

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the matter of,)	Docket No. 03-IEP-01, 02-REN-1038,
Informational Proceeding and)	03-RPS-1078, and 04-DIST-GEN-1
Preparation of the 2004 Integrated,)	
Energy Policy Report Update)	
(2004 Energy Report Update))	
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COMMENTS OF THE UNION OF CONCERNED SCIENTISTS
ON THE ACCELERATED RENEWABLE ENERGY DEVELOPMENT
DRAFT STAFF WHITE PAPER

UCS appreciates the opportunity to provide comments on the Accelerated Renewable Energy Development Draft Staff White Paper, dated July 30, 2004. UCS is a non-profit membership organization with a Clean Energy Program that is devoted to cost-effectively reducing the environmental impacts of energy use.

The draft staff white paper presents a well-balanced analysis of the opportunities and challenges for renewable energy investments in California to reach both the current 2010 targets of the Renewables Portfolio Standard and potential incremental targets beyond 2010.

UCS elaborates on the following issues:

- The RPS should have incremental targets beyond 2010, which should be established in the near-term and be uniform statewide.
- Post-2010 targets should not be based on gross technical potential by utility service area.
- UCS recommends a statewide goal of at least 30 percent by 2020.
- Municipal utilities should not count large hydroelectric resources toward their RPS targets.
- The investor-owned utilities should allow net metering beyond the current “cap.”

UCS supports incremental RPS targets beyond 2010.

We commend staff’s in-depth examination of post-2010 renewables targets, and agree that once a utility achieves its 20 percent RPS goal before 2010, it should be “encouraged to continue accelerated renewable energy development beyond the minimum level required to maintain this achievement” (draft white paper at p. 3). The paper clearly articulates the need for such targets:

“Continued investment in renewable energy is important to increasing fuel diversity and associated benefits for California’s electricity supply.” (p. 1)

In order to fully realize these benefits, incremental goals must be set prior to 2010. Renewable developers are unlikely to achieve substantial cost reductions if they ramp up production only over a 5 to 6 year period, then scale back once the 20 percent is achieved and the development of new renewable facilities levels off. Predictable, sustained, orderly development of a diverse portfolio of renewable energy technologies beyond 2010 is important, for example, to encourage manufacturers to make forward investments in larger and more economic manufacturing facilities (and locate them in California); to encourage developers to continue site prospecting and pre-development activities and build a larger and increasingly efficient infrastructure for facility construction, operation and maintenance; and encourage the financial community to provide low-cost financing.

A growing share of renewable energy generation in the mix will also provide a sound hedge against the likelihood that deep carbon emission reductions will be needed in order to stabilize atmospheric concentrations of carbon dioxide at tolerable levels. Several state and regional climate change goals have been established or are being considered to this end.¹ A report issued by the New England Governors and Eastern Canadian Premiers highlights the need for deep reductions, and calls for both short- and long-term emissions reductions targets:

“Over the long term, anthropogenic [greenhouse gas] emissions must be reduced to levels that no longer pose a dangerous threat to the climate. The best science available at present indicates that attaining this goal will require reductions in [greenhouse gas] emissions of approximately 75–85% below current levels.”²

And here in California, Governor Schwarzenegger has endorsed the regional initiative among the Governors of California, Oregon, and Washington to reduce greenhouse gas emissions, and has stated that he intends to develop a greenhouse gas reduction target for the state.³

The 20 percent target of the RPS should be considered as a floor, not a cap, to renewables procurement. In evaluating various resource procurement options, the utilities should consider all cost-effective resource types, including additional renewables beyond the minimum standard. We are encouraged that PG&E and SDG&E have projected greater than 20 percent renewables beyond 2010 in their long-term resource plans filed with the CPUC, and dismayed that SCE only maintains a 20 percent portfolio beyond 2010 in its plan.

¹ The states of Maine, Massachusetts, New Hampshire, New Jersey, and New York have adopted CO₂ reduction targets. Nine Northeast and Mid-Atlantic states have formed “The Regional Greenhouse Gas Initiative” in a cooperative effort to discuss the design of a regional cap-and-trade program initially covering CO₂ emissions from power plants in the region.

² “Climate Change Action Plan 2001,” The Committee on the Environment and the Northeast International Committee on Energy of the Conference of New England Governors and Eastern Canadian Premiers, August 2001. <http://www.negc.org/documents/NEG-ECP%20CCAP.PDF> (Accessed 9/6/04)

³ Letter from California Environmental Protection Agency Secretary Tamminen to the Director of the Washington State Department of Ecology, June 23, 2004.

A recent report by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety sets forth a policy goal to increase the use of renewable energy to meet Germany's primary energy needs by 10 percent per decade.⁴ The report highlights the need to set steady renewable energy targets beyond 2010, extending beyond the current German renewable energy standard:

“[I]t has become apparent that the challenges of future energy supply make it necessary – building on the present market entry phase of renewable energy sources – to develop a step-by-step but continuous market introduction strategy, if renewable energy systems are to play a central role in energy supply by the middle of this century.”⁵

“The targeted climate protection objectives require that in the long term, renewables should become the principal source of energy supply with a share of about 50 percent by around the middle of the century. The Federal Environment Ministry therefore considers it necessary that after 2010 the share of German energy supply due to renewables should increase by around 10 percent per decade.”⁶

We call attention to this report because it illustrates the need to continue the steady development of renewable energy beyond the presently established RPS target year of 2010. In Figure 6 (p. 37) of the draft white paper, CEC staff has illustrated the difference between continuing the nearly linear growth trend of renewables from 2003 to 2010 and the maintenance of 20 percent. Under the latter scenario as depicted in Figure 6, the contribution of renewables to energy supply “flattens” to match the pre-2003 growth trend. We believe the multitude of renewable energy benefits warrant the former steady-growth scenario, and encourage the CEC and other state agencies to adopt strong policy in this direction.

A report issued in February 2003 by the Department of Trade and Industry in the United Kingdom recommended enhancing the U.K.'s renewables targets to include targets beyond existing law.⁷ The U.K. currently has a renewables requirement (called a “Renewables Obligation”) to achieve 10 percent renewables by 2010. The report recommends setting an incremental target of 20 percent by 2020 and looking at even further long-term planning issues:

“As well as making progress towards our 2010 target, and paving the way for our 2020 strategy, we need to make sure that we are planning for the longer-term up to 2050.”⁸

⁴ Dürschmidt W., G. Zimmermann, “Ecologically Optimized Extension of Renewable Energy Utilization in Germany,” Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, April 2004. http://www.bmu.de/files/nutzung_ee_eng.pdf (Accessed 8/25/04)

⁵ Id., p. 46.

⁶ Id., Preface.

⁷ “Our Energy Future: Creating a Low Carbon Economy,” United Kingdom Department of Trade and Industry, February 2003. <http://www.dti.gov.uk/energy/whitepaper/ourenergyfuture.pdf> (Accessed 9/6/04)

⁸ Id., p. 46.

Post-2010 RPS targets should be established in the near-term, should be uniform statewide, and should not be based on gross technical potential by utility service area. UCS recommends a statewide goal of at least 30 percent by 2020.

The draft white paper identifies a key disadvantage of setting individual targets relative to the gross technical potential that can be developed within a utility service area:

“The gross technical potential data reported in this chapter show gross technical potential only, without filters for economic, environmental, social, or cultural sensitivities.” (p. 41)

While the concept of setting targets in this manner is interesting, especially in light of the current relative development of this potential in each service area (Tables 7, 8 and 9 in the report) and the unequal geographical distribution of renewable resources, arriving at an equal percentage target would be difficult, highly debatable, and result in inequities among utilities.

The fundamental purpose of the RPS is to provide benefits to individual utilities and their customers, such as increased diversity of their fuel mix, a hedge against increased fossil fuel prices and price volatility, and a hedge against tougher future emission standards, especially for carbon. The RPS will also provide energy security, economic development, and environmental benefits for the citizens of the state as a whole. From both of these perspectives, it is much fairer to distribute the RPS requirement and any costs and benefits of the RPS relatively equally among the customers of all utilities. All customers within the state should be receiving a more diverse energy portfolio and hedging their environmental and economic risks, and it is largely immaterial to customers from what regions they obtain these resources, except insofar as energy or environmental benefits would be relatively diminished by the distance between the resource generation and use.

From a practical perspective, to reach 20 percent of retail sales, using 2003 retail sales as a basis, PG&E would need to achieve 31 percent of gross potential, SCE would need 7 percent, and SDG&E would need 43 percent. Since one would expect retail sales in 2010 to be higher than 2003 sales, the percentage needs of each utility would necessarily be higher. However, the utilities’ 2003 “baseline” renewables levels relative to gross technical potential are 19 percent for PG&E, 6 percent for SCE, and 4 percent for SDG&E.⁹ This means that any revised target of less than 43 percent of gross technical potential would leave SDG&E with a 2010 RPS target that is less than 20 percent of its retail sales, the amount required by law, and a post-2010 target that is unlikely to achieve substantial new renewables purchases. It would also require SCE to increase its purchases by almost an order of magnitude, which may be unreasonable given transmission constraints and other issues identified in the report. Therefore we do not find that post-2010 targets based on equal percentages of gross technical potential are reasonable.

Varying the percentage by utility based on resource potential, deliverability, costs, and other factors will likely lock utilities and interested stakeholders in a quagmire of disagreement on how to assign value to these factors. UCS instead supports post-2010

⁹ 2003 baseline quantities and retail sales as reported in CPUC Decision 04-06-014, Appendix B.

RPS targets that achieve an equal percentage for each utility of its retail sales, following the current RPS structure. A goal of 30 percent renewables by 2020, continuing with the current RPS requirement of at least one percent per year additional renewables procurement, is reasonable for planning purposes.¹⁰ As noted above, Figure 6 of the draft white paper shows the sustained project growth of a 30 percent target in 2020. In its long-term resource plan filed with the CPUC on July 9, 2004, SDG&E asserts that it will achieve a 24 percent renewables portfolio by 2014, which aligns with a one percent per year increase.

Many parties, particularly the utilities, want to gain experience with the RPS solicitations under the newly established rules in order to evaluate resource prices, transmission availability and other factors prior to consideration of additional RPS goals. This is a practical consideration that will better inform evaluation and update of RPS rules and goals. However, we believe the State will benefit by developing clear post-2010 renewables goals well in advance of 2010.

We appreciate the staff's investigations into setting a revised target for SCE due to the disparity of resource availability between utility service areas, and look forward to the workshop discussions on this issue. Access to renewable resources in SCE's service area is needed to meet the goals of an accelerated RPS and a post-2010 target. Information gathered from the current round of RPS solicitations should be used to develop an analysis of the potential benefits of unbundled RECs in overcoming deliverability challenges. We anticipate the CEC and CPUC will continue to closely collaborate, with active participation of the utilities, renewable developers, and other interested stakeholders, in developing solutions to transmission constraints to access new resources and evaluating the results of the current round of RPS solicitations.

Municipal utilities should not count large hydroelectric resources toward their RPS targets.

The white paper claims that the counting of large hydroelectric facility output by municipal utilities “reduces the significance of the 20 percent target for development of new renewable energy to meet growing electricity retail sales in California.” (p. 6) UCS agrees with this statement. The fundamental purpose of enacting the RPS was to increase the proportion of renewable energy in the state mix by developing new renewable energy supplies. Large hydro is also a mature resource with relatively little, if any, potential for expansion. Counting existing large hydro simply dilutes the purpose of the legislation, and results in more inequitable requirements between municipal and investor-owned utilities.

While hydro resources may yield benefits such as low-cost electricity, and have very low air emissions, they can produce significant adverse impacts on fish and wildlife and other resources. Reservoirs behind large hydroelectric dams can also be emitters of greenhouse gases. NPCA states in its comments that hydropower of any size is renewable, and is an “environmentally preferred resource” (NPCA comments dated Aug. 26, p. 2). There have been ongoing discussions in California and other states regarding

¹⁰ Public Utilities Code Section 399.15(b)(1) requires each electrical corporation to “increase its total procurement of eligible renewable energy resources by at least an additional 1 percent of retail sales per year” to reach 20 percent by 2017.

the eligibility of hydro resources for RPS programs in those states, and whether the 30 megawatt threshold is the appropriate determinant of environmentally preferred hydro resources. We support the inclusion of hydro resources that have been certified as “low-impact,” as defined and certified by the multi-stakeholder Low Impact Hydropower Institute.¹¹

Investor-owned Utilities should allow net metering beyond the current “cap.”

UCS supports raising the current one-half of one percent cap on net metering for each investor-owned utility. The net metering cap has historically been set by the Legislature as net metering has been revised and extended. At this time, we do not have a particular recommendation for encouraging utilities to allow net metering in excess of the cap. We encourage the CEC to continue monitoring PV interconnections through its Distributed Generation Rule 21 Working Group and to urge the utilities (particularly SDG&E, which has almost reached its cap) to continue new net metering enrollments.

Respectfully submitted,

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John Galloway
Senior Energy Analyst
Union of Concerned Scientists
2397 Shattuck Avenue, Suite 203
Berkeley, CA 94704
(510) 843-1872
jgalloway@ucsusa.org

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¹¹ <http://www.lowimpacthydro.org/>