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CALIFORNIA

July 22, 2008

Governor Arnold Schwarzenegger
State Capitol Building
Sacramento, CA 95814

RE: Achieving a 33% Renewable Portfolio Standard

Dear Governor Schwarzenegger:

Sierra Club California appreciates the opportunity to provide input to the Governor's office for the state's renewable energy program. We believe that moving to adopt a 33% Renewable Portfolio Standard (RPS) goal this year should be an urgent priority. It is necessary for meeting AB 32 climate protection goals, for improving air quality, and for reducing reliance on depleting fossil fuel resources.

The only current target for the electric sector is to achieve 20% renewables by 2010. This date will soon be upon us, and as yet there is no required course of action for 2011 and beyond. Utility companies are regulated and work on a 10-year planning horizon, meaning that commitment to long-term power supply agreements— for up to 20 years duration— are already in the works. Regulators, including the CPUC, CEC, ISO, CARB, the SWRCB, and Regional AQMDs, as well as utility companies, need to have renewable energy targets written into law in order to move forward in this matter. Delay risks missing opportunities to redirect the planning process and achieving the 33% goal.

At this point it is obvious that California's renewable energy portfolio standard law needs to upgrade both the targets and the rules under which it operates. Other states have adopted RPS laws and made significant strides in building renewable energy. In 2007 Texas reached a total installed wind capacity of over 5000 megawatts. In that same year California only built about 60 megawatts of wind turbines, a dismal performance. California once led the world in renewable energy and we need to regain our leadership. Doing so will require significant reforms in the RPS law to remove current regulations that have a built-in bias against renewable energy, and replace these with rules that support the state's goals for clean energy.

Sierra Club agrees with most of the guidance policies provided by the Governor's staff as well as comments by other environmental organizations.

To supplement these, we offer the following analysis of what we see as necessary to achieve a successful renewable program:

Eliminate the Market Price Referent: There is broad agreement between the Governor's office, the Sierra Club and other environmental groups that the current system of evaluating renewable contracts against the future projected price of natural gas power — the so-called Market Price Referent (MPR) — is flawed. While several other states have been moving ahead dramatically in building renewable energy, California has stagnated, in significant part because of an inadequate renewable contract evaluation system.



There are several reasons why the MPR system does not work well. Natural gas prices are highly volatile and pose a great risk for project developers who have to guess what the future price of natural gas will be estimated to be by state regulators in the year they sign a contract. It takes years to line up investors, secure optimal sites and perform environmental reviews prior to signing a contract with a utility company. During that time, the MPR will be adjusted every year up or down, as 10- to 20-year natural gas power price forecasts are modified in response to current market conditions. Choosing natural gas as the basis for competition creates the most volatile possible price risk.

By contrast, natural gas power plants are guaranteed full recovery of the future price of natural gas in their contracts, and utilities are guaranteed to be able to pass this on to customers in the form of future rate increases. Since natural gas can account for up to 80% of the operating expense of a natural-gas power plant, nearly all the commercial risk of the power plant is automatically passed on to utility customers. But if developers of renewables face years of poor wind resource or underperforming technology, they bear that risk fully. In other words, renewable energy has to take a risk that natural gas power plants do not. It is obvious why renewable energy usually loses in this system.

Compounding the problem, official projections for future natural gas prices have usually been in error, greatly underestimating the real cost. This means that proposed renewable contracts have to “compete” against their competitors’ fictitious low price. In such a regulatory environment, renewables lose, even when they provide better customer value over the long term.

For these reasons we strongly support your position of removing the Market Price Referent methodology and replacing it with “reasonability” criteria.

Change the “Least Cost/Best Fit” Criteria to “Planning for Renewables”: In addition to the Market Price Referent, the current method of approving a renewable contract uses the principles of “Least Cost” and “Best Fit.” Each of these has problems:

- The “least cost” criterion places renewable contracts directly in competition with natural gas contracts. Thus, even if the Market Price Referent (MPR) system is nominally eliminated, the “least cost” criterion, if it is not changed, may result in essentially the same outcome as described above: a built-in price bias against renewables.
- “Best fit” requires that individual renewable power supply contracts fit into the dominant energy supply pattern that is already mostly filled by existing nuclear, coal, and natural gas generators. A transition to a renewable supply system needs to look at how all the power supply and demand elements will fit into the future state of the “clean” electric system. Shifting to major reliance on renewable power — ideally, 33% or more — will require a holistic, “whole system” planning vision and rational design for all other resources to “fit” with more renewables, rather than the other way around. This planning process was recommended by the California Energy Commission in the 2007 IEPR.

Feed-in Tariffs: Payment structures such as tax credits and standard offer contracts have been successful at building renewable energy.

These are most effective when the following principles are adopted:

- They are performance-based, offering payment for actual kilowatt-hours delivered
- Payments allow full cost recovery and fair profit to investors & developers
- Payment levels are fixed in advance and provide long-term market stability



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While federal tax credits have built most of the wind power in the US, there have been frequent lapses in the credit. This has led to a “boom-and-bust” cycle in the wind industry that has stifled the growth of domestic manufacturing capacity. In this uncertain policy climate, investors are hesitant to commit money to manufacturing capacity, and wind farm developers have difficulty growing their business.

Well designed Feed-in Tariffs would allow the state to take charge of its own incentive structure for renewable energy without subjecting developers to the risks of arbitrary federal tax policy. Under a Feed-in Tariff, the Investor-Owned Utilities (IOUs) would provide fixed contract terms and prices — for each renewable technology — that allow full cost recovery, plus a reasonable rate of profit.

This system has been very successful when proper prices are established. Indeed, full cost recovery plus a fair rate of return has always been a standard regulatory principle for utility companies, especially for assets that they own. It is a powerful incentive that is responsible for building most of the nation’s electric infrastructure. Feed-in tariffs apply this same effective principle to renewables, and have been established in many countries throughout the world. Michigan, Minnesota and a few other states are currently considering establishing Feed-in Tariffs, while California is experimenting with this payment structure for a couple of narrow applications. Adopting a well-designed Feed-in Tariff program for a range of renewable technologies would remove several barriers to their development.

Prioritizing Local Renewables v. Transmission: While transmission costs need to be recovered, this should not become an excuse to have “transmission-only” solutions to getting more renewables. There needs to be a way to “level the playing field” or even give preference to local power resources, particularly since this is a principle in the loading order that improves efficiency and reliability.

Protect Community Choice (CCA) & Competitive Market Structure: We are concerned that “cost allocation” of renewable energy supplies to “all customers” not be turned into “stranded costs” that utilities could charge to departing CCA customers without the CCA customers getting the benefit of the renewable power. Charging steep fees to customers who want to develop alternative energy plans will tend to stifle competition with utility companies, especially from CCAs. Either: 1) stranded costs should never be passed on to departing CCA customers for renewables, and the extra renewable percentage would accrue to utilities, or 2) if costs are imposed in an exit fee, then the utility contract should be required by law to specify that a CCA has the option to take delivery of the power that they are paying for. We also urge adoption of the CEC’s recommendation in the IEPR that distributed generation, including renewables, fuel cells and cogeneration, be made a real priority and be exempted from any surcharges.

New CCAs might need flexibility in achieving RPS targets in the first few years, until they can build their own facilities. Since IOUs take away a community’s share of renewable energy at the commencement of a CCA, they may need a larger amount of RECs than IOUs to achieve compliance. These should have a “sunset” provision which expires after a reasonable time, say 5 to 7 years, after which CCAs would have the same REC limits as applied to IOUs.

Problem with “cap” on rate impact of renewables. While protecting customers from unreasonably high rate impacts from renewable energy is a great idea, there needs to be some caution around the idea of a “cost cap” on renewables. Even though this sounds good in “marketing” terms, as stated it appears



biased against renewables, since the same criteria would never be applied to natural gas or nuclear power even though these energy sources have often resulted in larger rate impacts than renewables.

Conventional power supplies have routinely increased customer rates from 2% to 6% per year for decades. It is important to take into consideration that the cost of renewables are largely “fixed” upfront at the time they are built, because most of the cost is tied up in the capital investment. Natural gas power plants, on the other hand, have up to 80% of their cost tied up with fuel that will not be purchased until near the time of use. This exposes natural gas power to an open-ended price risk. Historically, this risk is highly biased toward increasing prices — with an average increase of over 190% over 10 year intervals for the last half century.

Therefore, any “cap” on rate impact of renewable energy should take into account the upward price risk inherent in existing conventional generation. In addition, using understated projections of natural gas prices—as discussed above—will make it look like renewables have a bigger “upward” rate impact than they really do.

Expand the RPS to allow for innovation and energy recovery systems. RPS definition of renewable energy should be expanded in two ways. 1) include innovative technologies, such as using natural static electricity (e.g., as Tesla and Marks proposed); the current definition is biased toward concepts that are already well known and this discourages potential breakthroughs, 2) all recovery of thermal, kinetic, pressure, osmotic, or other energy to generate electricity when no – or minimal – additional fossil fuel input is required.

Prioritize RECs from local resources. Unbundled REC purchases should be allowed, for all load-serving entities, from local or on-site power projects without limitation, e.g., from on-site or community solar or wind generation projects. These could be owned by customers, third parties, coops, etc., and a premium price allowed that reflects extra benefits from avoided use of the grid. In addition to prioritizing in-state RECs, there should be a cap on the use of RECs imported from out of state.

Elimination of Penalty Caps: The CEC has recommended eliminating the \$25 million per utility cap on non-compliance with the RPS, which is a sound and necessary reform of the law, given the lack of progress to date in increasing renewables. Some consideration might also be given to narrowing the “loopholes” that allow the CPUC complete latitude in deciding whether to impose fines or not, especially since not one penny has been imposed to date despite the poor compliance track record.

Inclusion of MUNIs in the RPS: MUNIs should be required at a minimum to achieve the same RPS levels as the IOUs, but compliance rules should be left to the MUNIs, with the exception of the definition of renewable energy for RPS compliance.

Work to overcome Supply Chain limitations: Part of the RPS law should be to stimulate “in-state” manufacturing of renewable energy products, such as solar panels, wind turbines, etc., both of which have been under supply constraints globally. This would help eliminate a major barrier to renewables as well as help reduce costs. An example of such a principle at work is LADWP, which gives higher rebates to solar systems using locally manufactured panels.

Prevent Grabbing of Expiring Contracts: There is a real risk of one utility grabbing expiring renewable contracts away from another utility to claim an “increased renewable portfolio” and “reduced GHGs.” This is already a risk to SMUD, and is similar to buying RECs from existing projects, which adds nothing overall of benefit to the public or environment. This behavior should be restricted so that one utility does not increase its renewables by reducing the renewables of another.



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Adopt Improved Sustainability Standards for Renewables: Not all energy sources labeled under current law as “renewable” are equally sustainable in terms of environmental impacts or energy supply. The Geysers geothermal resource was developed by essentially poking holes in the ground and allowing the underground steam to escape into the atmosphere. This process releases both greenhouse gases as well as toxic materials. It has also reduced the steam resource to where today the Geysers only produce half the power they did at

their peak. Modern technology uses a “binary” process that re-injects the steam into the ground and prevents the release of toxics and greenhouse gases while protecting the steam resource. We have seen poor environmental practices at the Altamont wind site which resulted in excessive bird kills. The impact and sources of biofuels, large-scale development of solar power in the desert, toxic materials in certain types of solar panels, and other issues should be addressed and standards developed for proper use of resources. Unfortunately, these issues are not always adequately addressed in the environmental review process.

In devising California’s standards, we need to ensure we do not lose valuable resources, and that we do nothing to harm the environment we are striving to protect and improve. With these issues addressed, we can have a renewable portfolio standard for California that demonstrates sustainable development of renewable energy.

Sincerely,

Jim Metropulos
Senior Advocate

cc: Senate President pro Tempore Don Perata
Senator Darrel Steinberg
Senator Christine Kehoe
Senator Joe Simitian
Assembly Speaker Karen Bass
Assembly Speaker Emeritus Fabian Nunez
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