Dear CARB:

Thank you for the time and effort put into the Draft AB 32 Scoping Plan. Your efforts put California on the forefront of dealing with the major problems of energy and climate change plaguing us today. Certainly, it is no easy task to create a solution when so little is known about the efficacy, efficiency and long-term viability of possible solutions.

Clean Energy Sources for the Grid: Examine Wind Energy

Currently, the draft scoping plan is vague in terms of which clean energy solutions CARB will pursue. Perhaps this is for political reasons or perhaps the scoping plan is vague because not much is known about how clean energy solutions compare to each other with respect to power capacity, environmental impact, reliability, and national security.

There are many possible solutions being promoted in today's marketplace, not all of which have realistic, long-term viability.

For this reason, I urge CARB to closely review unbiased research currently being done in universities in California and across the country. For example, Stanford's Atmosphere/Energy program in the school of Civil & Environmental Engineering is comparing various clean energies in search of energy solutions that are efficient, safe and have long-term viability.

Wind energy, though long treated as a fringe energy source, is emerging as the most powerful and efficient clean energy source available. Wind turbines harvest electrical energy that is exponentially greater than the velocity of the wind. Consequently wind energy is an "underdog" power solution that warrants further investigation and incentives.

Thank you for your time and effort in tackling the major problems facing us today. It is my sincere hope that CARB is not swayed by lobbyists promoting corporate causes but instead intertwines itself with solutions and research conducted by unbiased sources pointing CARB towards efficient, long-term energy solutions.

I wish you all the best of luck and wisdom as your actions will have lasting impact.

Sincerely,
Nicole Smith

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-10 21:28:17

No Duplicates.

Comment 44 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Karen
Last Name: Del Compare
Email Address: kdcyew@excite.com
Affiliation:

Subject: electricity from 100% renewable energy in 10 yrs
Comment:

On July 17, 2008 former vice-president Al Gore challenged this country to produce 100% of our electricity from renewable energy within 10 years. I strongly support Mr. Gore in this effort and request that CARB (California Air Resources Board) also adopt this goal.

The text of his speech can be found at the webpage below. I have also pasted it below for your convenience. Thank you for all your efforts to limit global warming and air pollution.

http://www.wecansolveit.org/pages/al_gore_a_generational_challenge_to_repower_america/

Mr. Gore's Speech:

"Ladies and gentlemen:
There are times in the history of our nation when our very way of life depends upon dispelling illusions and awakening to the challenge of a present danger. In such moments, we are called upon to move quickly and boldly to shake off complacency, throw aside old habits and rise, clear-eyed and alert, to the necessity of big changes. Those who, for whatever reason, refuse to do their part must either be persuaded to join the effort or asked to step aside. This is such a moment. The survival of the United States of America as we know it is at risk. And even more - if more should be required - the future of human civilization is at stake.

I don't remember a time in our country when so many things seemed to be going so wrong simultaneously. Our economy is in terrible shape and getting worse, gasoline prices are increasing dramatically, and so are electricity rates. Jobs are being outsourced. Home mortgages are in trouble. Banks, automobile companies and other institutions we depend upon are under growing pressure. Distinguished senior business leaders are telling us that this is just the beginning unless we find the courage to make some major changes quickly.

The climate crisis, in particular, is getting a lot worse - much more quickly than predicted. Scientists with access to data from Navy submarines traversing underneath the North polar ice cap have warned that there is now a 75 percent chance that within five years

the entire ice cap will completely disappear during the summer months. This will further increase the melting pressure on Greenland. According to experts, the Jakobshavn glacier, one of Greenland's largest, is moving at a faster rate than ever before, losing 20 million tons of ice every day, equivalent to the amount of water used every year by the residents of New York City.

Two major studies from military intelligence experts have warned our leaders about the dangerous national security implications of the climate crisis, including the possibility of hundreds of millions of climate refugees destabilizing nations around the world.

Just two days ago, 27 senior statesmen and retired military leaders warned of the national security threat from an "energy tsunami" that would be triggered by a loss of our access to foreign oil. Meanwhile, the war in Iraq continues, and now the war in Afghanistan appears to be getting worse.

And by the way, our weather sure is getting strange, isn't it? There seem to be more tornadoes than in living memory, longer droughts, bigger downpours and record floods. Unprecedented fires are burning in California and elsewhere in the American West. Higher temperatures lead to drier vegetation that makes kindling for mega-fires of the kind that have been raging in Canada, Greece, Russia, China, South America, Australia and Africa. Scientists in the Department of Geophysics and Planetary Science at Tel Aviv University tell us that for every one degree increase in temperature, lightning strikes will go up another 10 percent. And it is lightning, after all, that is principally responsible for igniting the conflagration in California today.

Like a lot of people, it seems to me that all these problems are bigger than any of the solutions that have thus far been proposed for them, and that's been worrying me.

I'm convinced that one reason we've seemed paralyzed in the face of these crises is our tendency to offer old solutions to each crisis separately - without taking the others into account. And these outdated proposals have not only been ineffective - they almost always make the other crises even worse.

Yet when we look at all three of these seemingly intractable challenges at the same time, we can see the common thread running through them, deeply ironic in its simplicity: our dangerous over-reliance on carbon-based fuels is at the core of all three of these challenges - the economic, environmental and national security crises.

We're borrowing money from China to buy oil from the Persian Gulf to burn it in ways that destroy the planet. Every bit of that's got to change.

But if we grab hold of that common thread and pull it hard, all of these complex problems begin to unravel and we will find that we're holding the answer to all of them right in our hand. The answer is to end our reliance on carbon-based fuels.

In my search for genuinely effective answers to the climate crisis, I have held a series of "solutions summits" with engineers, scientists, and CEOs. In those discussions, one thing has become abundantly clear: when you connect the dots, it turns

out that the real solutions to the climate crisis are the very same measures needed to renew our economy and escape the trap of ever-rising energy prices. Moreover, they are also the very same solutions we need to guarantee our national security without having to go to war in the Persian Gulf.

What if we could use fuels that are not expensive, don't cause pollution and are abundantly available right here at home?

We have such fuels. Scientists have confirmed that enough solar energy falls on the surface of the earth every 40 minutes to meet 100 percent of the entire world's energy needs for a full year. Tapping just a small portion of this solar energy could provide all of the electricity America uses.

And enough wind power blows through the Midwest corridor every day to also meet 100 percent of US electricity demand. Geothermal energy, similarly, is capable of providing enormous supplies of electricity for America.

The quickest, cheapest and best way to start using all this renewable energy is in the production of electricity. In fact, we can start right now using solar power, wind power and geothermal power to make electricity for our homes and businesses.

But to make this exciting potential a reality, and truly solve our nation's problems, we need a new start.

That's why I'm proposing today a strategic initiative designed to free us from the crises that are holding us down and to regain control of our own destiny. It's not the only thing we need to do. But this strategic challenge is the lynchpin of a bold new strategy needed to re-power America.

Today I challenge our nation to commit to producing 100 percent of our electricity from renewable energy and truly clean carbon-free sources within 10 years.

This goal is achievable, affordable and transformative. It represents a challenge to all Americans - in every walk of life: to our political leaders, entrepreneurs, innovators, engineers, and to every citizen.

A few years ago, it would not have been possible to issue such a challenge. But here's what's changed: the sharp cost reductions now beginning to take place in solar, wind, and geothermal power - coupled with the recent dramatic price increases for oil and coal - have radically changed the economics of energy.

When I first went to Congress 32 years ago, I listened to experts testify that if oil ever got to \$35 a barrel, then renewable sources of energy would become competitive. Well, today, the price of oil is over \$135 per barrel. And sure enough, billions of dollars of new investment are flowing into the development of concentrated solar thermal, photovoltaics, windmills, geothermal plants, and a variety of ingenious new ways to improve our efficiency and conserve presently wasted energy.

And as the demand for renewable energy grows, the costs will continue to fall. Let me give you one revealing example: the price of the specialized silicon used to make solar cells was recently as high as \$300 per kilogram. But the newest contracts have prices as

low as \$50 a kilogram.

You know, the same thing happened with computer chips - also made out of silicon. The price paid for the same performance came down by 50 percent every 18 months - year after year, and that's what's happened for 40 years in a row.

To those who argue that we do not yet have the technology to accomplish these results with renewable energy: I ask them to come with me to meet the entrepreneurs who will drive this revolution. I've seen what they are doing and I have no doubt that we can meet this challenge.

To those who say the costs are still too high: I ask them to consider whether the costs of oil and coal will ever stop increasing if we keep relying on quickly depleting energy sources to feed a rapidly growing demand all around the world. When demand for oil and coal increases, their price goes up. When demand for solar cells increases, the price often comes down.

When we send money to foreign countries to buy nearly 70 percent of the oil we use every day, they build new skyscrapers and we lose jobs. When we spend that money building solar arrays and windmills, we build competitive industries and gain jobs here at home.

Of course there are those who will tell us this can't be done. Some of the voices we hear are the defenders of the status quo - the ones with a vested interest in perpetuating the current system, no matter how high a price the rest of us will have to pay. But even those who reap the profits of the carbon age have to recognize the inevitability of its demise. As one OPEC oil minister observed, "The Stone Age didn't end because of a shortage of stones."

To those who say 10 years is not enough time, I respectfully ask them to consider what the world's scientists are telling us about the risks we face if we don't act in 10 years. The leading experts predict that we have less than 10 years to make dramatic changes in our global warming pollution lest we lose our ability to ever recover from this environmental crisis. When the use of oil and coal goes up, pollution goes up. When the use of solar, wind and geothermal increases, pollution comes down.

To those who say the challenge is not politically viable: I suggest they go before the American people and try to defend the status quo. Then bear witness to the people's appetite for change.

I for one do not believe our country can withstand 10 more years of the status quo. Our families cannot stand 10 more years of gas price increases. Our workers cannot stand 10 more years of job losses and outsourcing of factories. Our economy cannot stand 10 more years of sending \$2 billion every 24 hours to foreign countries for oil. And our soldiers and their families cannot take another 10 years of repeated troop deployments to dangerous regions that just happen to have large oil supplies.

What could we do instead for the next 10 years? What should we do during the next 10 years? Some of our greatest accomplishments as a nation have resulted from commitments to reach a goal that fell well beyond the next election: the Marshall Plan, Social Security, the interstate highway system. But a political promise to do

something 40 years from now is universally ignored because everyone knows that it's meaningless. Ten years is about the maximum time that we as a nation can hold a steady aim and hit our target.

When President John F. Kennedy challenged our nation to land a man on the moon and bring him back safely in 10 years, many people doubted we could accomplish that goal. But 8 years and 2 months later, Neil Armstrong and Buzz Aldrin walked on the surface of the moon.

To be sure, reaching the goal of 100 percent renewable and truly clean electricity within 10 years will require us to overcome many obstacles. At present, for example, we do not have a unified national grid that is sufficiently advanced to link the areas where the sun shines and the wind blows to the cities in the East and the West that need the electricity. Our national electric grid is critical infrastructure, as vital to the health and security of our economy as our highways and telecommunication networks. Today, our grids are antiquated, fragile, and vulnerable to cascading failure. Power outages and defects in the current grid system cost US businesses more than \$120 billion dollars a year. It has to be upgraded anyway.

We could further increase the value and efficiency of a Unified National Grid by helping our struggling auto giants switch to the manufacture of plug-in electric cars. An electric vehicle fleet would sharply reduce the cost of driving a car, reduce pollution, and increase the flexibility of our electricity grid.

At the same time, of course, we need to greatly improve our commitment to efficiency and conservation. That's the best investment we can make.

America's transition to renewable energy sources must also include adequate provisions to assist those Americans who would unfairly face hardship. For example, we must recognize those who have toiled in dangerous conditions to bring us our present energy supply. We should guarantee good jobs in the fresh air and sunshine for any coal miner displaced by impacts on the coal industry. Every single one of them.

Of course, we could and should speed up this transition by insisting that the price of carbon-based energy include the costs of the environmental damage it causes. I have long supported a sharp reduction in payroll taxes with the difference made up in CO2 taxes. We should tax what we burn, not what we earn. This is the single most important policy change we can make.

In order to foster international cooperation, it is also essential that the United States rejoin the global community and lead efforts to secure an international treaty at Copenhagen in December of next year that includes a cap on CO2 emissions and a global partnership that recognizes the necessity of addressing the threats of extreme poverty and disease as part of the world's agenda for solving the climate crisis.

Of course the greatest obstacle to meeting the challenge of 100 percent renewable electricity in 10 years may be the deep dysfunction of our politics and our self-governing system as it exists today. In recent years, our politics has tended toward incremental proposals made up of small policies designed to avoid offending special interests, alternating with occasional baby

steps in the right direction. Our democracy has become sclerotic at a time when these crises require boldness.

It is only a truly dysfunctional system that would buy into the perverse logic that the short-term answer to high gasoline prices is drilling for more oil ten years from now.

Am I the only one who finds it strange that our government so often adopts a so-called solution that has absolutely nothing to do with the problem it is supposed to address? When people rightly complain about higher gasoline prices, we propose to give more money to the oil companies and pretend that they're going to bring gasoline prices down. It will do nothing of the sort, and everyone knows it. If we keep going back to the same policies that have never ever worked in the past and have served only to produce the highest gasoline prices in history alongside the greatest oil company profits in history, nobody should be surprised if we get the same result over and over again. But the Congress may be poised to move in that direction anyway because some of them are being stampeded by lobbyists for special interests that know how to make the system work for them instead of the American people.

If you want to know the truth about gasoline prices, here it is: the exploding demand for oil, especially in places like China, is overwhelming the rate of new discoveries by so much that oil prices are almost certain to continue upward over time no matter what the oil companies promise. And politicians cannot bring gasoline prices down in the short term.

However, there actually is one extremely effective way to bring the costs of driving a car way down within a few short years. The way to bring gas prices down is to end our dependence on oil and use the renewable sources that can give us the equivalent of \$1 per gallon gasoline.

Many Americans have begun to wonder whether or not we've simply lost our appetite for bold policy solutions. And folks who claim to know how our system works these days have told us we might as well forget about our political system doing anything bold, especially if it is contrary to the wishes of special interests. And I've got to admit, that sure seems to be the way things have been going. But I've begun to hear different voices in this country from people who are not only tired of baby steps and special interest politics, but are hungry for a new, different and bold approach.

We are on the eve of a presidential election. We are in the midst of an international climate treaty process that will conclude its work before the end of the first year of the new president's term. It is a great error to say that the United States must wait for others to join us in this matter. In fact, we must move first, because that is the key to getting others to follow; and because moving first is in our own national interest.

So I ask you to join with me to call on every candidate, at every level, to accept this challenge - for America to be running on 100 percent zero-carbon electricity in 10 years. It's time for us to move beyond empty rhetoric. We need to act now.

This is a generational moment. A moment when we decide our own path and our collective fate. I'm asking you - each of you - to

join me and build this future. Please join the WE campaign at wecansolveit.org. We need you. And we need you now. We're committed to changing not just light bulbs, but laws. And laws will only change with leadership.

On July 16, 1969, the United States of America was finally ready to meet President Kennedy's challenge of landing Americans on the moon. I will never forget standing beside my father a few miles from the launch site, waiting for the giant Saturn 5 rocket to lift Apollo 11 into the sky. I was a young man, 21 years old, who had graduated from college a month before and was enlisting in the United States Army three weeks later.

I will never forget the inspiration of those minutes. The power and the vibration of the giant rocket's engines shook my entire body. As I watched the rocket rise, slowly at first and then with great speed, the sound was deafening. We craned our necks to follow its path until we were looking straight up into the air. And then four days later, I watched along with hundreds of millions of others around the world as Neil Armstrong took one small step to the surface of the moon and changed the history of the human race.

We must now lift our nation to reach another goal that will change history. Our entire civilization depends upon us now embarking on a new journey of exploration and discovery. Our success depends on our willingness as a people to undertake this journey and to complete it within 10 years. Once again, we have an opportunity to take a giant leap for humankind."

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-11 12:22:36

No Duplicates.

**Comment 45 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Lawrence

Last Name: Finne

Email Address: lfinne@unitedcogen.com

Affiliation: United Cogen, Inc.

Subject: Scoping Plan Comments - Boiler Efficiency

Comment:

Please refer to our attached "AB32 Scoping Plan Comments". These comments refer specifically to pages C115 & C-116, Sect D 'Industrial Boiler Efficiency'. Thank you for your consideration.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/53-ab_32_scoping_plan_comments.doc

Original File Name: AB 32 Scoping Plan comments.doc

Date and Time Comment Was Submitted: 2008-08-11 14:01:19

No Duplicates.

Comment 46 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Patrick

Last Name: Griffith

Email Address: pgriffith@lacsds.org

Affiliation: Los Angeles County Sanitation Districts

Subject: LACSD Comments on the ARB Draft Scoping Plan: Electricity and Natural Gas Strategies

Comment:

LACSD offers the following comments on the discussion concerning Electricity and Natural Gas Strategies in the Draft Scoping Plan:

1. Page C-58: The energy sector overlaps with many other GHG sectors including Local Government, Water, Recycling and Waste Management, etc.
2. Page C-62: On-site clean distributed generation (DG) to accomplish "zero net energy" buildings will be limited in the South Coast Air Basin because of stringent regulations that in effect remove reciprocating engines from the DG prime mover list.
3. Page C-64: Regulation of water efficiency by the CEC is redundant.
4. Page C-73: Besides market barriers, significant regulatory barriers stand in the way of CHP reaching its full market potential, not the least of which is availability of emission reduction credits (ERCs) and local AQMPs that make it difficult to install reciprocating engines running for any length of time during the day in small CHP systems. The Scoping Plan economic analysis needs to account for the reality of what "ultra-clean CHP" (Page C-75) really means.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-11 14:20:23

No Duplicates.

Comment 47 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Audrey
Last Name: Chang
Email Address: achang@nrdc.org
Affiliation: NRDC

Subject: NRDC Comments on Electricity and Natural Gas in Draft Scoping Plan and Appendices
Comment:

NRDC respectfully submits these comments on Electricity and Natural Gas in Draft Scoping Plan and Appendices.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/55-nrdc_comments_on_electricity_and_natural_gas_in_draft_plan_and_appendices.pdf

Original File Name: NRDC Comments on Electricity and Natural Gas in Draft Plan and Appendices.pdf

Date and Time Comment Was Submitted: 2008-08-11 14:48:37

No Duplicates.

**Comment 48 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Tiffany

Last Name: Rau

Email Address: Tiffany.Rau@hydrogenenergy.com

Affiliation: Hydrogen Energy International LLC

Subject: AB 32 Draft Scoping Plan - Carbon Capture and Storage

Comment:

On behalf of Hydrogen Energy International LLC, please accept the attached comments on the Climate Change Draft Scoping Plan, June 2008 Discussion Draft.

These comments will focus specifically on the role of carbon capture and storage (CCS) in enabling California to achieve the greenhouse gas emission reductions required by AB 32.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/56-hecommentsab32scopingplanaug1108.pdf

Original File Name: HECommentsAB32ScopingPlanAug1108.pdf

Date and Time Comment Was Submitted: 2008-08-11 15:13:03

No Duplicates.

**Comment 49 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Evelyn

Last Name: Kahl

Email Address: ek@a-klaw.com

Affiliation:

Subject: CAC/EPUC Comments on Draft Scoping Plan & Appendices

Comment:

Attached are the comments of the Cogeneration Association of California and the Energy Producers & Users Coalition to the Draft Scoping Plan & Appendices.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/57-cac.epuc_comments.pdf

Original File Name: CAC.EPUC Comments.pdf

Date and Time Comment Was Submitted: 2008-08-11 15:39:23

No Duplicates.

**Comment 50 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Taylor
Last Name: Miller
Email Address: TMiller@sempra.com
Affiliation:

Subject: Scoping Plan Appendices 8-11-08
Comment:

Sempra Energy Scoping Plan Appendices 8-11-08

Attachment: www.arb.ca.gov/lists/sp-energy-ws/58-secomments_8-11-08.pdf

Original File Name: SEComments 8-11-08.pdf

Date and Time Comment Was Submitted: 2008-08-11 16:40:49

No Duplicates.

**Comment 51 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: SUE

Last Name: KATELEY

Email Address: INFO@CALSEIA.ORG

Affiliation: CALIFORNIA SOLAR ENERGY INDUSTRIES ASSOC

Subject: COMMENTS ON APPENDICES

Comment:

Please see comments of CALSEIA on the Draft Scoping Plan
Appendices.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/59-scoping_plan_appendices_comments_8-11-08.pdf

Original File Name: Scoping Plan Appendices Comments 8-11-08.pdf

Date and Time Comment Was Submitted: 2008-08-12 12:16:55

No Duplicates.

**Comment 52 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Derek
Last Name: Walker
Email Address: dbwalker@edf.org
Affiliation: Environmental Defense Fund

Subject: EDF - Elec. & Nat. Gas comments
Comment:

Please accept the attached electricity and natural gas comments
from Environmental Defense Fund on the AB 32 draft Scoping Plan.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/60-edf_-_elec.____nat._gas_comments.pdf

Original File Name: EDF - Elec. & Nat. Gas comments.pdf

Date and Time Comment Was Submitted: 2008-08-12 15:15:30

No Duplicates.

**Comment 53 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Jim

Last Name: Antone

Email Address: jantone@ysaqmd.org

Affiliation: Yolo-Solano Air Quality Mgmt. District

Subject: Appliances/electronics

Comment:

The Air Resources Board should work with the appropriate utilities,
public agencies and industry to develop appliances and electronics
that do not continue to consume electricity while turned "off".

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-08-12 16:47:33

No Duplicates.

**Comment 54 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Nancy

Last Name: Rader

Email Address: nrader@calwea.org

Affiliation: California Wind Energy Association

Subject: CalWEA-LSA Comments on Draft Scoping Plan

Comment:

Attached please find the comments of the California Wind Energy Association (CalWEA) and the Large-scale Solar Association (LSA) on the ARB's draft Scoping Plan.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/62-calwea-lsa_comments_on_ab32_draft_scoping_plan__8-13-08_.pdf

Original File Name: CalWEA-LSA_comments_on_AB32_Draft_Scoping_Plan_8-13-08_.pdf

Date and Time Comment Was Submitted: 2008-08-13 17:21:03

No Duplicates.

**Comment 55 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Cathy
Last Name: Karlstad
Email Address: Cathy.Karlstad@sce.com
Affiliation: Southern California Edison

Subject: Southern California Edison's Comments on Draft Scoping Plan Appendices
Comment:

Attached are SCE's comments on the Draft Scoping Plan Appendices.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/63-sce_comments_on_draft_scoping_plan_appendices.pdf

Original File Name: SCE Comments on Draft Scoping Plan Appendices.pdf

Date and Time Comment Was Submitted: 2008-08-14 10:40:46

No Duplicates.

**Comment 56 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Steven

Last Name: Kelly

Email Address: steven@iepa.com

Affiliation:

Subject: Comments of the Independent Energy Producers

Comment:

These are the comments of the Independent Energy Producers
Association regarding Appendix C of The CARB Climate Change Draft
Scoping Plan.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/64-iep_comments_on_appendix_c_-_final-8-14-08.doc

Original File Name: IEP Comments on Appendix C - FINAL-8-14-08.doc

Date and Time Comment Was Submitted: 2008-08-14 17:08:22

No Duplicates.

Comment 57 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Andy

Last Name: Katz

Email Address: Andyk@ggbreathe.org

Affiliation:

Subject: Feed-In Tariff - Implementation of 33% RPS

Comment:

See attached letter.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/65-scoping_plan_-_feed_in_tariff_-_33_rps_final.doc

Original File Name: Scoping Plan - Feed in Tariff - 33% RPS FINAL.doc

Date and Time Comment Was Submitted: 2008-08-18 17:30:54

No Duplicates.

**Comment 58 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Eric

Last Name: Wong

Email Address: eric.r.wong@cummins.com

Affiliation: California Clean DG Coalition

Subject: Comments on CHP Recommendation of the Draft Plan

Comment:

See attachment for the Comments of the California Clean Distributed
Generation Coalition on Combined Heat and Power.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/66-ccdc_draft_ab_32_plan_comments-final.doc

Original File Name: CCDC Draft AB 32 Plan Comments-Final.doc

Date and Time Comment Was Submitted: 2008-08-20 14:07:17

No Duplicates.

Comment 59 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Dominic

Last Name: DiMare

Email Address: sharjer@lawpolicy.com

Affiliation: Alliance for Retail Energy Markets

Subject: AReM Comments to CARB on the Draft Scoping Plan

Comment:

On behalf of the Alliance for Retail Energy Markets, please find the attached comments regarding AB 32. If you have any questions regarding this document, please contact me at the number provided above.

Dominic F. DiMare

Attachment: www.arb.ca.gov/lists/sp-energy-ws/68-arem_comments_to_carb_on_the_draft_scoping_-september_19.doc

Original File Name: AReM Comments to CARB on the Draft Scoping -September 19.doc

Date and Time Comment Was Submitted: 2008-09-19 10:11:18

No Duplicates.

**Comment 60 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Michelle

Last Name: Passero

Email Address: mpassero@tnc.org

Affiliation:

Subject: TNC Supplemental Comments re: Solar Energy in the Desert

Comment:

Attached are supplemental comments on the Draft Scoping Plan from
The Nature Conservancy regarding solar energy in California
Deserts.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/69-tnc__scoping_plan_comments_solar.doc

Original File Name: TNC Scoping Plan Comments Solar.doc

Date and Time Comment Was Submitted: 2008-09-19 13:54:34

No Duplicates.

**Comment 61 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Evelyn

Last Name: Kahl

Email Address: ek@a-klaw.com

Affiliation:

Subject: Comments on Scoping Plan Measure Documentation Supplement

Comment:

Attached are the Comments of CAC and EPUC on the Scoping Plan
Measure Documentation Supplement.

Attachment: [www.arb.ca.gov/lists/sp-energy-ws/70-
epuc.cac_comments_on_measure_supplement.pdf](http://www.arb.ca.gov/lists/sp-energy-ws/70-epuc.cac_comments_on_measure_supplement.pdf)

Original File Name: EPUC.CAC Comments on Measure Supplement.pdf

Date and Time Comment Was Submitted: 2008-09-24 16:16:30

No Duplicates.

Comment 62 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Jim

Last Name: Cormack

Email Address: jim_cormack@transcanada.com

Affiliation: TransCanada's GTN and North Baja System

Subject: Comments on Draft Scoping Plan

Comment:

Attached please find TransCanada's GTN System and North Baja System comments on the Climate Change Draft Scoping Plan.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/71-transcanada_draft_scoping_plan_comments.pdf

Original File Name: transcanada_draft_scoping_plan_comments.pdf

Date and Time Comment Was Submitted: 2008-09-26 09:14:02

No Duplicates.

**Comment 63 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Paul

Last Name: Lemar, Jr.

Email Address: pll@rdcnet.com

Affiliation: U. S. Clean Heat and Power Association

Subject: Comments on Behalf of USCHPA

Comment:

USCHPA respectfully requests that ARB address these comments in
adopting the final Scoping Plan.

Attachment: www.arb.ca.gov/lists/sp-energy-ws/72-uschpa_ab_32_comments_final.pdf

Original File Name: USCHPA AB 32 Comments FINAL.pdf

Date and Time Comment Was Submitted: 2008-09-26 12:06:33

No Duplicates.

Comment 64 for Energy Comments for the GHG Scoping Plan (sp-energy- ws) - 1st Workshop.

First Name: Sophie

Last Name: Lapaire

Email Address: Sophie@bridgemakersconsulting.com

Affiliation:

Subject: Electrical savings -simple solutions

Comment:

When facing a looming crisis like global warming and dwindling non-renewable resources, we must all come together and decide to make a difference in every aspects of our lives.

One thing that really bothers me is when I drive in the evening and see empty business buildings with lights on on every floor for no particular reason. That's a lot of energy wasted and CO2 produced to light ceilings and empty offices.

California is leading the country in energy efficiency but this issue and many other low hanging fruits should be tackled. It would save money to companies, cities that could be used for other more important things.

Please consider these simple and low tech solutions in your plan that will make a huge difference in no time if we all do it.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-09-29 21:07:49

No Duplicates.

**Comment 65 for Energy Comments for the GHG Scoping Plan (sp-energy-
ws) - 1st Workshop.**

First Name: Scott
Last Name: Johnson
Email Address: sjohnson@ucdavis.edu
Affiliation: California Wind Energy Collaborative

Subject: Distributed Renewable Energy
Comment:

Please view the attached letter for our comments on the Draft
Scoping Plan.

Thank you,

C.P. "Case" van Dam, Henry Shiu, Scott Johnson
California Wind Energy Collaborative
Department of Mechanical and Aeronautical Engineering
University of California, Davis
One Shields Avenue
Davis, CA 95616-5294
<http://cwec.ucdavis.edu/>

Attachment: www.arb.ca.gov/lists/sp-energy-ws/74-cwec_comments_on_scoping_plan.pdf

Original File Name: CWEC comments on Scoping Plan.pdf

Date and Time Comment Was Submitted: 2008-10-02 11:30:35

No Duplicates.

Comment 66 for Energy Comments for the GHG Scoping Plan (sp-energy-ws) - 1st Workshop.

First Name: Tracey
Last Name: Drabant
Email Address: traceydrabant@bves.com
Affiliation: Bear Valley Electric Service

Subject: Climate Change Draft Scoping Plan
Comment:

Please see attached letter

Attachment: www.arb.ca.gov/lists/sp-energy-ws/75-bves_comments_on_climate_change_draft_scoping_plan_100208.pdf

Original File Name: BVES comments on Climate Change Draft Scoping Plan 100208.pdf

Date and Time Comment Was Submitted: 2008-10-02 16:05:09

No Duplicates.

There are no comments posted to Energy Comments for the GHG Scoping Plan (sp-energy-ws) that were presented during the Workshop at this time.