

**Publicly Owned Electric Utilities
and the California Renewables
Portfolio Standard:
A Summary of Data Collection Activities**

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CHAPTER 1: INTRODUCTION

Policy Background

The California Renewables Portfolio Standard (RPS) was established by Senate Bill 1078 (SB 1078, Chapter 516, Statutes of 2002, Sher) in 2002, and calls for the state's investor-owned utilities (IOUs), energy service providers (ESPs), and community choice aggregators (CCAs) to meet 20 percent of their electricity load with eligible sources of renewable energy by 2017. To reach this target, each obligated load-serving entity must increase by at least 1 percent annually the percentage of its load served by renewable energy.

Publicly owned utilities (POUs), including both municipal utilities and electric cooperatives, serve roughly 25 percent of the state's electricity load and are provided flexibility in meeting the state's renewable energy targets. As specified in SB 1078, "Each governing body of a local publicly owned electric utility, as defined in Section 9604, shall be responsible for implementing and enforcing a renewables portfolio standard that recognizes the intent of the Legislature to encourage renewable resources, while taking into consideration the effect of the standard on rates, reliability, and financial resources and the goal of environmental improvement." SB 1078 goes on to require that POUs report, on an annual basis to their customers: (1) expenditures of public goods charge funds for renewable energy development, and (2) the resource mix used to serve customers, including the contribution of each type of renewable energy resource, with separate categories for those fuels considered eligible under the state's RPS for IOUs, ESPs, and CCAs.

The state's energy agencies have committed to an acceleration of the RPS such that the 20 percent goal is met seven years early, by 2010. Governor Schwarzenegger has endorsed this accelerated schedule and has set a goal of achieving a 33 percent renewable energy share by 2020 for the state as a whole; the California Energy Commission (Energy Commission) and the California Public Utilities Commission (CPUC) have also expressed support for this aggressive target. To ensure that the state's POUs are purchasing renewable energy in quantities consistent with the statewide goals, there has been discussion of whether the state's POUs should be held to a more rigorous and more uniform standard for renewable energy purchases than the present, more flexible approach.

The Energy Commission has proposed that POUs be required to meet the same renewable energy percentage targets, compliance timelines, and renewable resource eligibility requirements as the state's IOUs, ESPs, and CCAs. POUs would not, however, be required to conform to the same complicated administrative requirements as the state's IOUs in achieving their RPS goals. Recognizing that certain POUs may not be in a position to make aggressive new commitments to renewable energy, the Energy Commission has also proposed to establish an exemption process for the smaller POUs.¹

The CPUC, in an October 6, 2005 Policy Statement, writes: "In order to ensure consistency, the PUC calls on the publicly-owned utilities to reduce emissions that contribute to global warming by adopting energy efficiency and renewables goals that are comparable to the standards that the IOUs are required to meet under state law and regulation, as well as adopting an equivalent GHG [greenhouse gas] performance standard."²

Revisions to the state's RPS that were considered, but not implemented, in 2005 would not have been as prescriptive as suggested by the Energy Commission, but would have increased the reporting obligations of the state POU. Senate Bill 107 (SB 107, Simitian, proposed in 2004) would have required the POU to submit the reports required under SB 1078 not only to their customers, but also to the Energy Commission. POU would also have been obligated to report to the Energy Commission their status in implementing an RPS and progress towards achieving the targets so established.³

Not surprisingly, the state's POU have not expressed enthusiasm for increased requirements under the state's RPS, citing progress that they have already made in purchasing renewable energy and a desire to maintain local control. Concerns have also been raised about the impacts of rigid renewable purchase requirements on POU whose load may not be growing, who may be fully contracted for generation capacity, or who do not have ready access to low-cost renewable energy supply.

Objectives

This brief paper aims to contribute to discussions of the appropriate role for POU under the state's RPS. The scope of work included here is limited:

- **Chapter 2** describes the varied treatment of POU in other state RPS programs, contrasting that treatment with the approach used in California.
- **Chapter 3** summarizes California POU renewable energy targets, timelines, and eligibility rules, updating (where possible) a tabular summary previously created by the Energy Commission and comparing POU targets with those of the state's three major IOUs.
- **Chapter 4** highlights the status of POU renewable energy procurement to date, based on available information and (where possible) compares recent POU renewable procurements with those of the state's IOUs. Chapter 4 also summarizes some of the barriers to aggressive POU RPS policies.

In addition to these information-gathering activities, in Chapter 5 we propose possible future research that might help to identify key barriers to and policy options for POU in joining a statewide effort to reach the current 20 percent renewable energy goal and the longer-term 33 percent target.

CHAPTER 2: TREATMENT OF PUBLICLY OWNED UTILITIES IN STATE RPS POLICIES

Overview

It is perhaps useful to understand how other states have dealt with POUs in their RPS policies. Twenty-two states and Washington D.C. have renewable energy purchase mandates or goals in place, and the treatment of POUs within these policies is diverse (see Table 1).

Table 1. Treatment of POUs in State RPS Statutes and Rules

| | POUs Fully Exempt | POUs Fully Obligated | Intermediate Treatment | Comments |
|------------------|-------------------|----------------------|------------------------|---|
| Arizona | | | ✓ | Co-ops obligated; munis exempt |
| California | | | ✓ | POUs provided flexibility to design own RPS policies |
| Colorado | | | ✓ | Multiple exemptions based on size, vote, and substantially similar RPS |
| Connecticut | ✓ | | | |
| Delaware | | | ✓ | Can apply for exemption by June 2006: approval based on multiple factors |
| Hawaii | | ✓ | | |
| Illinois | ✓ | | | |
| Iowa | ✓ | | | |
| Maine | ✓ | | | |
| Maryland | | | ✓ | All POUs must comply, except possibly certain co-ops |
| Massachusetts | ✓ | | | |
| Minnesota | | | ✓ | Strict "good faith" effort requirement applies to "up-stream" POUs |
| Montana | | | ✓ | Larger POUs provided flexibility to design own RPS; small POUs fully exempt |
| Nevada | ✓ | | | |
| New Jersey | ✓ | | | |
| New Mexico | | | ✓ | POUs exempt, but some co-ops must offer green power |
| New York | ✓ | | | |
| Pennsylvania | | | ✓ | POUs exempt unless they participate in competitive markets |
| Rhode Island | ✓ | | | |
| Texas | | | ✓ | POUs exempt unless they open their markets to competition |
| Vermont | | ✓ | | |
| Washington, D.C. | N/A* | N/A* | N/A* | |
| Wisconsin | | ✓ | | |

* There are no POUs serving the District of Columbia.

As shown in Table 1, nine states fully exempt POU, three fully obligate them, and ten (including California) take an intermediate stance (there are no POU in Washington, D.C.). The three states in which POU are fully obligated are Hawaii, Vermont, and Wisconsin; note, however, that the Vermont and Hawaii RPS policies are not as firm and enforceable as those RPS policies in some other states and Wisconsin's RPS targets have already been met.⁴ Several of the "intermediate" states fully obligate at least *certain* POU.

Below we provide more details on each state that uses an intermediate strategy, excluding California (which was described earlier), and then categorize the approaches that have been applied in these states.

State-by-State Treatment of POU

Arizona: The Arizona RPS was established by regulation, not via legislation. Municipalities and the Salt River Project are outside of Arizona Corporate Commission (ACC) jurisdiction, so they are exempt from the state's RPS. Electric cooperatives, which are subject to ACC regulation, were initially and for a brief period allowed to file a request demonstrating "good cause" for an exemption. Today, however, all electric cooperatives are required to submit RPS compliance plans and meet RPS obligations.

Colorado: POU are fully obligated under the state's RPS (which was established by voter referendum), except under the following three scenarios:

- 1) The POU serves fewer than 40,000 customers (this exemption applies to IOUs and POU alike).
- 2) The POU's board of directors allows its customers to vote (on a one meter equals one vote basis) on the question of exemption from the RPS, and a vote in favor of exemption passes by a majority of those voting (provided that at least 25 percent of eligible customers voted). IOUs may also seek exemption through this process.
- 3) The POU self-certifies compliance by submitting a statement to the commission demonstrating that it has a "substantially similar" RPS to that required by the state. A "substantially similar" RPS means one that involves one or more of the same eligible renewable resources, applied in equal or higher RPS percentage targets, with an optional green pricing program for customers to support emerging renewable energy technologies.

Finally, the board of directors of a POU *not* subject to the RPS may, at its discretion, allow its customers to vote (on a one meter equals one vote basis) whether or not the POU should opt in to the state's RPS. Approval by a majority of those voting is required to opt in (provided that at least 25 percent of eligible customers voted).

Delaware: POU may elect to be exempt from the RPS, provided that:

“on or before June 1, 2006, they:

1. submit a written notice to the General Assembly;
2. alert their End-Use Customers with notices inserted in two consecutive electricity bills;
3. offer their retail customers a voluntary program for purchasing renewable energy under competitive rates; and
4. either contribute to the Green Energy Fund at levels commensurate with other Retail Electricity Suppliers or create an independent, self-administered fund separate from the Green Energy Fund to be used in support of energy efficiency technologies, renewable energy technologies, or demand side management programs, into which they make payments of \$0.178 for each megawatt-hour they sell, transmit, or distribute in this State.”

Maryland: Maryland’s RPS legislation specifically exempts “an electric cooperative under an electricity supplier purchase agreement that existed on October 1, 2004, until the expiration of the agreement.” The Maryland Public Service Commission is currently reviewing this requirement and will issue guidance in the near future. All other POU’s are obligated to meet the state’s RPS.

Minnesota: Minnesota’s renewable energy objective applies to all IOUs, generation and transmission (G&T) cooperatives, and municipal power agencies. Rural electric cooperatives (many of which are supplied by G&T cooperatives) and municipal utilities (many of which are supplied by municipal power agencies) are exempt – i.e., the obligation is placed “upstream” of retail cooperatives and municipal utilities. With the exception of Xcel Energy, for which the renewable energy objective is mandatory, all other obligated entities must demonstrate “good faith efforts” to meet the objectives.

In a June 1, 2004 order, the Minnesota PUC laid out a number of criteria that it will use to judge whether or not a utility has made a “good faith effort” to comply. These criteria, which must be addressed by each obligated entity in a biennial filing, include demonstrated commitments to: follow a compliance plan; build renewable facilities or purchase the required amount of renewable energy; construct necessary physical infrastructure; enter into legally binding contracts; meet regulatory requirements in a timely fashion; provide necessary transmission access; keep the process open and transparent; and consider technical feasibility and protect against undesirable impacts on system reliability and undesirable economic impacts on ratepayers.

Montana: POU’s are exempt from the standard applied to IOUs. However, state law requires that each POU with 5,000 or more customers:

is responsible for implementing and enforcing a renewable energy standard that recognizes the intent of the legislature to encourage new renewable energy

production and rural economic development, while taking into consideration the effect of the standard on rates, reliability, and financial resources.⁵

In other words, as is the case in California, larger POU's in Montana are not required to meet the same RPS as IOUs, but they are required to develop internal RPS policies that balance the legislative intent with their own particular needs and constraints.

New Mexico: POU's are exempt from the RPS. However, the New Mexico Administrative Code states:

rural electric cooperatives must offer a voluntary renewable energy tariff to the extent that their suppliers under their all-requirements contracts make such renewable resources available. Rural electric cooperatives must report to the commission by April 30 of each year concerning the availability to them of renewable energy and the annual demand for renewable energy pursuant to their voluntary tariff.⁶

In addition, the law states that any IOU that:

has an all-requirements contract which would not reasonably permit it to procure renewable energy for purposes of meeting the renewable portfolio standard, may apply to be exempted from the renewable portfolio standard until the earlier of the date of their next contract forward or the first date on which the all-requirements contract is amended or renegotiated, at which time such public utility shall be subject to the renewable portfolio standard.⁷

Although this exemption applies to IOUs, this approach could make sense for POU's under all-requirements contracts as well.

Pennsylvania: Municipal utilities that participate in Pennsylvania's retail choice market (offering service outside of their service territory) are subject to the state's RPS. Specifically, the RPS applies to "electric generation suppliers," which are defined in Pennsylvania's restructuring legislation as "including municipal corporations which choose to provide service outside their municipal limits except to the extent provided prior to the effective date of this chapter...." To date, no municipal utility in Pennsylvania has registered as an electric generation supplier; if any were to register, the RPS would apply only to those retail sales outside of municipal limits. Rural electric cooperatives, on the other hand, are exempt, but must offer "a voluntary program of energy efficiency and demand-side management programs, as a means to satisfy compliance with the requirements of this act."

Texas: POU's are only obligated under the RPS if they open their local markets to retail competition (to our understanding, no POU in Texas has opted to do so).

Summary

California's approach to POUs is more stringent than that in nine other states where POUs are fully exempt, and is less stringent than in three states where POUs must fully comply with the state's renewable energy goals. California is among 10 states that take an intermediate approach to POUs.

Though the treatment of POUs within the RPS policies of these 10 "intermediate" states varies considerably, most of these states can be placed into one or more of four broad categories of approaches (several states establish multiple requirements for POUs, ensuring that they fall within several categories simultaneously):

- 1) Subject to RPS, with Exemptions:** In several states, POUs are fully obligated under the RPS, but exemptions are possible. Exemptions are provided: (1) on request based on a formal filing (to the ACC in Arizona initially, and to the legislature and their customers in Delaware), (2) based on utility size (Colorado), (3) based on customer vote (Colorado), (4) based on the presence of all-requirements contracts (Maryland took this approach for electric cooperatives, while New Mexico included such a provision for IOUs), and/or (5) based on creating a green energy fund (Delaware).⁸ In Minnesota, "up-stream" POUs (G&T cooperatives and municipal power agencies) must demonstrate "good faith" efforts to comply. In each of these cases, POUs generally have more responsibility (at least by default) for meeting a uniform statewide standard than the approach currently used in California.
- 2) Subject to a "Substantially Similar" RPS:** Several states provide POUs additional flexibility in defining their own RPS policies. California and Montana are the most lenient (California's policy applying to all POUs, and Montana's to POUs with over 5,000 customer accounts). The RPS self-certification process in Colorado also falls within this category, but requires far more uniformity in RPS application than do California or Montana.
- 3) Green Pricing Requirements:** In addition to or as a replacement for meeting an RPS target, some states require POUs to offer a voluntary green power program (New Mexico for rural electric cooperatives, Delaware as one of several requirements to receive an exemption from the RPS, and Colorado for utilities self-certifying RPS compliance).
- 4) Only Subject to RPS if Engaged in Retail Competition.** Pennsylvania (for municipal utilities only and only for sales in competitive markets) and Texas fall into this category.

CHAPTER 3: REVIEW OF POU RENEWABLE ENERGY TARGETS IN CALIFORNIA

Overview

In the Energy Commission report, “Implementing California’s Loading Order for Electricity Resources,” staff compiled a table that summarizes POU renewable energy supply, RPS targets, and renewable resource eligibility.⁹ For the present report, we were asked to: (1) update this table where possible based on easily accessible and publicly available information, and (2) supplement the table with additional information on resources that meet POU RPS targets, but that are not consistent with the resource eligibility rules applied to IOUs and ESPs.

Obtaining publicly available, consistent data with which to update the table was a considerable challenge, and the table continues to have a large number of holes. Because reporting requirements for POUs are not as stringent as those for IOUs, some data are currently unavailable and the information described in both this chapter and the next is still incomplete. It is evident that a far more consistent data reporting process would be needed to accurately and adequately track POU renewable energy goals and progress towards meeting those goals. We encourage reviewers to identify mistakes in our data summary, and provide information where such information is currently lacking.

In updating the table, we relied upon a number of sources: (1) a review of POU websites for Power Content Labels, other renewable energy reports, and new RPS plans; (2) a review of Power Content Labels provided by the Energy Commission; (3) the Energy Commission’s most recent power source disclosure reconciliation reports;¹⁰ (4) the Energy Commission’s “Accelerated Renewable Energy Development” report;¹¹ (5) the Energy Commission’s “Revised California and Western Electricity Supply Outlook Report”;¹² (6) discussions with POU staff at industry events; and (7) private telephone and email correspondence with select POU staff. In some cases, it was unclear whether new data that we identified were superior to the data already in the earlier Energy Commission table, especially where various data sources conflicted for seemingly no reason; when in doubt, we generally opted to use data already published by the Energy Commission and not to make changes to the pre-existing table.

Renewable Energy Targets

Table 2 provides data on the RPS purchases and targets for 32 California POUs, including three POUs not previously reported in the Energy Commission’s table. According to the Energy Information Administration, 39 POUs operated within California in 2003.¹³ The POUs included in Table 2 represented 98 percent of total POU load in the state in that year.

The following adjustments and additions were made to the table, compared to the earlier table prepared by Energy Commission staff:

- Information on three additional POU's was included: Needles, Surprise Valley, and Vernon.
- Information on total retail sales in 2003, by POU, was added as column 2, and the table is now sorted by utility size.
- Information on total POU-qualifying generation (for 2003 and 2004) was added, which includes both resources that meet the Energy Commission's RPS eligibility requirements (CEC-eligible) and – where deemed eligible under a POU RPS plan – large hydropower. Data on large hydropower, by POU, came from the Energy Commission's "Accelerated Renewable Energy Development" report for 2003, and from Power Content Labels and the Energy Commission's power source disclosure reconciliation report for 2004 (including back-up materials provided by staff that underlie the 2004 reconciliation report).
 - Burbank: We assumed that Burbank did not make any purchases of "low impact" hydropower in 2003/2004.
 - Los Angeles Department of Water and Power (LADWP): We assumed that LADWP's "qualifying" larger hydropower facilities (those above 30 MW, but excluding Hoover) add 2.7 percent to their qualifying renewables, from the Energy Commission's "Revised California and Western Electricity Outlook Report." As such, for 2003, we add 2.7 percent to the reported CEC-eligible data for LADWP to derive POU-qualifying 2003 purchases. It is somewhat unclear where LADWP included these hydropower resources in its 2004 Power Content Label. We assumed that they were included in the reported 5 percent eligible renewables category, and thereby assign the 5 percent figure to POU-qualifying 2004 purchases. CEC-eligible supply comes from the 2004 reconciliation report.
 - Imperial: For Imperial, large hydropower supply used to determine POU-qualifying values for both 2003 and 2004 was calculated based on data presented in the Energy Commission's "Revised California and Western Electricity Supply Outlook Report."
- Data on 2003 CEC-eligible renewables for Sacramento and Riverside were updated based on final 2003 Power Content Labels.
- Data on 2004 CEC-eligible renewables were added or adjusted in a number of cases. For Glendale, the value that had been reported as CEC-eligible was moved to POU-qualifying for definitional consistency. All other changes or additions were based on the 2004 Energy Commission reconciliation report and available 2004 Power Content Labels.
- Information on POU RPS targets, timeframes, and hydro eligibility remains consistent with the earlier table, with a few exceptions. Interim targets were added for Palo Alto and LADWP based on recent press releases, and LADWP has decided not to include large hydropower as an eligible resource, except as discussed above. Pasadena counts only large hydropower already in its resource portfolio; any further purchases of large hydropower would not be considered qualifying.

Table 2. RPS Status of California's Publicly Owned Utilities

| Utility Name | Total Retail Sales 2003 (MWh) | CEC Eligible 2003 (%) | CEC Eligible 2004 (%) | POU Qualifying 2003 (%) | POU Qualifying 2004 (%) | Large Hydro Included | RPS Target | RPS Timeframe |
|-----------------|-------------------------------|-----------------------|-----------------------|-------------------------|-------------------------|---------------------------|---|--|
| Los Angeles | 23,040,163 | 2% | 3% | 4% | 5% | Partial | 13%/20% | 2010/2017 |
| Sacramento | 9,917,373 | 9% | 11% | 9% | 11% | No | 20% | 2011 |
| Imperial | 2,864,042 | 12% | 11% | 18% | 17% | Yes | 20% | 2007 |
| Anaheim | 2,548,925 | 1% | 2% | 2% | 6% | Yes | 15% | 2017 |
| Modesto | 2,381,511 | 4% | 5% | 4% | 5% | No | 20% | 2017 |
| Santa Clara | 2,369,056 | 26% | 24% | 65% | 65% | Yes | Continue support of renewables | |
| Riverside | 1,888,892 | 13% | 12% | 15% | 14% | Yes | 20% | 2015 |
| Turlock | 1,587,894 | 8% | 9% | 8% | 9% | No | 20% | 2017 |
| Vernon | 1,165,002 | n/d | 8% | n/a | n/a | Unknown | 5%/20% | 2009/2017 |
| Pasadena | 1,160,275 | 2% | 2% | 7% | 8% | Existing large hydro only | 20% | 2017 |
| Glendale | 1,093,973 | 7% | n/d | 15% | 14% | Yes | 20% | 2017 |
| Roseville | 1,059,693 | 14% | 13% | 45% | 51% | Yes | 20% | Maintain for unspecified time |
| Burbank | 1,036,107 | 1% | 1% | 1% | 1% | Only if "low impact" | 20% | 2017 |
| Palo Alto | 956,371 | 7% | 5% | 7% | 5% | No | 10%/20% | 2008/2015 |
| Redding | 751,789 | 5% | 6% | n/d | 46% | Yes | 20% | 2017 |
| Lodi | 439,418 | 25% | 28% | 46% | 54% | Yes | 20% | Maintain for unspecified time |
| Alameda | 367,522 | 50% | 61% | 75% | 86% | Yes | 40% | Maintain through 2020 |
| Merced | 318,661 | 11% | 12% | 11% | 12% | No | 15% | 2012 |
| Colton | 316,020 | 2% | n/d | 5% | n/d | Yes | 15% | 2017 |
| Azusa | 233,021 | 7% | 7% | 10% | 9% | Yes | 20% | 2017 |
| Banning | 139,882 | 0% | n/d | 1% | n/d | Yes | 20% | 2017 |
| Lompoc | 131,090 | 37% | 32% | 68% | 61% | Yes | 20% | Purchases limited to funds, load growth, and replacing retired resources |
| Plumas-Sierra | 130,616 | n/d | n/d | n/d | n/d | Yes | 20% | Unknown |
| Truckee Donner | 126,133 | n/d | n/d | n/d | n/d | Yes | Seek to add qualifying renewables if public goods charge available | |
| Ukiah | 109,076 | 50% | 52% | 80% | 84% | Yes | Will seek to add qualifying renewables as demand increases | |
| Trinity | 81,943 | 0% | n/d | 100% | n/d | Yes | Consider only renewables in meeting future growth beyond that provided by the Trinity River | |
| Surprise Valley | 79,122 | 1% | 1% | n/a | n/a | Unknown | Unknown | Unknown |
| Healdsburg | 68,487 | 55% | 52% | n/a | n/a | Unknown | Unknown | Unknown |
| Needles | 58,877 | 0% | 5% | n/a | n/a | Unknown | Unknown | Unknown |
| Gridley | 30,990 | 10% | n/d | 100% | n/d | Yes | 20% | Unknown |
| Biggs | 16,259 | 10% | 19% | n/d | 39% | Yes | 20% | Unknown |
| Port of Oakland | Unlisted | 4% | n/d | n/d | n/d | Yes | 20% Goal, 40% Objective | 2017 |

n/a = not applicable

n/d = no data readily identifiable

As reported in Table 2, a total of 29 POUs representing approximately 98 percent of total POU load in the state are known to have established RPS commitments of some type (the other POUs may also have established renewable energy goals, but we have been unable to find information on these plans). At least 16 of these POUs have taken measurable steps to acquire renewable resources (see Chapter 4).

It is clear, however, that the RPS policies being established by POUs vary considerably, and in some cases are less stringent than those policies established by SB 1078 for the state's IOUs and ESPs/CCAs. A variety of implementation and definitional issues have emerged that may have bearing on the question of the consistency of POU RPS goals with those of the state's IOUs and ESPs/CCAs.

RPS Compliance Dates: Though IOUs, ESPs, and CCAs are all required to meet the RPS target of 20 percent by 2017 (accelerated by the state's energy agencies to 2010, and with a goal of 33 percent by 2020), POU target dates vary from 2007 to 2017; some POU RPS policies are silent on the issue altogether. Few of the POUs have accelerated their targets to 2010. Additionally, though most POU RPS commitments include end-targets, many do not include intermediate-year targets such as those faced by the state's IOUs and ESPs/CCAs.¹⁴

Treatment of Hydroelectric Output: For IOUs, ESPs, and CCAs, output from hydroelectric facilities is only RPS-eligible if it originates at facilities 30 MW or less in size (for existing facilities) and if it requires no increased diversion or appropriation of water (for new facilities). A number of the POUs have opted for a more lenient stance towards large hydropower eligibility.

Twenty of the 32 utilities included in Table 2 (representing 26 percent of California POU retail sales in 2003) define all hydroelectric output as eligible under their RPS plans. Many of the POUs receive significant hydro allocations from the Western Area Power Administration, and a number of these utilities are, as a result, reporting that they have met their RPS goals well in advance of the years in which they are required to do so. Of the 20 utilities that allow all large hydropower to qualify, 10 appear to have met their RPS targets as of 2003 (representing roughly 9 percent of 2003 statewide POU load).

LADWP has opted not to include output from its Hoover Dam facility (491 MW), but owns fourteen hydro facilities ranging from less than 1 MW to 69 MW and appears to count output from all of these facilities (including five projects larger than 30 MW and totaling 223.5 MW) for purposes of RPS compliance. The Energy Commission's "Revised California and Western Electricity Supply Outlook Report" suggests that inclusion of these hydropower resources will add roughly 2.7 percent to LADWP's qualifying resources. The City of Burbank Water & Power defines only "low impact hydroelectric generation" as an eligible renewable resource, while Pasadena counts existing hydropower towards its RPS, but as a matter of policy has decided not to allow increases in its large hydropower purchases to qualify as eligible.

Unbundled Renewable Energy Certificates: Currently, IOUs and ESPs/CCAs are precluded from using unbundled Renewable Energy Certificates (RECs) for RPS compliance. The CPUC has left open the option of allowing unbundled RECs in the future, and is considering allowing their use for ESPs, CCAs, and IOUs. The California legislature has also begun to wrestle with the issue of RECs, and some stakeholders (e.g., TURN and SCE) believe that statutory changes would be necessary for unbundled RECs to be legally permissible under the RPS.

POU RPS policies are generally silent on this issue, but several of the POUs have purchased unbundled RECs for purposes of short-term RPS compliance. Other POUs have purchased shaped/firmed renewable energy products (including from PPM's High Winds project), which involve an unbundling of RECs and then a rebundling of those RECs with system power. Shaped/firmed products do not appear to be allowed for IOU RPS compliance at this time, though the CPUC has indicated that they will be addressing this topic later in 2005.

Discussions with some of the POUs lead us to believe that many POUs do not intend to primarily rely upon unbundled RECs to achieve RPS compliance in the future (shaped/firmed electricity products will be more common). This is because POUs sometimes see renewable power purchase agreements or equity interests in renewable generation facilities as the more cost-effective means of acquiring the necessary renewable resources.

One specific concern expressed by the Energy Commission in the past is that POUs may choose to buy unbundled RECs from large hydroelectric facilities; we have found no evidence that such purchases have taken place or are planned. However, at least one POU, Alameda Power & Telecom, is currently reporting more than 50 percent eligible renewables penetration, and has therefore begun to offer excess RECs for sale to other retail suppliers. The RECs being offered for sale are from specifically identified CEC-eligible geothermal and wind projects. Alameda has not offered any RECs from large hydro and there is no indication they have any intention of doing so.

Deliverability Requirements and Geographic Eligibility: POU RPS policies are also generally silent (and therefore presumably more lenient than SB 1078) on geographic eligibility (whether for RECs or delivered electricity). We are, however, aware of a few POUs that are purchasing unbundled RECs from out-of-state renewable facilities for purposes of RPS compliance. The state's IOUs are precluded from such purchases.

Green Pricing Programs: POU RPS policies are often silent on whether renewable resources can be "counted" for both RPS compliance and used in green pricing programs. Currently, this issue is relevant only to POUs because the IOUs are not offering green pricing programs. It appears as if some POUs are counting renewable resources sold through green pricing programs toward their RPS goals.

POU green pricing programs with Green-e certification, however, are clearly using only additional renewables to supply their programs, based on Green-e rules.

Electricity Without REC Ownership: At least one POU, Imperial Irrigation District, initially elected to consider electricity purchased from otherwise eligible resources but without the associated RECs as eligible for RPS compliance. We believe that Imperial subsequently decided to acquire the RECs associated with this electricity.

We are not aware of other POUs that have contemplated counting *new* eligible renewable energy towards their RPS without the associated RECs. However, some POUs may be counting purchases of *existing* renewable generation (e.g., through allocations from the Western Area Power Administration) without clear title to the associated RECs.¹⁵

Related, data in Table 2 on CEC-eligible and POU-qualifying generation are derived in many instances from Power Content Labels that include both specific purchases and generic purchases of net system power. Because net system power contains some CEC-eligible and POU-qualifying generation, and RECs are not specifically transferred in system power transactions, the data in Table 2 includes some renewable generation that arguably should not be counted towards POU RPS obligations. Because a centralized RPS reporting requirement does not exist for the state's POUs, we are unclear whether POUs use the Power Content Label data for RPS tracking purposes, or whether POUs exclude system power transactions from internal RPS reporting.

Comparing POU and IOU Targets

Comparing the stringency of the POU targets reported above with those for the state's major IOUs is challenging because of differences in the percentage targets, the renewable energy resource and geographic eligibility rules, the required/targeted timeframes for compliance, and the level of enforcement applied to IOUs and POUs.

Nonetheless, the difference between the POUs' 2003 qualifying renewable purchases and their ultimate RPS target represents the incremental amount of renewables required for the POUs to achieve their internal goals. The same percentages can be derived for the state's IOUs, based on a 20-percent-by-2010 target. Assuming that the incremental renewable purchases from the POUs come from CEC-eligible renewable resources (i.e., that POUs will not count towards their RPS programs additional large hydropower not already under contract), this measure of "incremental" renewable energy need provides a useful benchmark with which to compare the IOUs and POUs.

Table 3 provides the result of this comparison, and shows that available POU RPS targets, by this metric, are more aggressive than those of the state's IOUs, on average. On a load-weighted basis, where data are available, POU incremental renewable energy needs represent 12.5 percent of load. The comparable figure for the state's IOUs is 6.1 percent. There is, of course, considerable variation in

renewable energy need among both the IOUs and the POUs. But, of the 20 POUs for which these data are available¹⁶ (representing 89 percent of statewide POU load in 2003), 11 have incremental renewable energy purchase needs that exceed those of the IOUs (on average).

Table 3. Incremental Renewable Energy Needs: Ultimate RPS Target Less 2003 Deliveries (Percent Aggregate and Annual)

| | Ultimate Target less 2003 Deliveries | Annual Incremental Need to Achieve Target |
|---------------------------------|---|--|
| Investor-Owned Utilities | | |
| <i>Load-Weighted Average</i> | 6.1% | 0.86% |
| SDG&E | 16.4% | 2.30% |
| PG&E | 7.6% | 1.10% |
| SCE | 2.3% | 0.30% |
| Publicly Owned Utilities | | |
| <i>Load-Weighted Average</i> | 12.5% | 1.04% |
| Burbank | 19.0% | 1.4% |
| Banning | 18.9% | 1.4% |
| Modesto | 16.5% | 1.2% |
| Los Angeles | 15.8% | 1.1% |
| Pasadena | 13.3% | 1.0% |
| Anaheim | 13.0% | 0.9% |
| Palo Alto | 13.0% | 1.1% |
| Turlock | 12.0% | 0.9% |
| Sacramento | 11.0% | 1.4% |
| Colton | 10.0% | 0.7% |
| Azusa | 10.0% | 0.7% |
| Glendale | 5.4% | 0.4% |
| Riverside | 5.0% | 0.4% |
| Merced | 4.0% | 0.4% |
| Imperial | 2.5% | 0.6% |
| Roseville | 0.0% | 0.0% |
| Lodi | 0.0% | 0.0% |
| Alameda | 0.0% | 0.0% |
| Lompoc | 0.0% | 0.0% |
| Gridley | 0.0% | 0.0% |

The state's IOUs are currently held to a 2010 20 percent RPS compliance date (though a 33 percent goal is also in place), but the state's POUs have generally provided themselves more time to comply with their internal targets. Therefore, Table 3 also translates the overall incremental need into an annual figure, assuming that each utility will increase its percentage of renewable energy on a steady basis over time to achieve its ultimate target. Even by this metric, POU targets are, on average, more aggressive than those of the IOUs.

Several caveats to these conclusions are in order.

- First, while these data suggest that the POUs' targets are more stringent (on average) than the IOUs', the POU targets are just that – goals without the same enforcement mechanisms as those applied to the state's IOUs. The IOU targets are therefore more firm than those of the POUs.
- Second, POU renewable purchases may sometimes be sourced from a broader range of renewable energy technology types than allowed for the state's IOUs (e.g., some POUs allow large hydropower, or a broader range of biomass projects), and with more lenient delivery rules than allowed for the IOUs (unbundled RECs from in-state and out-of-state, and shaped/firmed products).
- Third, given the relatively higher load of the state's IOUs, the IOUs' incremental renewable needs would look more aggressive if calculated on a capacity or energy (rather than percentage) basis.
- Fourth, the POU needs are higher in large part because they are starting with a smaller amount of CEC-eligible renewable energy than are the IOUs. On a load-weighted basis (where data are available), 2003 CEC-eligible deliveries averaged 6.5 percent for the POUs. IOU CEC-eligible deliveries in 2003 averaged approximately 14 percent.
- Finally, as mentioned earlier, the CEC, CPUC and Governor have expressed support for a statewide renewable energy goal of 33 percent. If the IOUs are ultimately held to a 33 percent target but POUs are allowed to maintain their existing targets, then the incremental need from the IOUs would far exceed that of the POUs.

With these important caveats in mind, one conclusion is in order: self-established POU renewable energy targets do not appear to be grossly out of line with, or substantially more lenient than, the 20-percent-by-2010 target applied to the state's IOUs. In fact, though the POU targets are not truly comparable to the enforced RPS as applied to the IOUs, the above analysis suggests that the POUs' internal targets are (on average) more aggressive than those of the IOUs in terms of incremental renewable energy needs in percentage terms.

CHAPTER 4: RENEWABLE ENERGY PROCUREMENT PROGRESS TO DATE

Overview

The POU renewable energy targets described in Chapter 3 are goals, and are not enforced in the same manner as the IOUs' RPS requirements. As such, it is all the more important to track actual renewable energy purchases, renewable energy solicitations, and new renewable energy contracts. This chapter provides data on all three of these measures, where publicly available information was readily accessible. We again acknowledge that significant limitations exist with the data that are presented here, and that we may have missed important POU activity. We welcome corrections and additions. This chapter ends with a brief discussion of some of the barriers to more aggressive renewable energy goals and procurements faced by POUs.

Renewable Energy Purchases, 2003-2004

Between 2003 and 2004, IOU RPS purchases increased by roughly 0.5 percent for SCE and 0.7 percent for SDG&E, and decreased by roughly 0.7 percent for PG&E. In aggregate, as a percentage of total IOU load, renewable energy purchases by the IOUs remained largely constant between 2003 and 2004.

Data from the POUs are too spotty to comprehensively compare increases in POU renewable energy procurements with those of the IOUs over this short one-year period, but the results may, nonetheless, be informative. Where both 2003 and 2004 POU data are available (see Table 2), these data show mixed results. Specifically, 12 POUs appear to have increased their purchases of CEC-eligible resources between 2003 and 2004 (on a percentage basis, increases ranged from less than one percent to 11 percent of load), while seven POUs experienced reductions in their renewable percentages (up to 5 percent of load). On average, where POU data are available, load-weighted POU deliveries increased by roughly one percent from 2003 to 2004.

Over this admittedly short one-year period, we see little evidence of *substantially* different procurement practices between the state's IOUs and POUs.

Renewable Energy RFOs

Table 4 presents summary information on 10 recent renewable energy solicitations by the state POUs. The POUs, in some instances, have the authority to make purchases without the benefit of a solicitation, and the distribution of solicitations that are issued is sometimes not as broad as is the case for the IOUs. Nonetheless, most of the POU solicitations establish resource eligibility requirements that are consistent with those applied to the state's IOUs, though more lenient delivery may be allowed. The time from solicitation release to first contract award has often been lengthy: from six months to over three years, with a mean of 16 months. These time

periods mirror the early experience of the state's IOUs, as shown in Figure 1. We see little difference, on average, among POUs and IOUs in solicitation speed.

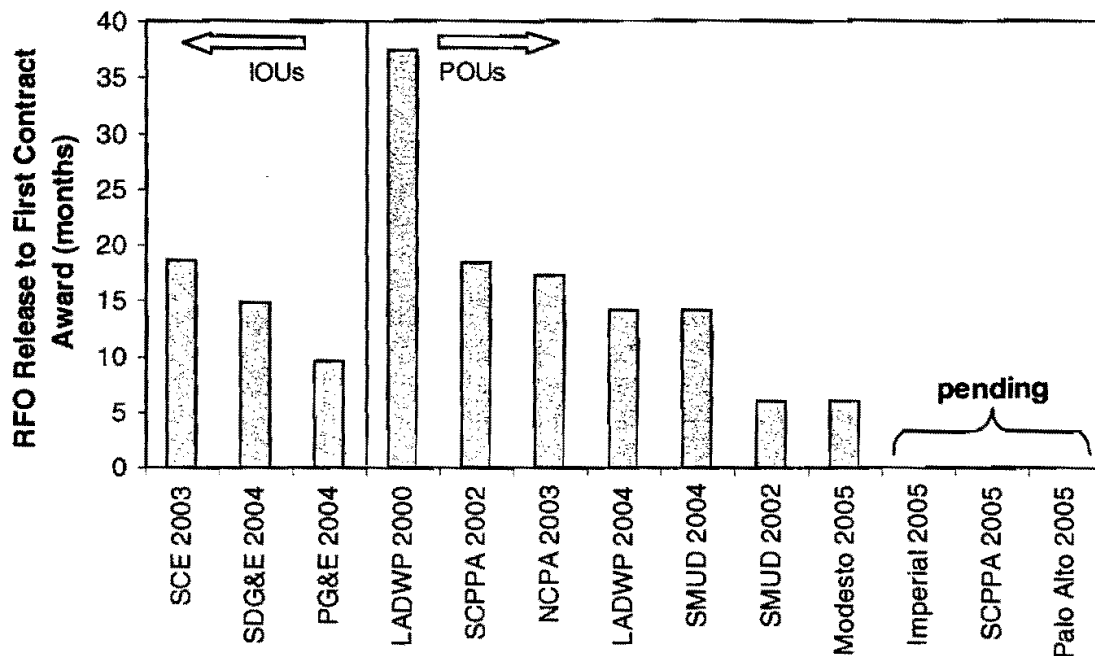
Table 4. Recent POU Renewable Energy Solicitations

| Issued By | Date of Solicitation | Date of First Contract Award | Technologies Requested* | Capacity Solicited |
|-----------|----------------------|------------------------------|-------------------------|--------------------|
| Imperial | Oct-05 | Pending | CEC Eligible | 53 aMW** |
| SCPPA | Aug-05 | Pending | CEC Eligible | < 75 MW |
| Palo Alto | Aug-05 | Pending | CEC Eligible | 25 aMW |
| Modesto | Feb-05 | Aug-05 | Wind | 10 - 25 MW |
| LADWP | Jun-04 | Sep-05 | CEC Eligible | 150 aMW** |
| SMUD | Jun-04 | Aug-05 | CEC Eligible | 47 - 257 aMW** |
| NCPA | Mar-03 | Aug-04 | CEC Eligible | 30 - 85 MW |
| SCPPA | Feb-02 | Sep-03 | CEC Eligible | 70 - 120 MW |
| SMUD | Jan-02 | Jul-02 | Wind | 10 MW |
| LADWP | Jan-00 | Feb-03 | CEC Eligible | 100 MW |

* Some of the RFPs do not explicitly identify CEC-eligible as a requirement, but define eligible technologies to be largely consistent with CEC rules. There are some modest exceptions. IID, for example, does not apply the same restrictions to biomass and small hydro as does the CEC. SCAPPA's RFPs do not reference CEC eligibility, but indicate "any certifiable renewable energy."

** Average MW (aMW) refers to power deliveries assuming a 100 percent capacity factor.

Figure 1. Solicitation Timeframes: Comparing POUs to IOUs



Renewable Energy Contracts

In part as a result of this solicitation activity, and in part as a result of bilateral negotiations, POUs have signed contracts with a number of CEC-eligible renewable energy projects, many of which represent new renewable facilities. Though additional research would be needed to identify the vintage of each renewable energy project that has received a contract, we are confident that the majority of contracts and deliveries are from new renewable generation.

These projects would also, with few exceptions, meet Energy Commission resource eligibility requirements, but several would not meet the deliverability requirements imposed on the state's IOUs. Some of the POU purchases are for shaped/firmed products, and others involve unbundled RECs (some of which are short-term contracts, and some of which come from out-of-state facilities). Further research would again be necessary to comprehensively identify the deliverability requirements for each contract.

Table 5 provides data on those contracts of which we are aware (note that we did not attempt to collect data on solar photovoltaic installations).¹⁷ In total, POUs have contracted with roughly 1,000 MW of renewable energy capacity over the last several years, including 535 MW of wind, 225 MW of geothermal, 51 MW of landfill gas, and 74 MW of biomass. As noted above, most of this capacity represents new renewable energy generation, much of which is not yet on line. The POUs represented in this table served 88 percent of total California POU load in 2003 (the POUs not included in the table and in Table 6 have signed no contracts for new renewable generation of which we are aware).

Applying capacity factor assumptions where necessary, these projects hold the promise of annual renewable energy deliveries of over 4,700 GWh, if all projects achieve commercial operations. These potential renewable deliveries represent 8.2 percent of statewide 2003 POU load (see Table 6).

In comparison, the state's three major IOUs have contracted with approximately 1,710 – 3,030 MW of new renewable energy capacity since 2002 (the range reflecting expansion options), totaling 5,050 – 8,690 GWh/year in potential deliveries if all projects achieve commercial operation as planned. As a percentage of aggregate IOU load in 2003, these purchases represent approximately 3.2 percent to 5.4 percent (see Table 6).

Table 5. Recent POU Renewable Energy Contracts

| Utility | Technology | Capacity (MW) | Assumed Capacity Factor | Assumed Generation (MWh) | Expected/ Actual Start Date |
|---------------|--------------------|---------------|-------------------------|--------------------------|-----------------------------|
| Alameda | Wind | 10.0 | 35% | 30,660 | 2005 |
| Alameda | LFG | 6.5 | 85% | 48,399 | 2006 |
| Anaheim | Wind | 6.0 | 35% | 18,396 | 2003 |
| Anaheim | LFG | 4.5 | 85% | 33,259 | 2005 |
| Anaheim | Geothermal | 12.0 | 90% | 94,608 | 2006 |
| Azusa | Wind | 6.0 | 35% | 18,396 | 2003 |
| Banning | Geothermal | 2.0 | 90% | 15,768 | 2006 |
| Burbank | LFG | 0.3 | 85% | 1,862 | 2005 |
| Burbank | LFG | 2.3 | 85% | 17,275 | 2006 |
| Colton | Wind | 3.0 | 35% | 9,198 | 2003 |
| Colton | LFG | 1.3 | 85% | 9,680 | 2004 |
| Glendale | Wind | 9.0 | 35% | 27,594 | 2003 |
| Glendale | LFG | 4.5 | 85% | 33,259 | 2005 |
| Glendale | Geothermal | 3.0 | 90% | 23,652 | 2006 |
| Imperial | Biomass | 18.0 | 85% | 134,028 | 2004 |
| Imperial | Small Hydro | 1.0 | 85% | 7,446 | 2005/2006 |
| Imperial* | Geothermal | 185.0 | 90% | 1,458,540 | 2006/2007 |
| Los Angeles | LFG | 1.5 | 85% | 11,169 | 2004 |
| Los Angeles** | LFG | 6.1 | 85% | 45,421 | 2005 |
| Los Angeles** | LFG | 4.9 | 85% | 36,422 | 2005 |
| Los Angeles | Wind | 120.0 | 35% | 367,920 | 2006 |
| Los Angeles | Biomass | 40.0 | 85% | 297,840 | 2009 |
| Los Angeles** | Wind/Small Hydro | 65.0 | 35% | 200,000 | 2003 & 2004 |
| Merced | Wind | 5.0 | 35% | 15,330 | 2003 |
| Modesto | Wind | 25.0 | 35% | 76,650 | 2004 |
| Modesto | Wind | 50.0 | 35% | 153,300 | 2006 |
| Modesto | Biomass | 15.5 | 85% | 115,413 | 2006 |
| Palo Alto | Wind | 20.0 | 35% | 61,320 | 2004 |
| Palo Alto | LFG | 6.5 | 85% | 48,399 | 2006 |
| Palo Alto | Wind | 25.0 | 35% | 76,650 | 2006 |
| Palo Alto | Wind | 10.0 | 35% | 30,660 | 2006 |
| Palo Alto | LFG | 1.6 | 85% | 11,914 | 2007 |
| Pasadena | Wind | 6.0 | 35% | 18,396 | 2003 |
| Pasadena | LFG | 2.2 | 85% | 16,381 | 2005 |
| Pasadena | Geothermal | 3.0 | 90% | 23,652 | 2006 |
| Riverside | Unspecified (RECs) | 48.0 | 50% | 210,000 | 2002 |
| Riverside | Geothermal | 20.0 | 90% | 157,680 | 2003 |
| Riverside | LFG (3 sites) | 6.0 | 85% | 44,676 | 2003 |
| Riverside | Wind | 4.0 | 35% | 12,264 | 2003/2004 |
| Santa Clara | Wind | 75.0 | 35% | 229,950 | 2006 |
| Sacramento | Wind | 50.0 | 35% | 153,300 | 2003 |
| Sacramento | Wind | 10.0 | 35% | 30,660 | 2003 |
| Sacramento | Wind | 5.0 | 35% | 15,330 | 2004 |
| Sacramento | Wind | 25.0 | 35% | 76,650 | 2005 |
| Sacramento*** | Wind (RECs) | 71.4 | 35% | 219,000 | 2006 |
| Sacramento | LFG | 2.7 | 85% | 20,104 | 2006 |
| TOTAL | | 999 | | 4,758,470 | |

* In the initial contract, Imperial did not receive the RECs associated with this generation. Subsequent negotiations appear to have addressed this issue.

** Generation capacity was back calculated based on expected deliveries and an assumed capacity factor.

*** Actual contract was for 25aMW.

Table 6. Incremental Potential Contract Deliveries as a Percentage of 2003 Load

| Investor-Owned Utilities | Incremental Contract Deliveries as a Percentage of 2003 Load |
|---|---|
| <i>Percentage of Aggregate 2003 IOU Load</i> | <i>3.2% - 5.4%</i> |
| SDG&E | 15.3% - 23.7% |
| PG&E | 1.4% |
| SCE | 2.5% - 5.9% |
| Publicly Owned Utilities | |
| <i>Percentage of Aggregate 2003 POU Load</i> | <i>8.2%</i> |
| Imperial | 50.9% |
| Palo Alto | 23.9% |
| Riverside | 22.5% |
| Alameda | 21.5% |
| Modesto | 14.5% |
| Banning | 11.3% |
| Santa Clara | 9.7% |
| Azusa | 7.9% |
| Glendale | 7.7% |
| Colton | 6.0% |
| Anaheim | 5.7% |
| Sacramento | 5.2% |
| Pasadena | 5.0% |
| Merced | 4.8% |
| Los Angeles | 4.2% |
| Burbank | 1.8% |

Some of the POU contracts may be with existing renewable energy generators, and some represent shaped/firmed and unbundled REC contracts (IOU data do not include such contracts). Nonetheless, contrary to popular belief, the underlying conclusion from Table 6 appears to be that the POUs as a whole have been somewhat more aggressive with their renewable energy contracting in recent years than have the state's IOUs, on average. Whether this trend will continue in future years is unclear.

Looking in more detail at the data presented in Table 6, one sees significant variation among utilities in the amount of their incremental contracts. Among the IOUs, SDG&E stands out for its aggressive contracting to date (in percentage terms), while PG&E's contracts with new renewable generation have lagged. Among the POUs represented in Table 6, many appear to have made more aggressive renewable energy contract commitments than both PG&E and SCE in recent years as a percentage of 2003 load. The POUs not included in Table 6, on the other hand, represent 12 percent of statewide POU load and have made no incremental renewable purchases of which we are aware.

It is difficult to predict what fraction of these contracts will ultimately result in actual deliveries, but the IOUs (i.e., SCE and SDG&E) have contracted with a significant amount of solar thermal capacity that is arguably at greater risk of contract failure than those projects under contract to the POU (solar thermal represents 35 to 45 percent of the total projected deliveries from the contracts signed by the IOUs to date). This comparison is imprecise, however, because we have not compared the performance requirements embedded in the POU contracts with those of the IOUs.

Barriers to Aggressive POU RPS Policies

POUs face a number of barriers to aggressive renewable energy procurement, some of which are unique to POU and would not be experienced by the state's major IOUs. This is one of the reasons for the enhanced flexibility offered to POU under SB 1078. Based on a cursory review of Energy Commission and other regulatory filings and on conversations with POU staff individually and at a variety of industry meetings, here we summarize some of the key issues for and barriers to the development and implementation of POU RPS policies, as identified by POU:¹⁸

Autonomy: Although perhaps not a barrier to POU adoption of strong RPS policies per se, clearly the most significant obstacle to POU cooperation with state legislative and regulatory activities is the desire by public power to remain outside state regulatory arenas and direct regulation to the maximum extent possible.

Rate Impacts: POU (like most other utilities) place great emphasis on maintaining low rates, and therefore express concerns about the rate impacts of aggressive renewable energy purchases. As market economics change in favor of renewables, it is likely that this barrier will be reduced. However, most POU are considerably smaller than the major IOUs in the state, therefore facing diseconomies of scale in renewable energy purchases, and most POU have access to significant quantities of inexpensive hydropower. Adding higher-priced renewables may therefore have greater rate impacts on POU than on IOUs. In addition, renewable energy contract payments by IOUs are capped at the Market Price Referent, and the IOUs do not have to meet RPS targets if Supplemental Energy Payments (production incentives that are funded through a public goods charge and distributed by the Energy Commission) are insufficient. Although a number of POU have developed similar mechanisms to cap the cost of the RPS, others have not.

City Budget Impacts: Although not widely discussed, many of the municipalities that own their own utilities use excess revenues from their utilities to fund city budgets. To the extent that POU believe increasing the use of renewables will reduce the availability of excess revenues, concerns about increased adoption become intertwined with much larger municipal issues.

Over-Resourced and Seasonally Under-Resourced Utilities: Some of the POU believe they are already adequately resourced or, in some cases, over-resourced. RPS requirements to procure additional resources might cause such entities to be

forced to sell low-cost resources and accept higher cost resources. In addition, some of the POU's that do need additional resources have such needs only during specific seasons. Since renewable generation may not follow their seasonal needs, they may be forced to sell lower-cost resources during times of excess supply. Related, resource adequacy rules may force some POU's to acquire additional generation resources, but some renewables, particularly wind, may not fully satisfy these requirements. If POU's are required to meet resource adequacy requirement with non-renewables and also meet RPS requirements, some are concerned that they may end up with excess generation.

Green Pricing Programs: Some POU's would like to see renewable resources procured for green pricing programs count toward RPS requirements, especially if such requirements are accelerated. These POU's argue that their customers are funding the renewable resources underlying their green pricing programs and, therefore, that the intent of state renewable policy (to encourage the development of new renewable resources) is being served.

Lack of Coordination Between Greenhouse Gas and Renewables Policy:

Some of the POU's have expressed concerns that lack of coordination at the state level between renewable policy and greenhouse gas policy activities may lead to increased costs or reduce the value of actions taken for RPS compliance. Specifically, POU's express some concern that GHG mitigation requirements may be imposed on them by the state that might not provide adequate credit for the POU's' earlier renewables activities (especially, for example, if the GHG policies are focused just on incremental supplies, not taking into consideration the GHG profile of the pre-existing generation mix and therefore the POU's' pre-existing renewable energy commitments).

Pricing of ISO Services: A number of POU's, particularly the larger POU's, such as Sacramento Municipal Utility District and LADWP, are not members of the California ISO. POU's in California are concerned that to meet RPS targets, they will need to access renewable resources outside their service area and pay CA ISO transmission charges and other fees. POU's may also be concerned with potentially having to finance any necessary transmission expansion to access these renewable resources.

CHAPTER 5: NEXT STEPS

Overview

Information collected in earlier sections suggests that many POUs are proactively pursuing renewable energy goals that are reasonably consistent with, if not even more aggressive than, the state's overall 20 percent target. Some other POUs, though in compliance with California's current RPS statute that provides considerable flexibility, are not taking such aggressive action and may not be complying with the "spirit" of the law. Most POUs, like the state's IOUs, are not yet planning for a 33 percent statewide goal.

Our review of other (non-California) state RPS policies shows that those states have taken a variety of approaches to addressing POU RPS compliance, but that a number of states impose more significant requirements on POUs than is presently the case in California. At the same time, it is important to recognize that a key finding of this paper is that California's POUs appear to be taking more aggressive actions (at least so far) than is commonly assumed.

The Energy Commission requested that we develop a preliminary work-plan for future research that might explore issues of POU compliance with California's renewable energy targets in more detail.

Proposed Task Areas

We propose that this work be conducted in 2006, and potentially contain three primary elements, or task areas:

1. ***Collect Baseline Information on POU RPS Actions:*** This report has provided summary information on the RPS plans and actions of POUs in California, but is not based on comprehensive information. We propose that future work seek to collect consistent and comprehensive information on the POU RPS targets, eligibility rules, and policy details from California's POUs, building off of the present effort and earlier efforts by the Energy Commission. We also propose to update and refine information on POU renewable energy solicitations, solicitation results, and renewable purchases, including information on whether the renewable purchases are with new or existing generators and what forms of delivery requirements are imposed on those contracts. This information would be gathered based on a more comprehensive set of contacts with POU representatives. This task would also seek to understand any barriers experienced in the renewable energy solicitation process.
2. ***Develop Recommendations for a More Consistent Tracking System:*** It is currently very difficult to track POU progress towards their existing renewable energy goals because POU renewable energy purchases are not uniformly and comprehensively reported in one place. Even on power content labels, the specific renewable energy projects or contracts are not identified. Under this

task we would review options for establishing a more consistent, statewide tracking system for this critical information. One specific option might be to require POU participation in WREGIS and delivery of WREGIS renewable generation reports; before WREGIS is operational, another option might be to require or encourage participation in the Energy Commission's interim tracking system.

3. *Identify Barriers to Action, and Opportunities for Policy Refinement:*

Several important barriers to aggressive renewable purchases and RPS goals for the state's POUs were summarized in Chapter 4. We recommend that these and other barriers be further explored, primarily through interviews with POU personnel. In addition, recognizing that many states have sought intermediate strategies in which POUs are required to meet certain RPS requirements but offered certain exemptions or additional flexibility, we would seek to explore these policy options with POU representatives. These options might include: (1) size-based RPS exemptions for smaller POUs, (2) exemptions based on specific findings of hardship, (3) exemptions based on a vote by POU customers, and (4) affirmative demonstration of substantially-similar RPS requirements or of good faith efforts to achieve the statewide target. The purpose would be to identify policy options that might go beyond the present requirements, but that would not obligate total uniformity among the IOUs and POUs.

Proposed Methods

We tentatively recommend that much of the information required to fulfill the above tasks be collected through interviews with senior POU personnel (building to some degree off of similar stakeholder interviews in 2005 to understand barriers to IOU compliance). These interviews would be based on a loose interview guide, and would likely require 45 to 90 minutes to complete. A less time-intensive but also less comprehensive approach would be to collect this information through an Energy Commission workshop, or through an on-line survey instrument. In addition, we propose to work closely with Energy Commission staff, especially those already receiving information from POUs, to identify gaps in current data collection procedures and to ensure that information already being collected can be used more effectively and comprehensively.

There are 39 POUs operating in California. One could seek to conduct in-person or telephone interviews with each POU in the state, but we recognize that time and resource constraints may require a sampling approach. If a sample is used we recommend that it include the state's largest POUs but also include a sampling of the smaller POUs. A minimum of 10 utilities should be interviewed, to ensure a good representation of both larger and smaller utilities. For those utilities not targeted for in-person or telephone interviews, we recommend that either a mailed or on-line survey instrument be used to collect basic information. In addition to interviews directly with POUs, we recommend interviews with relevant POU industry organizations, including the Northern California Power Agency, Southern California

Public Power Authority, Western Area Power Administration, and California Municipal Utilities Association.

The interview guide would be consistent with the Task Areas described above, and would include questions on the following topics (specific questions would be developed later):

- Current POU RPS targets and policy details;
- POU solicitations, solicitation results, and renewable purchases;
- Lessons learned and experiences from recent renewable energy purchases;
- Options for a more uniform, statewide tracking of POU renewable purchases;
- Actual or expected barriers to achieving aggressive RPS targets;
- Policy options for reducing stated barriers;
- Policy options for greater statewide uniformity in renewables goals and actions;
- Policy flexibility that is essential for POU RPS policies.

As a supplement to the POU interviews, we recommend an optional set of other interviews with stakeholders familiar with POU renewable energy issues, or with a significant stake in those issues. These interviews would require their own interview guide, and might include:

- Environmental Stakeholders: e.g., Center for Energy Efficiency and Renewable Technologies, Global Green
- Investor-Owned Utilities: SCE, PG&E, SDG&E
- Renewable Developers: three to five developers active in POU solicitations
- Other: e.g., CA ISO on transmission barriers

The purpose of these interviews would be primarily to explore policy options for achieving greater uniformity in RPS achievement among the state's load-serving entities. We would also hope that the developer interviews would provide insight into the renewable solicitation and procurement practices of the state's POUs, relative to the IOUs.

As another optional element, we recommend that the Energy Commission consider a stakeholder workshop in which the findings are summarized and discussed. We recommend that such a workshop be conducted after a draft report is complete, with the final report addressing any significant issues raised during the workshop.

Proposed Schedule

The tentative work-plan proposed here is subject to revision based on comments received, as well as based on future RPS and market developments. If the Energy Commission chooses to pursue this work, as laid out above, we assume that it would commence in 2006. We believe that the tasks listed above would require approximately five months to complete, given possible interview scheduling difficulties.

ENDNOTES

¹ Most recently, see: California Energy Commission. 2005. "2005 Integrated Energy Policy Report." Committee Draft Report. CEC-100-2005-007-CTD. Similar recommendations were made in the Energy Commission's *2003 Energy Policy Report* and *Integrated Energy Policy Report 2004 Update*.

² California Public Utilities Commission. 2005. "Policy Statement on Greenhouse Gas Performance Standards." Agenda ID: 4958. October 6, 2005.

³ The legislation may have also disallowed the use of unbundled REC transactions by POU's in the satisfaction of their renewable energy targets.

⁴ The Hawaii RPS is only enforceable if compliance costs are below the cost of alternative generation resources. The Vermont RPS is a goal for many years and, if the goals are not achieved, will then revert to an enforceable standard.

⁵ Senate Bill 415 (2005): Montana Renewable Power Production and Rural Economic Development Act, Section 8 (2).

⁶ Title 17, Chapter 9, Part 572, Public Utilities and Utility Services, Electric Services, renewable energy for electric utilities, New Mexico Administrative Code 17.9.572.20.

An "all-requirements contract" is a contract that provides full electricity supply for typically smaller POU's. These arrangements sometimes do not allow the POU to buy renewable electricity outside the all-requirements contract (other than via RECs) because the POU is already fully resourced.

⁷ Title 17, Chapter 9, Part 572, Public Utilities and Utility Services, Electric Services, renewable energy for electric utilities, New Mexico Administrative Code 17.9.572.10 (E).

⁸ Somewhat related, Vermont's RPS legislation allows POU's to comply either through their all-requirements contracts, or in some other manner approved by the Public Service Board.

⁹ California Energy Commission. 2005. "Implementing California's Loading Order for Electricity Resources." Staff Report. CEC-499-2005-043.

¹⁰ California Energy Commission. 2004. "Reconciliation of Retailer Claims – 2003." Commission Report. CEC-500-04-067CR. And, California Energy Commission. 2005. "Reconciliation of Retailer Claims – 2004." Commission Report. CEC-300-2005-021.

¹¹ California Energy Commission. 2004. "Accelerated Renewable Energy Development." CEC-100-04-003D.

¹² California Energy Commission. 2005. Revised California and Western Electricity Supply Outlook Report." CEC-700-2005-019.

¹³ The EIA does not include the Port of Oakland as a Publicly Owned Utility, while the Energy Commission has historically elected to include this entity.

¹⁴ POU RPS policies are also generally silent on the issue of defining the dates of actual electricity generation that are eligible for meeting the RPS requirements of a particular year. For example, there is no indication whether RECs from renewable electricity generated in 2003, but procured in 2005, could be reported as eligible for meeting 2005 RPS goals. Though IOUs, ESPs, and CCAs have some flexibility in this regard, POU's RPS policies have not generally addressed this issue.

¹⁵ The same could be said for the state's IOUs in their contracts with Qualifying Facility renewable generators.

¹⁶ For the other POU's, either 2003 qualifying renewable generation and/or RPS targets/timeframes are not available.

¹⁷ Data were collected from a number of sources, including press releases, POU websites, contacts with POU's, POU submissions to the Energy Commission, and Energy Commission reports.

¹⁸ Although not rising to the level of a barrier to the development of strong RPS policies, some POU's have also expressed concerns that IOUs do not make their renewable contracts public as some POU's are required to do.