

Environment California Research & Policy Comments on the Proposed Concept Outline for the California Renewable Electricity Standard

November 19, 2009

Environment California Research & Policy Center appreciates the opportunity to comment on the Proposed Concept Outline for the California Renewable Electricity Standard (RES).

Environment California is a statewide nonprofit environmental advocacy organization with more than 200,000 members and online activists. We've been heavily engaged in issues surrounding renewable electricity in California and appreciate the opportunity to comment on how best to establish what promises to be the nation's strongest renewable energy mandate of 33% by 2020 per Executive Order S-14-08.

The most important elements of a strong renewable electricity standard (RES) are as follows:

- A big, bold immovable target that makes up the core of the mandate itself coupled with penalties for noncompliance;
- Application of the RES to all utilities in the state;
- Interim targets to ensure progress along the way;
- Strong, clean definition of eligible renewable energy that excludes non-renewable resources and that prioritizes those technologies with the greatest promise including distributed generation;
- Reasonable flexibility to accommodate roadblocks out of the control of the regulated energy providers can be appropriate but unnecessary loopholes that render the mandate unenforceable are counterproductive.

In addition to elaborating on the points above, we also provide comments on specific elements of the concept outline below.

APPLICABILITY

All load-serving entities should be required to comply with the RES, including California electrical corporations, electric service providers, community choice aggregators, electrical cooperatives, and local publicly owned electric utilities. Environment California would not be opposed to exclusion of the smallest entities, such as utilities that provide for less than a few hundred thousand customers. The issue of burden is often raised not only for utility size but also for those utilities that are heavily invested in hydroelectric power. The argument is that these utilities should not be required to divest from their existing hydro resources in order to meet their RES obligations. To address this concern while still incorporating those utilities with heavy hydro investments, ARB include language that would require the RES obligations to "kick in" once additional resources are needed to service the utility's service area or once existing contracts are expired. The principle of the matter is that all utilities in California, whether they be small or those that are currently heavily invested in hydropower, should be required to invest in renewable energy to meet their new or future energy needs.

ELIGIBILITY

California's 33% by 2020 RES should accomplish multiple goals including reducing carbon dioxide and other air pollutants, diversifying our energy supplies, commercializing the most promising renewable energy technologies, promoting energy efficiency and enhancing economic development and green jobs.

Aiming for these goals, Executive Order S-21-09 directs ARB to place the highest priority on those resources that "provide the greatest environmental benefits with the least environmental costs and impacts on public health that can be developed most quickly and that support reliable, efficient, cost-effective electricity system operations."

Under these guidelines, it is clear which technologies should qualify for California's RES and which should not. In short, Environment California supports maintaining existing definitions of renewable energy with two exceptions: the Stanislaus County MSW incinerator and biomass discussed further below. Environment California strongly opposes adding large hydroelectric power, nuclear power, non-organic municipal solid waste to California's renewable energy eligible technologies and we also strongly oppose loosening or disregarding existing limitations placed on small or so-called "run of river" hydroelectric facilities.

Solar, wind, geothermal, etc.

Per existing statute defining eligible renewable energy technologies, we support including solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, digester gas, landfill gas, ocean wave, ocean thermal, or tidal current, and any additions or enhancements to the facility using that technology.

Given the near limitless potential for distributed generation resources, particularly solar power, we think ARB should give special care to ensure these technologies are not only included but prioritized as a way of meeting the RES obligations. This said, ARB should be careful to not create "double dipping" with already existing programs such as the Million Solar Roofs Initiative. Such a situation would be created if ARB allowed distributed generation to be subtracted from calculating a regulated entity's RES obligations. Currently in California, the green or renewable energy attributes of a solar electric facility owned by a customer-generator, instead of a utility, are owned entirely by the customer and not the utility. If the utility wants to count the renewable energy attributes of a solar roof they have to purchase the REC from the customer. The only exception to this is if the solar system generates surplus electricity over the course of a year and the customer signs a surplus compensation agreement with their utility, then only that electricity purchased by the utility can count toward meeting the utilities renewable energy obligations (see AB 920 –Huffman- for details) We suggest that ARB continue this policy to avoid confusion with the existing RES and to help promote the maximum amount of distributed generation in California.

Hydroelectric

We strongly support ARB's proposal to continue California's exclusion of large hydroelectric power plants from the RES. Large hydroelectric power plants have extreme and irreversible environmental impacts that outweigh any carbon benefits the facilities may provide. Furthermore, given the expense and length of time needed to develop most large-scale hydroelectric facilities, they would hardly qualify as "greatest environmental benefits with the least environmental costs and impacts on public health that can be developed most quickly" as called for in the Executive order.

We also support including small hydroelectric generation of 30 megawatts or less provided they comply with existing restrictions designed to ensure that the dam will not “cause an adverse impact on instream beneficial uses or cause a change in the volume or timing of stream flow. However, we *oppose* weakening existing limitations on even small hydroelectric facilities, such as would be required to include hydroelectric facilities under consideration in British Columbia.

Municipal Solid Waste

We oppose inclusion of municipal solid waste in California’s RES. The loophole in existing statute affecting the 20% by 2010 RPS that includes the incinerator in Stanislaus County should be sunset with the RPS and not included in the RES. Moving forward, California’s RES should be devoid of facilities that utilize municipal solid waste. If ARB feels it necessary to include municipal solid waste, it should be that used only in facilities that meet the strict limitations in existing statute (25741 PRC):

(3) For the purposes of this subdivision, “solid waste conversion” means a technology that uses a noncombustion thermal process to convert solid waste to a clean-burning fuel for the purpose of generating electricity, and that meets all of the following criteria:

(A) The technology does not use air or oxygen in the conversion process, except ambient air to maintain temperature control.

(B) The technology produces no discharges of air contaminants or emissions, including greenhouse gases as defined in Section 38505 of the Health and Safety Code.

(C) The technology produces no discharges to surface or groundwaters of the state.

(D) The technology produces no hazardous wastes.

(E) To the maximum extent feasible, the technology removes all recyclable materials and marketable green waste compostable materials from the solid waste stream prior to the conversion process and the owner or operator of the facility certifies that those materials will be recycled or composted.

(F) The facility at which the technology is used is in compliance with all applicable laws, regulations, and ordinances.

(G) The technology meets any other conditions established by the commission.

(H) The facility certifies that any local agency sending solid waste to the facility diverted at least 30 percent of all solid waste it collects through solid waste reduction, recycling, and composting.

Environment California strongly urges ARB to resist including controversial and environmentally-unproven waste-to-energy technologies. Significant uncertainty remains regarding the environmental performance, public health risks, and impacts to recycling from thermochemical conversion technologies. Like incinerators, many of the processes defined as biorefineries by proponents, heat solid waste to temperatures known to produce dioxins, one of the most carcinogenic substances known to humankind.

Biomass

We support including biomass facilities in California’s RES but suggest that ARB look carefully at these technologies to ensure that they will result in carbon pollution benefits and won’t lead to increased air pollution in already heavily polluted regions in the state such as the Central Valley.

Nuclear

Environment California strongly supports ARB’s proposal to exclude nuclear power from the state’s RES. There is no other technology that fails to qualify for the parameters of greatest environmental benefit, least environmental impact, lowest cost and quickest development timeline than nuclear power.

A recent report, [*Generating Failure: How building nuclear power plants will set America back in the fight against global warming*](#), released by Environment California details why nuclear power would actually hurt our abilities to fight global warming. Some of the conclusions of the report include:

- Nuclear power is too slow to contribute to this effort. No new reactors are now under construction in the United States. Building a single reactor could take 10 years or longer. As a result, it is quite possible that nuclear power could deliver **no progress** in the critical next decade, despite spending billions on reactor construction.
- Even if the nuclear industry somehow managed to build 100 new nuclear reactors by 2030, nuclear power could reduce total U.S. emissions of global warming pollution over the next 20 years by only 12 percent -- far too little, too late.
- In contrast, energy efficiency and renewable energy can immediately reduce global warming pollution. Energy efficiency programs are already cutting electricity consumption by 1-2 percent annually in leading states, and the U.S. wind industry is already building the equivalent of three nuclear reactors per year in wind farms. America has vast potential to do more.
- Building 100 new reactors would require an up-front investment on the order of \$600 billion dollars – money which could cut at least twice as much carbon pollution by 2030 if invested in clean energy. Taking into account the ongoing costs of running the nuclear plants, clean energy could deliver 5 times more pollution-cutting progress per dollar.
- Nuclear power is not necessary to provide clean, carbon-free electricity for the long haul. The need for base-load power is exaggerated and small-scale clean energy solutions can actually enhance the reliability of the electric grid.

Combined Heat and Power

Environment California strongly supports clean forms of combined heat and power (CHP). When done right, CHP can provide significant energy efficiency benefits. However, not all CHP is alike. Furthermore, CHP belongs on the efficiency side of regulatory programs, not within a renewable energy mandate. Even subtracting out CHP from a regulated entity's baseline, as considered in Attachment 3 of the concept outline, would inappropriately benefit CHP over truly renewable energy projects. Even with an aggressive 33% RES, there's ample room in California's energy market, 67% in fact, for CHP to play a significant role in meeting California's clean energy future.

Delivery and Renewable Energy Credits (RECs)

Environment California supports inclusion of Renewable Energy Credits (RECs) and allowing out-of-state renewable energy resources to count toward the RES as a way of providing flexibility for compliance. We believe care should be given to establish regulations that ensure the RES results in the greatest amount of new renewable energy developments and the maximum amount of benefits come to California.

COMPLAINCE AND ENFORCMENT

Hard Mandate with Penalties

First and foremost, the 33% by 2020 RES must be a floor and not a ceiling for the development of renewable energy in California. Furthermore, it must be a hard-fast deadline and mandate carrying with it strict penalties to ensure compliance.

Leading up to the 33% by 2020 minimum goal, the regulations should also include interim targets every 1-3 years. Anything longer than three years would endanger the carbon benefits of the RES policy and

threaten the ability for utilities to meet their 2020 goals. And, like with the 2020 target, the interim targets should carry penalties for non-compliance. One basis for such penalties, in addition to the fact that missing them would endanger the ultimate 2020 goal, would be that time is of the essence when it comes to solving global warming. The sooner we act to cut carbon emissions, the more likely we are to stave off the worst impacts. The longer we wait the fewer options we'll have in the future to solve global warming. Furthermore, to the extent that an RES is about developing a new clean energy market, the sooner utilities invest in renewable energy projects, the faster renewable energy will emerge the dominant energy resource in California.

Should ARB feel it necessary to include some flexibility for compliance, the regulations should couple strong, clear mandates and strict penalties with very limited, narrowly defined flexibility measures. We strongly encourage the ARB to add specificity to this allowance. Such limitations could include those similar to CEERT's comments:

- The regulated entity has undertaken all reasonable measures to develop and construct new transmission lines or upgrades to existing lines in a timely fashion.
- The regulated entity has taken all reasonable operational measures to maximize deliveries of electricity from eligible renewable energy resources in advance of transmission availability including distributed generation.
- The regulated entity has prudently managed portfolio risks, relied on sufficiently viable projects, sought to develop its own eligible renewable energy resources, and procured an appropriate level of renewable generation necessary to comply with the renewables portfolio standard to compensate for foreseeable delays or insufficient supply.

Loopholes

The regulations should steer clear of loopholes that leave too much room for interpretation. RES policies are intended to ensure that a given percentage or amount of electricity supplied in a state comes from renewable power. Yet loopholes and exemptions can make the percentage target an empty promise rather than a firm commitment.

Among the most common loopholes are cost caps, which are intended to serve as a ceiling for the additional costs imposed by renewable energy development. If the price of purchasing a renewable energy certificate exceeds the cost cap, the utility has the option, in some state RES policies, to pay the amount of the cap into an "alternative compliance fund," which the state can then use to promote renewable energy development. In other states, the utility is exempted from compliance with the RES altogether when costs exceed the cap. One problem with cost caps is that, if set too low, they can actually discourage utilities from engaging in practices that can lower the cost of renewable energy—for example, by entering into long-term contracts with renewable energy developers.

More fundamentally, cost caps erode a state's commitment to achieve a given level of renewable energy development. Force majeure clauses in RES policies are another type of problematic loophole. Force majeure refers to instances in which a utility cannot comply with an RES due to forces beyond its control. In the context of an RES, force majeure can be used to reduce the percentage target if it is judged that there is inadequate renewable energy capacity or constraints in transmission. The presence of a force

majeure clause gives utility regulators discretion over whether to enforce an RES, opening up the possibility that they will relax the standard when it is merely inconvenient, rather than impossible, for utilities to comply.

In many cases, cost caps, alternative compliance payments, and force majeure clauses are adopted as part of the series of compromises that results in the passage of state RES policies. Where they are implemented, it is important that states design the policies narrowly, so that they apply only to truly extraordinary circumstances. Given the abundance of low-cost renewable energy options available across the country, these circumstances should be rare.

Energy Delivered not GHG Reductions as Metric

Last but not least, the 33% by 2020 RES should be based on energy delivered to customers as opposed to energy generated or carbon reductions. This is the best way to ensure simplicity in the system, consistency with existing regulations and ensure the program stays true to its original goal of developing renewable energy as a means of reducing air pollution, among many other benefits. We support the requirement that regulated entities submit long-term plans per Long-Term Procurement Plans require by the PUC.

Thank you again for the opportunity to submit these comments. If you have any questions, please feel free to contact Bernadette Del Chiaro at 916-446-8062 x 103 or Bernadette@environmentcalifornia.org.