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RENEWABLES PORTFOLIO STANDARD 2005 PROCUREMENT VERIFICATION

COMMISSION FINAL REPORT

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Arnold Schwarzenegger, *Governor*

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ABSTRACT

This *Renewables Portfolio Standard Verification Report (Verification Report)* provides the California Energy Commission's findings on the amount of renewable energy procured by select retail sellers of electricity under California's Renewables Portfolio Standard (RPS). This *Verification Report* verifies the Investor Owned Utilities' (IOUs) Initial Baseline Procurement Amount, which serves as their baselines for purposes of their Renewable Portfolio Standard procurement targets, and their Annual Procurement Targets (APTs) for the years 2004 and 2005. This report verifies that all RPS procurement was generated by certified RPS-eligible facilities, determines to the extent possible that RPS-eligible energy procured by the IOUs' was counted only once in California, estimates incremental geothermal procurement, reports the IOUs' progress towards their Annual Procurement Targets, and reports whether there is enough generation to validate the IOU's procurement claims.

KEYWORDS

Renewables Portfolio Standard, Renewable Energy, California, Annual Procurement Target, Certification, Incremental Geothermal, Verification, Generation, Investor-Owned Utilities

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SECTION 1: INTRODUCTION

This *Renewables Portfolio Standard Verification Report (Verification Report)* provides the California Energy Commission's findings on the amount of renewable energy procured by select retail sellers of electricity under California's Renewables Portfolio Standard (RPS). The RPS was established by Senate Bill 1078 (Sher, Chapter 516, Statutes of 2002) and required the state's retail sellers of electricity — investor-owned utilities (IOUs), electric service providers (ESPs), and community choice aggregators (CCAs) — to procure 20 percent of their retail electricity sales with eligible sources of renewable energy by 2017. California's energy agencies subsequently committed to achieving the 20 percent target by 2010. This 20 percent target has now been codified by the enactment of Senate Bill 107 (Simitian and Perata, Chapter 464, Statutes of 2006), which took effect on January 1, 2007.

In creating the RPS, the Legislature underscored the importance of increasing the diversity, reliability, public health, and environmental benefits of the energy mix. To reach the 20 percent target, each retail seller of electricity must increase the percentage of its electrical load served by renewable energy by at least one percent annually, with certain cost constraints. Under the law, retail sellers of electricity include the state's IOUs, ESPs, and CCAs, but does not include local publicly owned electric utilities.

The Energy Commission prepares a verification report annually to report its findings on the amount of renewable energy procured each year by retail sellers of electricity under California's RPS. The verification report is prepared as part of the Energy Commission's responsibilities under the RPS. Under the RPS, the Energy Commission is charged with certifying eligible renewable energy resources that satisfy RPS procurement requirements, developing an accounting system to verify retail sellers' compliance with the RPS, and awarding supplemental energy payments (SEPs) to cover the above-market cost to procure new and repowered eligible renewable energy resources.

Once the verification report is adopted by the Energy Commission, the report is transmitted to the California Public Utilities Commission (CPUC), so it may implement its role in setting California's RPS procurement targets and determining compliance with RPS requirements.

This *Verification Report* verifies the IOUs' Initial Baseline Procurement Amount, which serves as their baselines for purposes of their Renewables Portfolio Standard targets, and their Annual Procurement Targets (APTs) for the years 2004 and 2005. The *Verification Report* revises some of the information provided in the Energy Commission's prior verification report, which was submitted to the CPUC in February 2006, based on subsequent decisions by the CPUC. The CPUC's decision, *Opinion on Reporting and Compliance Methodology for Renewables Portfolio Standard Program* (Rulemaking 06-05-027, Decision 06-10-050) set the formula that determines the IOUs' Initial Baseline Procurement Amounts and their Annual

Procurement Targets. In this report, that decision is referred to as the CPUC's Accounting Rules Decision. The formula for calculating the IOUs' Initial Baseline Procurement Amounts was revised in March 2007, (Rulemaking 06-05-027, Decision 07-03-046). This report will refer to that decision as the March 2007 Baseline Decision. While this verification report provides the IOUs' Initial Baseline Procurement Amounts and estimates the progress that the IOUs have made towards meeting RPS targets for the years 2004 and 2005, the CPUC determines actual compliance of California's IOUs, ESPs, and CCAs with the RPS.

The findings in this Verification Report are based on the Energy Commission's interim tracking system, which, as discussed below, has limitations that should be noted. The robustness of the current approach is limited by the availability and quality of generation data that the RPS-procurement is checked against. Since CPUC procurement targets had not been established for ESPs, CCAs, small and multijurisdictional utilities by the end of 2006, this report addresses IOU RPS procurement only.

RPS Verification Report Development Process

The Staff Draft *Verification Report* (Publication #CEC-300-2007-001-SD) was released on March 5, 2007. On March 15, 2007, the Renewables Committee held a workshop to discuss the Staff Draft *Verification Report.* The Renewables Committee carefully considered oral and written comments received on the Staff Draft *Verification Report* and released a Committee Final *Verification Report* (Publication #CEC-300-2007-001-CTF) on May 11, 2007. This report was adopted by the California Energy Commission at its Business Meeting on August 1, 2007.

Report Organization

This report is organized into five sections. Section 1 is the introduction, followed by Section 2, which describes the Interim Tracking System methodology. Section 3 discusses the methodology and results for incremental geothermal facilities. Section 4 provides the procurement verification findings for each IOU and fuel type. Lastly, Section 5 discusses the limitations of the current tracking system.

Purpose and Scope of the Report

The *2005 RPS Procurement Verification Report* transmits the Energy Commission's RPS procurement verification findings to the CPUC. The purpose of the report is to:

- Verify RPS-eligibility of the renewable energy facilities from which each IOU procured energy.

- Verify, to the extent possible, the amount of energy procured by each IOU from each RPS-eligible facility.
- Verify, to the extent possible, that RPS procurement exclusively serves California's RPS and does not support another renewable energy market claim.
- Verify that renewable facilities located out-of-state satisfy the Energy Commission's RPS energy delivery requirements.
- Apply statutory requirements and the CPUC's rules to identify incremental procurement and annual procurement.
- Quantify the amount of incremental geothermal energy.
- Compare the CPUC's annual procurement targets for each IOU with the Energy Commission's findings for how much procurement qualifies toward the targets.

SB 1078 requires the Energy Commission to design and implement a tracking system to verify compliance with the RPS program and ensure that renewable energy procured to meet California's RPS is counted only once and is not counted toward meeting other renewable energy retail claims.[1] Although the statute provides guidance on the purpose of the Energy Commission's accounting system, it is silent on how the Energy Commission should report the results of its accounting and verification to the CPUC. The CPUC's Accounting Rules Decision refers to the RPS verification reports to initiate and aid the CPUC's process for determining RPS compliance. The Energy Commission intends to develop and issue an annual *Verification Report* to meet the statutory requirements for RPS accounting and verification and transmit the report to the CPUC.

SB 1078 also requires the Energy Commission to certify renewable generating facilities as eligible for California's RPS and to implement RPS delivery requirements.[2] The Energy Commission's *Renewable Portfolio Standard Eligibility Guidebook*[3] specifies the eligibility criteria and process for certifying generating facilities as eligible for the RPS. The eligibility criteria include facility qualifications by technology, size, fuel type, and initial commercial operation date. The law also required the Energy Commission to certify that portion of geothermal facility's

[1] Public Utilities Code Section 399.13(b) requires the Energy Commission to "design and implement an accounting system to verify compliance with the renewable portfolio standard by retail sellers, to ensure that renewable energy output is counted only once for the purpose of meeting the renewables portfolio standard of this state or any other state, and for verifying retail product claims in this state or any other state."

[2] For purposes of RPS compliance, electricity is deemed delivered if it is either generated at a location within the state or is scheduled for consumption by California end-user retail customers as specified in Public Resources Code Section 25741, subdivision (a). Consequently electricity generated in-state or from facilities which have their first point of interconnection to the WECC transmission system in-state satisfies California RPS delivery requirements. To count generation from out of state facilities for purposes of RPS compliance, the retail seller must enter a power purchase agreement with an RPS-certified facility and a matching amount of electricity must be delivered into an in-state market hub or an in-state point of delvery located within California.

[3] *Renewable Portfolio Standard Eligibility Guidebook*, March 2007, Pub No. CEC-300-2007-006-CMF

capacity that qualifies as incremental geothermal production and is thereby eligible for satisfying a retail seller's procurement obligations.[4] Although SB 107 eliminates the Energy Commission's responsibility to certify and measure incremental geothermal production, this report quantifies incremental geothermal procurement for 2005, because the change in statute did not go into effect until January 1, 2007.

The CPUC also has important roles in monitoring and verifying RPS compliance. For example, the CPUC is responsible for:

- Establishing each IOU's initial baseline.[5]
- Implementing the annual procurement target for each IOU.[6]
- Approving or rejecting contracts executed to procure RPS-eligible electricity.
- Determining if an IOU is in compliance with the RPS consistent with the CPUC's flexible compliance rules.[7]
- Imposing penalties for non-compliance. The CPUC adopted penalties of 5 cents per kilowatt-hours (kWh) for non-compliance with the RPS, limited to $25 million annually per IOU.[8]

Renewables Portfolio Standard Procurement Targets

This report includes procurement targets calculated by Energy Commission staff using the methodology currently applicable in the CPUC decisions specifically the CPUC's Accounting Rules Decision and the CPUC's March 2007 Baseline Decision. The targets given in this report reflect CPUC decisions currently applicable. The targets are intended to provide a framework for the procurement figures and to help inform readers about the amount of RPS-eligible energy procured in relation to state goals. The targets will be revised in subsequent Verification Reports if the CPUC revises the targets.

The CPUC sets the APT for the amount of RPS-eligible energy each IOU must procure. The APT reflects the statutory requirement that the IOUs must annually increase their renewable procurement by at least 1 percent of retail sales per year to serve 20 percent of its retail sales with RPS-eligible energy.[9]

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[4] Before the enactment of SB 107, Public Utilities Code Section 399.12(a)(2) provided that the "Energy Commission shall determine historical production trends and establish criteria for measuring incremental geothermal production that recognizes the declining output of the steamfields and contribution of capital improvements in the facility or wellhead." SB 107 eliminated this requirement, so the Energy Commission is revising its RPS Eligibility Guidebook to reflect this change in the law.
[5] Public Utilities Code Section 399.15(b)(2).
[6] SB 107 revises Public Utilities Code Section 399.15(b) the 20 percent target to 2010 from 2017.
[7] Public Utilities Code Section 399.14(a)(2)(C).
[8] CPUC, Decision 03-06-071, R.04-04-026, *Order Initiating Implementation of the Senate Bill 1078 Renewables Portfolio Standard Program*, June 19, 2003.
[9] Subject to CPUC rules for flexible compliance (Decision 06-10-050, R.06-05-027, *Opinion on Reporting and Compliance Methodology for Renewables Portfolio Standard Program*).

The CPUC's Accounting Rules Decision outlines the rules for calculating the APT and the incremental procurement target (IPT), which represents the amount of RPS-eligible procurement that the IOU must purchase in a given year, over and above the total amount the IOU was required to procure in the prior year. For 2003, there is no APT, instead an Initial Baseline Procurement Amount. Although the CPUC's Accounting Rules Decision created the Initial Baseline Procurement Amount, the CPUC's March 2007 Baseline Decision revises the formula used to calculate the baseline. The 2003 Initial Baseline Procurement Amount equals the percentage of RPS-eligible procurement by an IOU in 2001 multiplied by that IOU's 2003 total retail sales plus 1% of 2001 Total Retail Sales.

The first year of RPS compliance for the IOUs is 2004, and the 2004 APT is calculated by adding the 2003 Initial Baseline Procurement Amount to the 2004 IPT, which equals 1 percent of 2003 total retail sales. The IPT for each year from 2004 through 2009 equals 1 percent of the prior year's retail sales. The APT for 2005 through 2009 is calculated by adding the prior year's APT to the current year's IPT. In 2010, the IOUs must meet the 20 percent target with actual delivery of RPS-eligible energy.[10]

In some cases, an IOU has procured energy from a facility that has not been certified by the Energy Commission as RPS-eligible. If a facility is not RPS-certified, the energy procured from that facility is not counted towards the procuring IOU's APT. This is consistent with the requirements in the Energy Commission's *Renewables Portfolio Standard Eligibility Guidebook*.

This report reflects an APT-based reporting methodology. Unlike the *2004 Verification Report*, in this report any RPS-eligible procurement may be used to satisfy any portion of the IPT. The IPT is strictly a numerical target and there is no need to separately track baseline, annual, and incremental procurement.

Each IOU must meet its APT subject to CPUC rules for flexible compliance and the availability of supplemental energy payments (SEPs). SEPs are incentives from the Energy Commission awarded to certified RPS generators to cover eligible above-market costs, subject to caps that may be imposed by the Energy Commission.

It is important to note that this report does not account for banked procurement because banking falls under the CPUC's purview as part of evaluating compliance with the RPS targets.

[10] The 20 percent by 2010 target is clarified in the CPUC's *Opinion of Reporting and Compliance Methodology for Renewables Portfolio Standard Program*.

SECTION 2: METHODOLOGY

This report does the following:

- Verifies that all RPS procurement was generated by certified RPS-eligible facilities.
- Determines to the extent possible that RPS-eligible energy procured by the IOUs was counted only once in California.
- Estimates incremental geothermal procurement.
- States the IOU's Initial Baseline Procurement Amounts.
- Reports the IOU's progress towards their Annual Procurement Targets.
- Reports whether there is enough generation to validate the IOU's procurement claims.

The Interim Tracking System methodology used for this report is termed "interim," because the Energy Commission is developing a more robust electronic system to verify procurement towards the RPS beginning in 2007 and thereafter. This electronic system is known as the Western Renewable Energy Generation Information System (WREGIS). Once WREGIS is operational, it will replace the Interim Tracking System and serve as the accounting and verification system for the California RPS.[11] The Energy Commission will then produce its *Verification Report* using data from the WREGIS system. The Energy Commission plans to use North American Electricity Reliability Council (NERC) tags in conjunction with the WREGIS to verify delivery of RPS energy from out-of-state sources into California.

Interim Tracking System

To track and verify the IOUs' RPS procurement, the Energy Commission applied the approach used since 1998 to develop the *Reconciliation of Retailer Claims Report* for the Power Source Disclosure Program.[12] The *Reconciliation of Retailer Claims Report* is an annual report prepared by the Energy Commission to compare the source of power that retailers disclose to their customers with the actual energy generated for consumption in California as required by law.

For this analysis, the first step was to check that energy procured was generated by a certified RPS-eligible facility. Next, a comparison was made between the amount of RPS-eligible energy procured by IOUs and the total amount of energy generated

[11] Since WREGIS is expected to become operational midway through calendar year 2007 and the *Verification Report* is based on calendar year data, the interim tracking system will be used to verify 2007 procurement.

[12] The Power Source Disclosure Program is implement pursuant to Public Utilities Code Section 398.1, et seq., as enacted by Senate Bill 1305 (Chapter 796, Statutes of 1997). This law requires retail suppliers of electricity to disclose to consumers "accurate, reliable and simple to understand information on the sources of energy that are (being) used...." (Public Utilities Code Section 398.1(b).)

to ensure that the amount procured did not exceed the amount generated. For example, if two or more IOUs procured energy from the same facility, the cumulative amount of energy procured from that facility was compared with the total amount of energy generated by that facility.

If staff found a discrepancy in which procurement appears to exceed generation by more than 5 percent, staff did not include the "excess" procurement as RPS-eligible. For example, if data shows that a facility generated 100 MWh and the IOU reported it procured 108 MWh, staff accounted for 100 MWh as eligible for the APT. The methodology allows for a 5 percent difference between generation and procurement figures to account for possible rounding errors when comparing data sources that use differing energy units (for example, GWh or MWh versus KWh). For specific purchases in which procurement exceeds generation by 5 percent or less, staff will randomly select a sample of these purchases from the IOUs' CEC-RPS-Track filings for 2004 and 2005 and request that the IOUs submit invoices for those purchases to verify that the procurement claimed in the CEC-RPS-Track filing corresponds with the invoices submitted.[13]

Next, staff determined to the extent possible that RPS-eligible energy procured by the IOUs was counted only once in California or any other state.

Finally, staff verified that procurement from out-of-state facilities satisfied RPS delivery requirements, using the process described in Section 4.

Sources of Procurement Data

Pacific Gas & Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) filed CEC-RPS-Track forms with the Energy Commission to report their RPS procurement from 2003 through 2005. Data on 2001 procurement was available for these IOUs from their filings to the CPUC under Rulemaking 01-10-024 (R.01-10-024), *Report to the California Public Utilities Commission: Utility Procurement of Renewable Energy – 2001 and 2002*.[14]

In the IOUs' CEC-RPS-Track filings, the IOUs reported how much energy they procured in calendar year 2005, delineated by RPS-certified facility and by month, as well as their retail sales. For the purposes of this *Verification Report*, a procurement "claim" or "specific purchase" refers to the amount of energy an IOU procured from a specific renewable facility. The information presented in each of the IOUs' CEC-RPS-Track forms and the available generation totals for each facility by data source is included in the appendix.

[13] If discrepancies are discovered, the IOU and the CPUC will be notified and the Energy Commission will report on the discrepancies in its subsequent *RPS Verification Report*.
[14] In December 2005, SCE submitted revised versions of their "Report to the California Public Utilities Commission: Utility Procurement of Renewable Energy- 2001 and 2002."

Sources of Generation Data

The Energy Commission staff collected generation data from various sources to verify the IOUs' procurement data. Self-reported data were collected from the U.S. Energy Information Administration's (EIA) Web site, which provides monthly generation from facilities with a capacity greater than 1 megawatt (MW).[15]

The Energy Commission also used self-reported data submitted from owners of electric power plants larger than 1 MW located in California. The data collected includes the nameplate capacity, fuel type, generation, and fuel usage. Owners of generating facilities with a nameplate capacity of 1 to 10 MW must report annually, while owners of facilities larger than 10 MW must report quarterly.

The staff also reviewed data collected from generating facilities that are registered and eligible for funding from the Energy Commission's Existing or New Renewable Facilities Programs as well as generation data from its Public Interest Energy Research Program's (PIER) *Wind Performance Report Summary*. Since 1985, operators of wind facilities with a capacity greater than 100 kW that sell electricity to a power purchaser submit the annual generation output of their facilities to the Energy Commission. Wind generation data from 1985 through 2003 is available on the electronic Wind Performance Reporting System at http://wprs.ucdavis.edu/. The 2005 wind generation data used for this report, however, have not yet been posted on that Web site.

In most cases, facility data was compiled from more than one source, consistent with the approach used for the *Reconciliation of Retailer Claims Report*. If the various data sources show different generation amounts per facility, procurement is compared to the data source showing the most generation from that facility, consistent with *Reconciliation of Retailer Claims Report* methodology, since lower generation figures may not capture all of the generation from that facility. For example, facilities that participate in the Existing and New Renewable Facilities Program report to the Energy Commission only if they are eligible to receive incentive payments in a given month.

Additional generation data comes from the RPS-certified facilities. A facility that certifies as RPS or SEP eligible with the Energy Commission must annually submit data on its monthly generation, including any generation sold to an entity that does not qualify as a retail seller pursuant to Public Utilities Code Section 399.12, Subdivision (c). These data must be reported on the CEC-RPS-GEN by May 1 (or the next business day) of each year.

[15] The 2005 generation data from the Energy Information Administration can be downloaded at [www.eia.doe.gov/cneaf/electricity/page/eia906_920.html.]

For facilities in which available generation data indicates that procurement exceeded generation by 5 percent or greater, staff requested that the procuring utility submit invoices to verify procurement from those facilities. Staff has compared the totals on those invoices with procurement.

Verification that RPS Procurement is Counted Only Once

The Energy Commission also verified, to the extent possible, that RPS procurement was counted once and only once in California or any other state. The primary data source for this purpose was the data supporting the *Reconciliation of Retailer Claims Report.*[16] If a retail seller claims specific purchases — purchases traceable to specific generation sources — on its Power Content Label, those purchases are included in the *Reconciliation of Retailer Claims Report.*[17] The seller is then required to submit an annual report to the Energy Commission listing the generating facilities from which it procured electric generation for the previous year. Using these data, IOU procurement was cross-referenced with retail sales made by other load serving entities in California, including publicly owned utilities and ESPs.

The *Reconciliation of Retailer Claims Report* reviewed annual reports from 30 retail providers and two electricity wholesalers for 2005. Data from the annual reports included procurement from 807 facilities, including 440 that were certified as RPS-eligible or were "registered" as a renewable supplier.[18] The analysis included Annual Reports submitted by PG&E, SCE, and SDG&E.[19]

Additionally, the Energy Commission verified, to the extent possible, that the renewable facilities claimed by the California IOUs for RPS compliance were not claimed by retail providers in other states. In the past, in administering the Power Source Disclosure Program the Energy Commission has collaborated with state

[16] Specific purchases for the purposes of the Power Source Disclosure Program refer to wholesale power purchases that the retailer can trace to specific generators and thereby claim that the electricity offered for sale to retail customers is a particular fuel type.

[17] The power content label is the format for retail electric providers to disclose their fuel source information about the electricity product(s) offered for sale and about net system power to their customers.

[18] Through 2006, facilities that did not meet the RPS or SEP eligibility requirements could apply to the Energy Commission for "registration" as a Renewable Supplier if the facilities generate electricity from one or more of the following renewable resources consistent with definitions in the Energy Commission's *Overall Program Guidebook* (December 2006, Pub, No. CEC-300-2006-008-ED2): biomass, biodiesel, fuel cells using renewable fuels, digester gas, geothermal, landfill gas, municipal solid waste, ocean wave, ocean thermal, tidal current, photovoltaic, small hydroelectric, solar thermal, or wind. Facilities were also required to report the type and percent of fossil fuel used, if applicable. Effective March 2007, the Energy Commission no longer registers facilities as Renewable Suppliers.

[19] The following entities submitted 2005 Annual Reports to the Power Source Disclosure Program: 3Phases Energy Services; Sempra Energy Solutions; Anaheim Public Utility District; Bear Valley Electric; City of Alameda, Azusa, Biggs, Burbank, Colton, Healdsburg, Lodi, Lompoc, Needles, Palo Alto, Pasadena, Redding, Riverside, Roseville, Ukiah; Los Angeles Department of Water and Power; Imperial, Merced, Modesto, and Turlock Irrigation District; Sacramento Municipal Utility District; Silicon Valley Power; PG&E; SCE; SDG&E; Surprise Valley Electrification Association; Bonneville Power Administration; and Northern California Power Authority.

agencies in Oregon and Washington to develop an energy information/tracking system funded by a U.S. Department of Energy grant. This system enables the participating states to determine if generation is claimed in more than one of the participating states. Using this system, representatives from the State of Washington reported that no retail providers in Washington or Oregon claimed renewable generation from California renewable facilities.[20] Data was not available from other states.

RPS Certification

All 226 RPS purchases claimed by PG&E were from RPS-certified facilities. Of 186 renewable purchases claimed by SCE, 183 were from RPS-certified facilities, and ` all of SDG&E's 20 RPS purchases came from RPS-certified facilities. The three facilities from which SCE procured renewable generation that have not been certified are the Edwin Curtis solar energy system, the Raul Soza small wind energy system, and net metered distributed generation systems. Procurement from uncertified facilities is not counted towards the IOUs' APTs for 2004 and 2005 in this report. If the facilities become certified, the procurement will be considered RPS-eligible.

Additionally, SCE claimed RPS purchases from a distributed generation facility that was RPS certified while SCE claimed procurement from the Community Corporation of Santa Monica solar energy system. Staff has determined that procurement from this facility may not count towards SCE's APT at this time, because of outstanding issues concerning the manner in which distributed photovoltaic generation may be used to satisfy procurement targets because, as stated on page 3 of the *RPS Eligibility Guidebook,* "The law includes solar energy as an eligible resource for the RPS, but several issues need to be clarified to determine how best to include distributed photovoltaic resources, as well as other forms of customer-side renewable distributed generation."

Long-Term Verification

To better meet its statutory requirements for RPS verification, the Energy Commission, together with the Western Governors' Association, is developing WREGIS. As noted previously, WREGIS will electronically track renewable energy certificates (WREGIS Certificates) representing renewable energy generation and will replace the Interim Tracking System described above and used for this report.

WREGIS will create an electronic certificate for each megawatt-hour (MWh) of renewable energy generated, with certificates tagged as California RPS-Eligible or California RPS-SEP-Eligible, as applicable. WREGIS will function like a banking

[20] Based on conversations with Michael Bradley from Washington State, the only specific purchases of California renewables from the Northwest were from facilities for which the IOUs did not claim procurement for purposes of the RPS.

system, with WREGIS Certificates deposited into a generator's "account." WREGIS Certificates can be transferred between parties but can reside in only one party's account at a time, thereby protecting against double-counting of renewable energy generation.

Renewable generators and retail sellers from the Western U.S., Western Canada, and parts of Northern Mexico may participate in WREGIS. As a regional system, WREGIS is designed to verify that any RPS-eligible generation is counted once and only once in California and throughout the geographic area covered by the WECC.[21]

The Energy Commission expects WREGIS to begin operation in mid-2007. Once WREGIS is operational, the Energy Commission will require renewable suppliers and IOUs to participate in WREGIS as part of California RPS compliance. The Energy Commission envisions that retail sellers will provide reports generated via WREGIS to meet the reporting requirements currently satisfied with the CEC-RPS-Track forms. The WREGIS reports will replace the need for cross references with other databases to ensure that the RPS-eligible energy is counted only once. The Energy Commission will check WREGIS data with NERC tag data to verify delivery into California from out-of-state renewable generators.

Outlook for Future Reports

The Energy Commission intends to prepare future *Verification Reports* based on the following schedule.

The *RPS Eligibility Guidebook* requires that retail sellers submit CEC-RPS-Track Filings by May 1 of each year. Subsequently, the staff will begin reconciling the reported renewable procurement by the retail sellers with the generation data from the Energy Commission's Existing and New Renewable Facilities Programs, the Energy Commission's PIER Program, and generation data reported to the Energy Information Administration.

In early August, the Energy Commission provides an annual assessment of how much electricity is produced by fuel type in California to the Department of Finance. This assessment is called the J-11 Table and is developed with generation data submitted to the Energy Commission by late July and supports the analysis used in both the *Reconciliation of Retailer Claims Report* and the *Verification Report*.

[21] The WECC is one of four regional organizations that oversee the operation of the nation's bulk power grid and among the ten regional councils of the North American Electric Reliability Council (NERC). It provides coordination in operating and planning the electricity system for the Western Interconnection. The Western Interconnection is the geographic area containing the synchronously operated electric transmission grid in the western part of North America, which includes parts of Montana, Nebraska, New Mexico, South Dakota, Texas, Wyoming, and Mexico and all of Arizona, California, Colorado, Idaho, Nevada, Oregon, Utah, Washington, and the Canadian Provinces of British Columbia and Alberta.

The legal deadline for submitting the *Reconciliation of Retailer Claims Report* to the CPUC is October 15. Prior to its October adoption by the Energy Commission, the first draft of the *Reconciliation of Retailer Claims Report* is provided to retail sellers in September to give them an opportunity to verify or propose corrections to the findings it contains. The Energy Commission intends to use a similar review process in developing the *Verification Report*. To allow for full consideration of the data and results from the adopted *Reconciliation of Retailer Claims Report*, the Energy Commission intends to consider the *Verification Report* for adoption near the close of each calendar year.

SECTION 3: INCREMENTAL GEOTHERMAL

Using criteria in the *RPS Eligibility Guidebook*, the Energy Commission's Renewable Energy Program certified incremental geothermal capacity for nine Calpine Geysers facilities. However, the enactment of SB 107 in January 2007 eliminated the Energy Commission's responsibility to certify incremental geothermal capacity starting in 2007. Since the requirements for certifying incremental geothermal capacity existed in 2005, this report includes an estimate of the generation from incremental geothermal resources and the *Verification Report* for 2006 will also include an estimate of incremental generation. Originally, generation from incremental geothermal capacity was only eligible to count toward the RPS baseline or adjustment to the baseline unless it was certified as incremental geothermal by the Energy Commission.[22] This section provides an estimate of the amount of energy produced and procured from capacity certified as incremental geothermal by the Energy Commission. The results are included in PG&E's and SCE's procurement verification findings presented in Section 4. Through 2005, SDG&E did not procure incremental geothermal generation.

The Energy Commission certified incremental geothermal capacity at the Calpine Geysers facilities as shown in Table 1 for years 2003 through 2006. In Table 1, the "Total Incremental Geothermal" is the amount of capacity per facility certified as incremental geothermal for that year, and the bottom row shows the amount that was disapproved for certification. The table also shows the increase (or decrease) in incremental geothermal capacity from 2003 to 2004, 2004 to 2005, and 2005 to 2006. For 2005, the Energy Commission approved a total of 145.4 MW of geothermal capacity at the nine Calpine Geysers facilities. The Energy Commission denied 6 MW of the 151.4 MW for which Calpine applied for incremental geothermal certification.

For each of Calpine's nine facilities, part of the capacity is certified as incremental geothermal, and the remainder is considered geothermal restricted to baseline RPS energy. However, the CPUC's Accounting Rules Decision considers incremental procurement to be any RPS-eligible procurement above the previous year's APT so it is not necessary to classify geothermal generation as either incremental or baseline based on generation from capital improvements to geothermal facilities constructed before 1996.

[22] Pursuant to former Public Utilities Code Section 399.12 (a)(2) which was subsequently amended by SB 107.

Table 1:
Capacity Certified as Incremental Geothermal for 2003 through 2006

Calpine Geyser Unit	Quantity Certified as Incremental Geothermal Each Year[1]				Changes in the Quantity Certified as Incremental Geothermal[2]		
	Total Incremental Geothermal (MW)				Increase from 2003 to 2004 (MW)	Increase from 2004 to 2005 (MW)	Increase from 2005 to 2006 (MW)
	2003	2004	2005	2006			
Unit 3/ Sonoma	1.3	7.6	13.1	18.7	6.3	5.5	5.6
Unit 5/6	1.4	6.5	7.0	9.0	5.1	0.5	2.0
Unit 7/8	8.6	15.6	25.0	36.2	7.0	9.4	11.2
Unit 12	3.6	8.6	16.8	25.9	5.0	8.2	9.1
Unit 13	9.0	11.0	12.0	13.0	2.0	1.0	1.0
Unit 16	7.0	7.0	7.0	7.0	0.0	0.0	0.0
Unit 17	19.7	21.7	24.5	27.4	2.0	2.8	2.9
Unit 18	14.0	14.0	13.0	14.0	0.0	-1.0	1.0
Unit 20	17.0	21.0	27.0	31.0	4.0	6.0	4.0
Total Approved	**81.6**	**113.0**	**145.4**	**182.2**	**31.4**	**32.4**	**36.8**
Not approved	**6.0**	**6.0**	**6.0**	**4.0**	**--**	**--**	**--**

[1] For example, for Unit 5/6 the Energy Commission certified 1.4 MW as incremental geothermal for 2003 and 6.5 MW for 2004 (the 6.5 MW includes the 1.4 MW certified for 2003).
[2] These columns show the difference between the quantity certified from one year to the next and is calculated from the first set of columns. To continue the example for Unit 5/6, for 2004 an additional 5.1 MW of incremental geothermal capacity was added to the amount certified for 2003.

Methodology

The quantity of incremental geothermal electricity produced was estimated for this report by applying the percentage of incremental capacity to the total energy production of the facility. The percentage of incremental capacity is derived by dividing the incremental geothermal capacity by the estimated operating capacity of the facility. The rationale for using operating capacity rather than the nameplate

capacity is that the Geysers steam field has declined over time such that the installed nameplate capacity does not reflect current actual operating capacity.

The operating capacity was estimated using data that the Geysers Power Company submitted to the Energy Commission in compliance with the *Power Plant Owner Report Forms* (Form 1304). In Form-1304, the Geysers Power Company reported the capacity available from each of its power plants during "system peak" dates and hours specified by the Energy Commission. For this analysis, the capacity-per-facility per month reported in Form-1304 was reviewed and the highest value was used as a proxy for the operating capacity. Table 2 shows the data reported in 2005 with the high values that serve as a proxy for the operating capacity highlighted.

Table 2:
Available System Peak Capacity per month,
per Geyser Unit in 2005[1,2]

	Sonoma	Unit 5[3]	Unit 6[3]	Unit 7[3]	Unit 8[3]	Unit 12	Unit 13	Unit 16	Unit 17	Unit 18	Unit 20
Jan	42	36	36	31	31	53	**58**	**55**	**60**	47	45
Feb	44	36	36	31	31	**57**	56	**55**	**60**	48	45
Mar	**45**	36	36	31	31	**57**	56	54	**60**	45	45
Apr	41	37	37	33	33	**57**	55	54	**	47	**46**
May	43	39	39	**36**	**36**	50	54	54	53	43	44
June	42	38	38	34	34	49	53	53	51	47	44
July	39	37	37	33	33	48	50	50	51	42	42
Aug	40	37	37	33	33	49	51	51	52	47	43
Sep	42	39	39	34	34	51	50	52	50	49	41
Oct	42	39	39	34	34	51	50	52	50	49	41
Nov	43	39	39	35	35	52	50	54	53	49	42
Dec	43	**40**	**40**	35	35	52	51	**55**	54	**50**	42

[1] The data shown were reported by the Geysers Power Company in Form CEC-1304, Power Plant Owner Report. This report is due to the Energy Commission quarterly pursuant to the California Code of Regulations, Title 20, Division 2, Chapter 3, Section 1304(a).

[2] The data shown in shaded and outlined cells indicate the highest operating capacity for that plant for the year. The shaded boxes mark the estimated operating capacity per unit.

[3] The data provided by SCE and PG&E aggregates procurement for Units 5 and 6 and for Units 7 and 8.

** Scheduled outage.

The following example illustrates how the amount of incremental geothermal procured was estimated. For Geysers Unit 20, the Energy Commission certified 17 MW of incremental geothermal for 2003, 21 MW for 2004, and 27 MW for 2005. The total generation from the 17 MW certified as incremental geothermal capacity in 2003 was considered incremental geothermal generation. Generation from the additional 4 MW of incremental geothermal capacity in 2004 and 6 MW of incremental geothermal capacity in 2005 was considered incremental geothermal generation for those years.

For 2005, the percentage of incremental capacity for Unit 20 was 13 percent, derived by dividing the facility's highest operating capacity for the year, 46 MW, by the 6 MW of increased incremental geothermal capacity. Unit 20's total generation for 2005 was 385,689 MWh, therefore PG&E's procurement of incremental geothermal from Unit 20 for 2005 equals 13 percent multiplied by 385,689 MWh or 50,307 MWh.

Because SCE did not begin its procurement of incremental geothermal capacity until May 2003, its certified incremental geothermal capacity for 2003 was for only eight months of incremental geothermal procurement. In subsequent years, SCE's incremental geothermal procurement for January through April was based on incremental capacity in the previous year. For May through December, 2005, the calculation uses the increase in certified incremental geothermal capacity applicable to 2005.

Results

As shown in Table 3, PG&E procured generation from two facilities with incremental geothermal capacity in 2005 — Units 13 and 20 of the Calpine Geysers. PG&E procured 435,695 MWh from Calpine Geysers Unit 13 and 267,919 MWh from Calpine Geysers Unit 20. Of the combined total of 703,614 MWh procured by PG&E from these units, the Energy Commission estimates that 58,237 MWh qualify as incremental geothermal energy. This estimate assumes that all of the incremental geothermal energy generated from these facilities was sold to PG&E and not allocated to a separate customer; total generation from these facilities exceeds the amount PG&E procured, indicating that some of the electricity produced was sold to a separate entity.

Table 4 shows an estimate of SCE's qualifying incremental geothermal procurement from the Calpine Geysers for 2005. SCE procured generation from the following Geysers facilities: Unit 3/Sonoma, Unit 5/6, Unit 7/8, Unit 12, and Unit 17. SCE's purchases from these units represent a mix of energy that qualified as either incremental or non-incremental geothermal. For 2005, of the 1,676,935 MWh procured by SCE from the Calpine Geysers, 142,776 MWh is estimated to be

incremental geothermal. Separate factors are used to estimate January through April and May through December incremental geothermal generation. However, for the months of May through December 2005, the increased incremental geothermal capacity over those months in 2004 is utilized in this calculation.

The total amount generated by these facilities was greater than the total procured by SCE (that is 2,443,575 MWh was generated in 2005 with 142,776 MWh qualifying as incremental geothermal) and this estimate assumes that all the incremental geothermal was procured by SCE, and that the energy not procured by SCE is non-incremental geothermal.

Table 3:
Estimated PG&E 2005 Incremental Geothermal Procurement

Calpine Geothermal Facility	2005 Facility Operating Capacity (MW)[1]	2005 Eligible Incremental Geothermal Capacity (MW)[2]	2005 Percent of Capacity Certified as Incremental Geothermal[3]	2005 Total Generation (MWh)[4]	2005 Estimated Incremental Geothermal Procured[5] (MWh)	2005 Total Calpine Geysers Procurement (MWh)[6]
Unit 13	58	1	1.7%	459,939	7,930	435,695
Unit 20	46	6	13.0%	385,689	50,307	267,919
Total	**104**	**7**	**n/a**	**845,628**	**58,237**	**703,614**

[1] This is the highest monthly "Available MW @ System Peak" that is reported by Calpine in its filing to the Energy Commission, *Power Plant Owner Report Forms* (Form 1304).

[2] Amount of capacity that the Energy Commission certified as "incremental geothermal" capacity.

[3] Eligible incremental geothermal capacity divided by the operating capacity.

[4] Reported by the generator to the Energy Commission.

[5] Estimated amount of incremental generation available for procurement in 2005 (total generation multiplied by percent of capacity certified as incremental geothermal). Staff assumed that all of the incremental geothermal generation produced from this facility was sold to PG&E by Calpine.

[6] Reported by PG&E to the Energy Commission on the RPS-Track form.

Table 4:
Estimated SCE 2005 Incremental Geothermal Procurement

Calpine Geothermal Facility	2005 Facility Operating Capacity (MW)[1]	2005 Eligible Incremental Geothermal Capacity (MW)[2]	2005 Percent of Capacity Certified as Incremental Geothermal[3]	2005 Total Generation (MWh)[4]	2005 Estimated Incremental Geothermal Procured(MWh)[5]	2005 Total Calpine Geysers Procurement (MWh)[6]
Sonoma/ Unit 3	45	5.5	12.2%	377,267	34,244	260,451
Unit 5/6	80	0.5	0.6%	597,455	10,452	406,926
Unit 7/8	72	9.4	13.1%	518,259	42,886	351,916
Unit 12	57	8.2	14.4%	465,816	41,030	322,175
Unit 17	60	2.8	4.7%	484,778	14,164	335,467
Total	**314**	**26.4**	**n/a**	**2,443,575**	**142,776**	**1,676,935**

[1] This is the highest monthly "Available MW @ System Peak" that is reported by Calpine in its filing to the Energy Commission, *Power Plant Owner Report Forms* (Form 1304), see Table 2.

[2] Amount of capacity that the Energy Commission certified as "incremental geothermal" capacity.

[3] Eligible incremental geothermal capacity divided by the operating capacity.

[4] Reported by the generator to the Energy Commission.

[5] Estimated amount of incremental generation available for procurement in 2005. For January 2005 through April 2005, the sum of the incremental geothermal capacity that was certified for 2004 and 2005 was used to calculate eligible incremental geothermal generation. However, from May 2005 through December 2005, only the increased amount of geothermal capacity certified for 2005 as compared to 2004 was used to calculate the incremental geothermal generation. This table assumes that SCE procured all of the incremental geothermal generation produced by these facilities.

[6] Reported by SCE to the Energy Commission on the RPS-Track form.

SECTION 4: PROCUREMENT VERIFICATION FINDINGS

This section presents procurement verification findings for 2005 and updates findings in the previous *Verification Report* for the IOUs Initial Baseline Procurement Amounts and the IOUs' APT and their progress towards the 2004 and 2005 targets. As previously discussed, the methodology used here is derived from the following CPUC decisions: the 2006 decision entitled *Opinion on Reporting and Compliance Methodology for Renewables Portfolio Standard Program* ("Accounting Rules Decision") and the CPUC's Decision 07-03-046 under Rulemaking 06-05-027 (the March 2007 Baseline Decision) that revises the methodology used to calculate the IOUs' Initial Baseline Procurement Amounts.[23]

Based on the CPUC's October 2006 Accounting Rules Decision, there is no APT for 2003. Instead, there is an Initial Baseline Procurement Amount which equals the following: (2001 RPS-eligible procurement/2001 total retail sales) X 2003 total retail sales + 1% of 2001 Total Retail Sales. The APT for 2004 equals the 2003 Initial Baseline Procurement Amount plus the 2004 IPT, which is 1 percent of the 2003 total retail sales. For 2005 through 2009, the APT for each year is equal to the previous year's APT plus the current year's IPT, which is 1 percent of the previous year's retail sales. All RPS-eligible renewables purchased above the previous year's APT are counted towards the IPT. All RPS-eligible renewables procured in a given year count towards that year's APT.

A facility must be certified by the Energy Commission as RPS-eligible for its generation to be eligible for the RPS. This section identifies facilities that have not been RPS-certified and the amount of energy procured from each that is not counted towards the IOUs' APT for 2004 and 2005. Additionally, if there is a discrepancy in which procurement appears to exceed generation by more than 5 percent, staff does not include the "excess" procurement as RPS-eligible.

This section first compares verified procurement that qualifies as IPT and APT with the IOUs' targets for 2005. The results are presented for energy and percent retail sales for 2001 and from 2003 through 2005. Next, each IOU's procurement is shown by fuel type. Finally, each IOU's procurement from new and repowered facilities is identified from 2003 through 2005. Please note that the data shown are snapshots for the year and do not include banking that may be available from excess procurement in previous years.

[23] The *2004 Verification Report*, which was released before the CPUC's October 2006 Accounting Rules Decision, referred to a previous CPUC decision, the *Order Instituting Rulemaking to Implement the California Renewables Portfolio Standard Program, Rulemaking 04-04-026* (R.04-04-026).

Comparison of Procurement and Targets

Table 5 lists the IOUs' 2005 APT and IPT and the Energy Commission's estimates for the amount of procurement qualifying toward each target. Tables 6 through 22 show total IOU renewable procurement for 2001 and 2003–2005.

Table 5: IOU Progress in Meeting the RPS for 2005 (MWh)

Utility	2005 Annual Procurement Target (APT)	Procurement Eligible Towards Meeting the APT	Total Procured in Excess of 2005 APT[1]	2005 Incremental Procurement Target (IPT)	Estimated Incremental Procurement[2]	Total Incremental Procured in Excess of 2005 IPT[3]
PG&E	8,543,303	8,650,362	107,059	736,163	843,222	107,059
SCE	12,620,726	12,924,401	303,675	729,634	1,033,309	303,675
SDG&E	604,741	825,366	220,625	158,116	378,741	220,625

[1] Negative numbers indicate that the IOU procured less than its APT.

[2] Incremental procurement is defined as total RPS-eligible procurement that exceeds the previous year's APT.

[3] Negative numbers indicate that the IOU procured less than its IPT.

Pacific Gas and Electric

Table 6 shows how PG&E's 2003 Initial Baseline Procurement Amount was calculated. Table 7 shows the amount of RPS-eligible electricity PG&E procured in terms of energy and percent retail sales, reflecting the allocation of PG&E's procurement as incremental or as part of the total procurement. Table 8 shows the procurement targets set for PG&E by the CPUC. Table 9 shows the estimated amount of RPS-eligible energy PG&E procured per year in comparison with its APT.

Table 6: PG&E's 2003 Initial Baseline Procurement Amount[1]

	(MWh)
2001 RPS-Eligible Procurement	6,719,480
2001 Total Retail Sales	75,320,000
2001 RPS-Eligible Procurement/2001 Total Retail Sales	8.9%
2003 Total Retail Sales	71,099,363
1 Percent of 2001 Total Retail Sales	753,200
2003 Initial Baseline Procurement Amount	7,096,147

[1] Per Decision 07-03-046, Rulemaking 06-05-027, the 2003 Initial Baseline Procurement Amount equals (2001 RPS-eligible procurement/2001 total retail sales) X 2003 total retail sales + 1% of 2001 Total Retail Sales.

Table 7: PG&E RPS Procurement

	RPS Procurement for PG&E (MWh)[1]				Percent of Retail Sales			
	2001	2003	2004	2005	2001	2003	2004	2005
APT	na	na	7,807,140	8,543,303	na	na	10.61%	11.75%
IPT	na	na	710,994	736,163	na	na	0.97%	1.01%
Incremental Procurement[2,4]	na	na	1,392,671	843,222	na	na	1.89%	1.16%
Total procurement[3]	6,719,480	na	8,574,976	8,650,362	8.92%	12.42%	11.65%	11.89%
Procurement from Facilities Without RPS-Certification[4]	na	na	na	na	na	na	na	na
Procurement from Facilities in Which Procurement Exceeds Generation by 5 percent or greater[5]	na	na	na	na	na	na	na	na
Procurement from Distributed Generation[6]	na	na	na	na	na	na	na	na
Procurement Eligible Towards the APT[7]	na	na	8,574,976	8,650,362	na	na	11.65%	11.89%
Retail sales[8]	75,320,000	71,099,363	73,616,302	72,726,639	na	na	na	na

[1] For 2001, total renewable procurement was reported in the "Report to the California Public Utilities Commission: Utility Procurement of Renewable Energy-2001 and 2002" which was filed by PG&E under Rulemaking 01-10-024. The data for 2003-2005 are derived from PG&E's RPS-Track submittals to the Energy Commission.

[2] Incremental procurement is the amount of RPS-eligible procurement that is procured in a given year over the previous year's APT.

[3] Incremental Procurement and Total Procurement are divided by the current year's retail sales.

[4] Since 2004, in order to be eligible for the RPS, facilities must be certified by the Energy Commission pursuant to the *RPS Eligibility Guidebook*.

[5] Procurement from each facility was compared to generation from the facility. If more than one generation total was available, the highest one was selected.

[6] Page 3 of the *RPS Eligibility Guidebook* states the following: "The law includes solar energy as an eligible resource for the RPS, but several issues need to be clarified to determine how best to include distributed photovoltaic resources, as well as other forms of customer-side renewable distributed generation."

[7] This is the Total Procurement for a given year that excludes procurement from facilities that don't have their RPS-Certification (none), procurement from facilities in which total procured exceeds annual generation by 5 percent or greater, and procurement from distributed generation facilities (none).

[8] Attachment A of CPUC D.06-10-050 indicates the APT and IPT are calculated based on the previous year's retail sales. The APT for 2004 is the sum of the 2003 Initial Baseline Procurement Amount and the 2004 IPT, which is 1 percent of the previous year's retail sales. The APT for 2005-2009 is the sum of the previous year's APT and IPT, the IPT is 1 percent of the previous year's retail sales.

[9] The May 2007Committee Draft recommended that PG&E not get any credit for its procurement from the Sierra Pacific Industries Burney facility towards its RPS targets for 2004 because of a competing claim of renewable attributes between PG&E and the Energy Service Provider, 3Phases Energy Services, sold by that facility. However, it was discovered that 3Phases procurement of renewable attributes from the Sierra Pacific Burney facility was not in accordance with regulations for the Energy Commission's Power Source Disclosure Program, CCR, tit. 20, sec. 1390 – 1394. Under the Energy Commission's regulations for the Power Source Disclosure Program, a generator may produce and issue certificates to document its generation using Commission-created software known as "GenReport." These certificates may then be used by a retail provider for purposes of the Power Source Disclosure Program to demonstrate it has purchased the

right to claim a specified quantity of generation from the generator. The Energy Commission's regulations state that the GenReport software is available to all generators within the Western Systems Coordinating Council that do not sell their generation to an IOU under the terms of a contract entered into prior to September 24, 1996, under Public Utility Regulatory Policies Act of 1978 (PURPA). The Sierra Pacific Industries Burney facility is a Qualifying Facility (QF) that sold its power to PG&E via a contract that was entered into prior to September 24, 1996 pursuant to PURPA. Staff has learned that the Energy Commission erroneously provided Sierra Pacific Burney with a copy of the Energy Commission's GenReport software and a series of certificate numbers in 2002, and that Sierra Pacific Burney subsequently used the software to issue GenReport certificates in 2004 to document their sales to 3Phases Energy Services. It is unknown why the Energy Commission provided the software or certificate numbers to Sierra Pacific Burney or why the oversight was not discovered earlier. However, it clear that the Energy Commission's regulations forbid Sierra Pacific Burney from issuing GenReport certificates for purposes of the Power Source Disclosure Program. Consequently, the GenReport certificates Sierra Pacific Burney sold to 3Phases are ineligible for purposes of the Power Source Disclosure Program, and do not represent a competing claim with PG&E. Staff will inform the CPUC of this issue but it is not recommended that any punitive action be taken towards 3Phases because the issuance of GenReport certificates by Sierra Pacific Industries Burney was facilitated in part by the Energy Commission's oversight in providing the facility the GenReport software. Moreover, it appears other biomass facilities operated by Sierra Pacific Industries could have properly issued GenReport certificates in 2004 for use by 3Phases had the facilities issued GenReport certificates at that time.

Table 8: PG&E RPS Procurement Targets[1]				
Target	**2004 Target (MWh)**	**2005 Target (MWh)**	**2004 Percent of 2003 Retail Sales**	**2005 Percent of 2004 Retail Sales**
IPT	710,994	736,163	1.00%	1.00%
APT	7,807,140	8,543,303	10.98%	11.61%

[1] The 2003 through 2005 targets are based on the methodology adopted in decision 06-10-050, R.06-05-027 on October 19, 2006.

Table 9: Difference between PG&E RPS Procurement and Targets				
Eligibility	**2004 Procurement (MWh)**	**2005 Procurement (MWh)**	**2004 Percent Above Target**	**2005 Percent Above Target**
Qualifying APT Procurement	8,574,976	8,650,362	9.84%	1.25%

Southern California Edison

Table 10 shows how SCE's 2003 Initial Baseline Procurement Amount was calculated. Tables 11 and 12 show 2004 and 2005 procurement totals from facilities that have not been certified by the Energy Commission as RPS-eligible. Tables 13 and 14 show distributed generation procurement in the years 2004 and 2005 that staff have not counted towards the APT. Tables 15 through 17 show SCE's RPS-eligible procurement accounted for as eligible and ineligible towards the APT. Table 15 shows the amount of RPS-eligible electricity SCE procured in terms of energy and percent retail sales, reflecting the allocation of SCE's procurement as incremental or as part of the total procurement. Table 16 shows the procurement targets set for SCE by the CPUC. Table 17 shows the estimated amount of RPS-eligible energy SCE procured per year in comparison with its APT.

Table 10: SCE's 2003 Initial Baseline Procurement Amount[1]	
	(MWh)
2001 RPS-Eligible Procurement	11,056,099
2001 Total Retail Sales	74,806,895
2001 RPS-Eligible Procurement/2001 Total Retail Sales	14.8%
2003 Total Retail Sales	70,617,000
1 Percent of 2001 Total Retail Sales	748,069
2003 Initial Baseline Procurement Amount	11,184,922

[1] Per Decision 07-03-046, Rulemaking 06-05-027, the 2003 Initial Baseline Procurement Amount equals (2001 RPS-eligible procurement/2001 total retail sales) X 2003 total retail sales + 1% of 2001 Total Retail Sales.

Table 11: 2004 SCE Procurement from Facilities Not RPS-Certified		
Facility Name	**Fuel Type**	**Annual Generation Procured (in MWh)**
Raul Soza	Wind	1
Total		1

Table 12: 2005 SCE Procurement from Facilities Not RPS-Certified		
Facility Name	**Fuel Type**	**Annual Generation Procured (in MWh)**
Net Energy Metering - Excess Energy	Various	5,313
Raul Soza	Wind	< 1 MW
Total		**5,313**

Table 13: 2004 SCE Procurement from Distributed Generation Facilities		
Facility Name	**Fuel Type**	**Annual Generation Procured (in MWh)**
Community Corp. of Santa Monica[1]	Solar	18
Total		**18**
[1] The Community Corp. of Santa Monica facility has its RPS Certification (60367E).		

Table 14: 2005 SCE Procurement from Distributed Generation Facilities		
Facility Name	**Fuel Type**	**Annual Generation Procured (in MWh)**
Community Corp. of Santa Monica[1]	Solar	7
Total		**7**
[1] The Community Corp. of Santa Monica facility has its RPS Certification (60367E).		

Table 15 : SCE RPS Procurement

	RPS Procurement for SCE (MWh)[1]				Percent of Retail Sales			
	2001	2003	2004	2005	2001	2003	2004	2005
APT	na	na	11,891,092	12,620,726	na	na	16.30%	16.76%
IPT	na	na	706,170	729,634	na	na	0.97%	0.97%
Incremental Procurement[2,3]	na	na	2,062,559	1,033,309	na	na	2.83%	1.37%
Total procurement[3]	11,056,099	na	13,247,500	12,929,722	14.78%	17.70%	18.16%	17.17%
Procurement from Facilities Without RPS-Certification[4]	na	na	1	5,314	na	na	0.00%	0.01%
Procurement from Facilities in Which Procurement Exceeds Generation by 5 percent or greater[5]	na	na	0	0	na	na	0.00%	0.00%
Procurement from Distributed Generation Facilities[6]	na	na	18	7	na	na	0.00%	0.00%
Procurement Eligible Towards the APT[7]	na	na	13,247,481	12,924,401	na	na	18.16%	17.16%
Retail sales[8]	74,806,895	70,617,000	72,963,394	75,301,524	na	na	na	na

[1] For 2001, total renewable procurement was reported in the "Report to the California Public Utilities Commission: Utility Procurement of Renewable Energy-2001 and 2002" which was filed by SCE under Rulemaking 01-10-024. The data for 2003 through 2005 are derived from SCE's RPS-Track submittals to the Energy Commission.

[2] Incremental procurement is the amount of RPS-eligible procurement that is procured in a given year over the previous year's APT.

[3] Incremental Procurement and Total Procurement are divided by the current year's retail sales.

[4] Since 2004, in order to be eligible for the RPS, facilities must be certified by the California Energy Commission pursuant to the *RPS Eligibility Guidebook*.

[5] Procurement from each facility was compared to generation from those facilities. In facilities where there was more than one generation total available, the highest one was selected.

[6] Page 3 of the *RPS Eligibility Guidebook* states the following: "The law includes solar energy as an eligible resource for the RPS, but several issues need to be clarified to determine how best to include distributed photovoltaic resources, as well as other forms of customer-side renewable distributed generation."

[7] This is the Total Procurement for a given year less Procurement from Facilities that do not have their RPS-Certification and less procurement from facilities in which total procured exceeds annual generation by 5 percent or greater (none) and less procurement claims from distributed generation (DG).

[8] Attachment A of CPUC D.06-10-050 indicates the APT and IPT are calculated based on the previous year's retail sales. The APT for 2004 is the sum of the 2003 Initial Baseline Procurement Amount and the 2004 IPT, which is 1 percent of the previous year's retail sales. The APT for 2005-2009 is the sum of the previous year's APT and IPT, the IPT is 1 percent of the previous year's retail sales.

Table 16: SCE RPS Procurement Targets				
Target	**2004 Target MWh**	**2005 Target MWh**	**2004 Percent of 2003 Retail Sales**	**2005 Percent of 2004 Retail Sales**
IPT	706,170	729,634	1.00%	1.00%
APT	11,891,092	12,620,726	16.84%	17.30%

[1] The 2003 through 2005 targets are based on the methodology adopted in decision 06-10-050, R.06-05-027 on October 19, 2006.

Table 17: Difference between SCE RPS Procurement and Targets				
Eligibility	**2004 Procurement (MWh)**	**2005 Procurement (MWh)**	**2004 Percent Above Target**	**2005 Percent Above Target**
Qualifying APT Procurement	13,247,481	12,924,401	11.41%	2.41%

San Diego Gas & Electric

Table 18 shows how SDG&E's 2003 Initial Baseline Procurement Amount was calculated. Table 19 shows 2004 procurement from a facility that is not RPS-certified. Tables 20 through 22 show SDG&E's RPS-eligible procurement accounted for as eligible and ineligible towards the APT. Table 20 shows the amount of RPS-eligible electricity SDG&E procured in terms of energy and percent of retail sales, reflecting the allocation of SDG&E's procurement as incremental or as part of the total procurement. Table 21 shows the procurement targets set for SDG&E by the CPUC. Table 22 shows the estimated amount of RPS-eligible energy SDG&E procured per year in comparison with its APT.

Table 18: SDG&E's 2003 Initial Baseline Procurement Amount[1]	
	(MWh)
2001 RPS-Eligible Procurement	145,760
2001 Total Retail Sales	14,998,806
2001 RPS-Eligible Procurement * 2001 Total Retail Sales	1.0%
2003 Total Retail Sales	15,043,865
1 Percent of 2001 Total Retail Sales	149,988
2003 Initial Baseline Procurement Amount	296,186

[1] Per Decision 07-03-046, Rulemaking 06-05-027, the 2003 Initial Baseline Procurement Amount equals (2001 RPS-eligible procurement/2001 total retail sales) X 2003 total retail sales + 1% of 2001 Total Retail Sales.

Table 19:
2004 SDG&E Procurement from Facilities Not RPS-Certified

Facility Name	Fuel Type	Annual Generation Procured (in MWh)
Cal West Industrial Park	Solar	114
Total		**114**

Table 20: SDG&E RPS Procurement

	RPS Procurement for SDG&E (MWh)[1]				Percent of Retail Sales			
	2001	**2003**	**2004**	**2005**	**2001**	**2003**	**2004**	**2005**
APT	na	na	446,625	604,741	na	na	2.82%	3.78%
IPT	na	na	150,439	158,116	na	na	0.95%	0.99%
Incremental Procurement[2,3]	na	na	381,666	378,741	na	na	2.41%	2.37%
Total procurement[3]	145,760	na	677,966	825,366	0.97%	3.66%	4.29%	5.16%
Procurement from Facilities Without RPS-Certification[4]	na	na	114	0	na	na	0.00%	0.00%
Procurement from Facilities in Which Procurement Exceeds Generation by 5 percent or greater[5]	na	na	na	na	na	na	na	na
Procurement from Distributed Generation Facilities[6]	na	na	na	na	na	na	na	na
Procurement Eligible Towards the APT[7]	na	na	677,852	825,366	na	na	4.29%	5.16%
Retail sales[8]	14,998,806	15,043,865	15,811,591	16,001,516	na	na	na	na

[1] For 2001, total renewable procurement was reported in the "Report to the California Public Utilities Commission: Utility Procurement of Renewable Energy-2001 and 2002" which was filed by SDG&E under Rulemaking 01-10-024. The data for 2003 through 2005 are derived from SDG&E's RPS-Track submittals to the Energy Commission.

[2] Incremental procurement is the amount of RPS-eligible procurement that is procured in a given year over the previous year's APT.

[3] Incremental Procurement and Total Procurement are divided by the current year's retail sales.

[4] Since 2004, in order to be eligible for the RPS, facilities must be certified by the Energy Commission pursuant to the *RPS Eligibility Guidebook*.

[5] Procurement from each facility was compared to generation from those facilities. In facilities where there was more than one generation total available, the highest one was selected.

[6] Page 3 of the *RPS Eligibility Guidebook* states the following: "The law includes solar energy as an eligible resource for the RPS, but several issues need to be clarified to determine how best to include distributed photovoltaic resources, as well as other forms of customer-side renewable distributed generation."

[7] This total is the Total Procurement for a given year less Procurement from Facilities that do not have RPS-Certification and less procurement from facilities in which total procured exceeds annual generation by 5 percent or greater (none), and less procurement from distributed generation (DG).

[8] Attachment A of CPUC D.06-10-050 indicates the APT and IPT are calculated based on the previous year's retail sales. The APT for 2004 is the sum of the 2003 Initial Baseline Procurement Amount and the 2004 IPT, which is 1 percent of the previous year's retail sales. The APT for 2005-2009 is the sum of the previous year's APT and IPT, the IPT is 1 percent of the previous year's retail sales.

Table 21: SDG&E RPS Procurement Targets[1]				
Target	**2004 Target MWh**	**2005 Target MWh**	**2004 Percent of 2003 Retail Sales**	**2005 Percent of 2004 Retail Sales**
IPT	150,439	158,116	1.00%	1.00%
APT	446,625	604,741	2.97%	3.82%

[1] The 2003 through 2005 targets are based on the methodology adopted in decision 06-10-050, R.06-05-027 on October 19, 2006.

Table 22: Difference Between SDG&E RPS Procurement and Targets				
Eligibility	**2004 Procurement (MWh)**	**2005 Procurement (MWh)**	**2004 Percent Above Target**	**2005 Percent Above Target**
Qualifying APT Procurement	677,852	825,366	51.77%	36.48%

RPS-Eligible Procurement by Fuel Type

One of the purposes of the RPS is "increasing the diversity" of California's energy mix.[24] Because of the importance of this goal and general interest in understanding the technologies used to meet the RPS, Tables 23-26 provide information on the renewable fuel mix. The categories for the fuel mixes in the *Verification Report* were used in the previous edition of this report, which was adopted in February 2006. A CPUC ruling entitled, *Administrative Law Judge's Ruling Adopting Standardized Reporting Format, Setting Schedule for Filing Updated Reports and Addressing Subsequent Process*, which was issued on March 12, 2007, lists the renewable fuel types for reporting purposes. The fuel type classifications prescribed in that CPUC ruling are not the ones used in Tables 23 through 26 because the IOUs' submitted their 2005 CEC-RPS-Track filings which included procurement by facility and the fuel type of that facility in May 2006, before the adoption date of the CPUC's ruling. Table 23 shows the 2005 fuel mix of RPS procurement for PG&E, SCE, and SDG&E that the Energy Commission staff determines is eligible for the APT. The fuel mix per utility is shown in Tables 24 through 26. As indicated, geothermal dominates the overall resource mix (primarily from SCE procurement). For PG&E, procurement from biomass fueled facilities is slightly higher than other fuel types. For SDG&E, procurement from biomass facilities is slightly higher than from other fuel types.

[24] Public Utilities Code Section 399.11.

Table 23: 2005 RPS Procurement by Fuel Type	
Fuel	**Procurement (MWh)**
Biomass	3,614,079
Biogas	1,110,233
Geothermal	***9,504,152***
Municipal Solid Waste	139,882
Small Hydro	3,743,740
Solar	622,110
Wind	3,665,933
Various From Net Metering	0
Total Renewable Procurement	**22,400,129**

Table 24: PG&E 2005 RPS Procurement by Fuel Type	
Fuel	**Procurement (MWh)**
Biomass	***2,936,015***
Biogas	154,748
Geothermal	1,680,710
Municipal Solid Waste	139,882
Small Hydro	2,864,805
Solar	4
Wind	874,198
Various From Net Metering	0
Total Renewable Procurement	**8,650,362**

Table 25: SCE 2005 RPS Procurement by Fuel Type	
Fuel	**Procurement (MWh)**
Biomass	379,119
Biogas	737,262
Geothermal	***7,823,442***
Municipal Solid Waste	0
Small Hydro	867,171
Solar	622,106
Wind	2,495,301
Various From Net Metering	0
Total Renewable Procurement	**12,924,401**

Table 26: SDG&E 2005 RPS Procurement by Fuel Type	
Fuel	**Procurement (MWh)**
Biomass	***298,945***
Biogas	218,223
Geothermal	0
Municipal Solid Waste	0
Small Hydro	11,764
Solar	0
Wind	296,434
Various From Net Metering	0
Total Renewable Procurement	**825,366**

Procurement from New and Repowered Generation

Based on the information presented on the CEC-RPS-Track filings, Table 27 shows the amount of energy the IOUs procured from new and repowered RPS-eligible facilities from 2004 and 2005 that staff determines is eligible towards the IOUs' APTs.[25] Table 28 shows the data disaggregated by fuel type for 2005. Wind is highlighted in Table 28 because it represents the largest amount of generation from new and repowered facilities in 2005.

Table 27: New and Repowered Procurement[1]		
Utility	**2004 Procurement (MWh)**	**2005 Procurement (MWh)**
PG&E	0	42,695
SCE	47,787	57,899
SDG&E	85,153	282,685
Totals	**132,940**	**383,279**
[1] The totals for 2004 and 2005 are for procurement claims by PG&E, SCE, and SDG&E that staff recommends counting towards the APT in those years.		

[25] The definition of New and Repowered renewable procurement is based on the version of the Public Resources Code Section 25743 in place from 2003 through 2006. The Energy Commission interpreted this law as requiring an initial operation or repowering date of January 1, 2002. The Energy Commission has subsequently revised this date to January 1, 2005, based on amendments to Section 25743 by SB 107, which took effect on January 1, 2007. SB 107 modified Section 25743 effective on January 1, 2007.

Table 28: 2005 New and Repowered Procurement by Fuel Type[1]	
Fuel	**Procurement (MWh)**
Biomass	0
Biogas	32,426
Geothermal	25,835
Municipal Solid Waste	0
Small Hydro	0
Solar	0
Wind	***325,018***
Various From Net Metering	0
Total Renewable Procurement	**383,279**

[1] The procurement listed here are the 2005 totals for procurement by new and repowered facilities by PG&E, SCE, and SDG&E that staff recommends be counted towards the 2005 APT.

Verification of Delivery Requirement

Under the Energy Commission's RPS guidelines, to count generation procured from an out-of-state RPS-eligible facility for purposes of RPS-compliance the retail seller must enter a power purchase agreement with the facility and energy must be delivered to California . In accordance with the policies of the North American Electricity Reliability Council (NERC), electricity delivered across control areas must be tagged with what is commonly referred to as a "NERC tag." NERC tags require, among other things, that information be provided identifying the Generation Providing Entity, the "source" or "Point of Injection," the physical transmission path for delivery, the contract or market path, the location to which the electricity will be delivered to ("sink" or "Point of Withdrawal"), and the Load Serving Entity responsible for the consumption of electricity delivered. Pursuant to the *RPS Eligibility Guidebook*, the Energy Commission requires summary reports of NERC tag transactions to document delivery of RPS electricity from out-of-state facilities. The *RPS Eligibility Guidebook* includes the following clarification: the delivery requirements do not apply to facilities located outside of California whose first point of interconnection to the WECC transmission system is located in California.

In 2005, there were only two specific purchases from two RPS-certified facilities located out-of-state. The staff verified that although one facility (and one specific purchase) was located outside of California, it was still located within the CA ISO control area, and therefore NERC tag data were not available because NERC tags are created only when energy delivery crosses control areas. For the second facility, staff reviewed a report submitted by SCE summarizing NERC tag data that identified

the RPS-eligible generator and SCE as the procuring IOU. This documentation confirmed that the RPS delivery requirements were satisfied.

SECTION 5: LIMITATIONS OF THE INTERIM TRACKING SYSTEM

This report verifies the IOUs' 2005 RPS procurement in comparison with CPUC procurement targets, with the following caveats.

The Interim Tracking System limits the extent to which the Energy Commission can cross-reference California RPS-procurement with other specific purchases. For example, staff makes every attempt to cross reference California RPS-procurement with retail claims made in Oregon and Washington but does not check against retail claims made in any other states.

Further, staff has only anecdotal information about specific purchases made in which Renewable Energy Certificates (RECs) — also called "green tags" or "environmental attributes" — are sold separately from the associated electricity.[26] In 2005, "unbundled" RECs were not eligible for RPS compliance in California.[27] In other non-RPS markets, however, generators, marketers, or brokers sold "unbundled" RECs as a separate commodity to individuals, companies, utilities, or other organizations. The Energy Commission does not track these transactions, and there is no mechanism for entities to report their unbundled REC procurement to the Energy Commission. Consequently, the Energy Commission is unable to cross-check RPS procurement claims with unbundled RECs sold in the voluntary market or used for compliance with the regulatory requirements of other states.

The robustness of the Interim Tracking System is also limited by the quality of the generation data. In most cases, the generation data used for this report is self-reported and not independently verified with third-party meter reads. WREGIS will help address many of these data limitations, because it will track renewable energy transactions throughout the WECC (not just California, Oregon, and Washington), account for unbundled REC transactions, and be supported by generation data from meter reads rather than self-reported generation data.

Availability of Generation Data

Although this report provides the IOUs' progress towards RPS targets in 2004 and 2005, this section compares procurement with generation data for 2005. The previous *Verification Report* includes tables that compares procurement with

[26] RECs represent the "renewable" quality of electricity generated from a renewable facility. A REC is created when a specific amount of renewable energy is generated. Although the REC market is not regulated in California, one MWh of renewable energy is typically represented with one REC. Once WREGIS is operational, it will track WREGIS Certificates whereby one WREGIS Certificate will be created when 1 MWh of renewable energy is generated.

[27] Public Utilities Code Section 399.16, as enacted by SB 107, allows the use of unbundled RECs once a tracking system is developed and other conditions are met.

generation data. The results provided here describe the availability of data to verify that in 2005, RPS-certified facilities generated at least as much energy as was procured by the IOUs. The IOUs reported 431 specific purchases for 2005 for the purposes of RPS compliance to the Energy Commission. Of those 431 specific purchases, 428 were from RPS-certified facilities which are not distributed generation facilities. The Energy Commission located independent sources of generation data for 311 of the 428 specific purchases, or 73 percent of purchases. Of those 311 facilities, the Energy Commission requested and received utility invoices to further verify procurement from 17 because the independent sources of generation data had initially indicated that procurement exceeded generation by 5 percent or greater.

Since the specific purchases vary in quantity procured, the Energy Commission also compared total RPS procurement in MWh with available generation data. Of 22,400,129 MWh of RPS-certified procurement and non-distributed generation procurement claimed by the IOUs, the Energy Commission located and analyzed generation data for 22,092,943 MWh or 99 percent of RPS-certified procurement.

Table 29 identifies the total number of RPS-certified specific purchases per IOU and the quantity of electricity procured. Table 30 shows how many RPS-certified and non-distributed generation specific purchases were validated with independent sources of generation data and the corresponding quantity of electricity procured. Table 30 also identifies the quantity of RPS-certified and non-distributed generation specific purchases for which data were not available to verify that at least as much energy was generated by the RPS-eligible facility as was procured from the facility.

As shown in Table 30, the IOUs procured 377,186 MWh from 117 facilities for which generation data were not available. On average, this equates to 3,224 MWh per facility per year, suggesting that these facilities are small enough that they are not required to report their generation data to the Energy Commission or the Energy Information Administration. Additionally, the facilities do not participate in the Energy Commission's Existing Renewable Facilities Program or the New Renewable Facilities Program so that generation data is not available from those programs. Despite the lack of independent data available to verify the generation, Energy Commission staff accounted for the procurement as APT-eligible, in part because the 377,186 MWh represents less than 2 percent of the total amount of RPS-certified and non distributed-generation procurement in MWh.

Table 29:
2005 Total RPS-Certified Specific Purchases

Utility	Number of Purchases	RPS Procurement(MWh)
PG&E	226	8,650,362
SCE	182	12,924,401
SDG&E	20	825,366
Totals	**428**	22,400,129

Table 30: Availability of Generation Data for 2005 RPS-Eligible Procurement				
	Procurement Verified with Generation Data		Procurement for which Generation Data was not Available	
Utility	Number of Specific Purchases	Energy Procured (MWh)	Number of Specific Purchases	Energy Procured (MWh)
PG&E	153	8,483,857	73	166,505
SCE	144	12,747,854	38	176,547
SDG&E	14	791,232	6	34,134
Totals	**311**	**22,022,943**	**117**	**377,186**

Pacific Gas and Electric

Table 31 compares PG&E's total RPS-certified procurement with the quantity that the Energy Commission verified with an independent source of generation data, while Table 32 identifies those purchases that could not be verified. The staff identified generation data for 153 of the 226 RPS-certified specific purchases made by PG&E in 2005. These 153 purchases represent 8,483,857 MWh of the total 8,650,362MWh reported by PG&E. For PG&E, 166,505 MWh of procurement could not be verified with independent sources of generation data because the data were not available. For further discussion of why data are not available in all cases, see the paragraphs under the heading entitled, "Availability of Generation Data." Such purchases will be subject to ongoing random verification through review of utility resources. Without evidence to the contrary, the Energy Commission recommends that the CPUC allow the 166,505 MWh to count towards satisfying PG&E's RPS obligations consistent with how it is treated in this report. This indicates that 98 percent of the total eligible RPS generation in MWh reported by PG&E could be verified with an independent source of generation data. The high percentage of verified generation occurred across technologies, with the exception of solar for which PG&E made one purchase that could not be verified.

For PG&E, generation data was available for 91 percent of the biogas generation and nearly 100 percent of the biomass generation. Of the 73 purchases that could not be verified with generation data, 61 were from small hydroelectric facilities representing 126,049 MWh. Although a large number of purchases could not be verified, data was available for 96 percent of the small hydro generation claims.

Table 31: Verification Data Available for PG&E				
	PG&E's Procurement Verified with Generation Data		PG&E's Total Procurement	
Fuel Type	**Number of Purchases**	**Energy Procured (MWh)**	**Number of Purchases**	**Energy Procured (MWh)**
Biomass	29	2,930,625	31	2,936,015
Biogas	7	140,642	11	154,748
Geothermal	9	1,675,778	10	1,680,710
Municipal Solid Waste	1	139,882	1	139,882
Small Hydro	77	2,738,755	138	2,864,804
Solar	0	0	1	4
Wind	30	858,175	34	874,199
Various From Net Metering	0	0	0	0
Totals	**153**	**8,483,857**	**226**	**8,650,362**

Table 32: Verification Data Not Available for PG&E				
	PG&E's Procurement Not Verified with Generation Data		PG&E's Total Procurement	
Fuel Type	**Number of Purchases**	**Energy Procured (MWh)**	**Number of Purchases**	**Energy Procured (MWh)**
Biomass	2	5,390	31	2,936,015
Biogas	4	14,106	11	154,748
Geothermal	1	4,932	10	1,680,710
Municipal Solid Waste	0	0	1	139,882
Small Hydro	61	126,049	138	2,864,804
Solar	1	4	1	4
Wind	4	16,024	34	874,199
Various From Net Metering	0	0	0	0
Totals	**73**	**166,505**	**226**	**8,650,362**

Southern California Edison

Table 33 compares SCE's RPS-certified purchases that could be verified with its total RPS purchases in 2005, while Table 34 shows purchases that could not be verified. Generation data was available for 144 of 182 RPS-certified purchases

made by SCE for 2005. Of the total 12,924,401 MWh procured by SCE for purposes of the RPS, the 144 specific purchases total 12,747,854 MWh, indicating that 99 percent of the total eligible RPS generation in kWh claimed by SCE could be verified with independent sources of generation data. For SCE, 176,547 MWh of procurement could not be verified with independent sources of generation data because the data were not available. For further discussion of why data are not available in all cases, see the paragraphs under the heading entitled "Availability of Generation Data." Such purchases will be subject to ongoing random verification through review of utility resources. Without evidence to the contrary, the Energy Commission recommends that the CPUC allow the 176,547 MWh to count towards satisfying SCE's RPS obligations consistent with how it is treated in this report.

Table 33:
Verification Data Available for SCE

	SCE's Procurement Verified with Generation Data		SCE's Total Procurement	
Fuel Type	**Number of Purchases**	**Energy Procured (MWh)**	**Number of Purchases**	**Energy Procured (MWh)**
Biomass	2	376,713	3	379,119
Biogas	16	736,056	21	737,262
Geothermal	26	7,736,921	27	7,823,442
Municipal Solid Waste	0	0	0	0
Small Hydro	32	835,576	56	867,171
Solar	8	622,100	9	622,106
Wind	60	2,440,488	66	2,495,301
Various From Net Metering	0	0	0	0
Totals	**144**	**12,747,854**	**182**	**12,924,401**

Table 34: Verification Data Not Available for SCE				
	SCE's Procurement Not Verified Generation Data		SCE's Total Procurement	
Fuel Type	Number of Purchases	Energy Procured (MWh)	Number of Purchases	Energy Procured MWh)
Biomass	1	2,406	3	379,119
Biogas	5	1,206	21	737,262
Geothermal	1	86,521	27	7,823,442
Municipal Solid Waste	0	0	0	0
Small Hydro	24	31,595	56	867,171
Solar	1	6	9	622,106
Wind	6	54,813	66	2,495,301
Various From Net Metering	0	0	**0**	0
Totals	**37**	**176,547**	**182**	**12,924,401**

The high percentage of verified generation occurred across technologies, with generation data available for 98 percent of the RPS-certified specific purchases from wind and for nearly 100 percent of the purchases from biogas and biomass. Of the 37 specific purchases that could not be verified with generation data, 24 were from small hydro facilities. Although a low number of overall small hydro purchases was verified by independent sources of data, the amount of generation data that could be verified represented 96 percent of all small hydro purchases.

San Diego Gas & Electric

Table 37 shows SDG&E's RPS-certified specific purchases that could be verified with its total RPS procurement, while Table 38 shows purchases that could not be verified. Generation data was available for 14 of 20 RPS-specific purchases made by SDG&E for 2005. The 14 specific purchases were verified with eligible generation data and total 791,232 MWh out of the 825,366 MWh procured by SDG&E, representing 96 percent of SDG&E's procurement in MWh. For SDG&E, 34,134 MWh of procurement could not be verified with independent sources of generation data because the data were not available. For further discussion of why data are not available in all cases, see the paragraphs under the heading entitled "Availability of Generation Data." Such purchases will be subject to ongoing random verification through review of utility resources. Without evidence to the contrary, the Energy Commission recommends that the CPUC allow the 34,134 MWh to count towards satisfying SDG&E's RPS obligations consistent with how it is treated in this report. Only 21 percent of SDG&E's small hydro specific purchases (in MWh) could be verified. SDG&E procured a total of 11,764 MWh from five small hydro facilities, while only 2,497 MWh from a single facility could be verified. However, for the remaining technologies, verification data were available for 100 percent of the RPS-certified biogas and biomass procurement.

Table 35: Verification Data Available for SDG&E				
	SDG&E's Procurement Verified with Generation Data		SDG&E's Total Procurement	
Fuel Type	Number of Purchases	Energy Procured (MWh)	Number of Purchases	Energy Procured (MWh)
Biomass	1	298,945	1	298,945
Biogas	9	193,356	11	218,223
Geothermal	0	0	0	0
Municipal Solid Waste	0	0	0	0
Small Hydro	1	2,497	5	11,764
Solar	0	0	0	0
Wind	3	296,434	3	296,434
Various From Net Metering	0	0	0	0
Totals	**14**	**791,232**	**20**	**825,366**

Table 36: Verification Data Not Available for SDG&E				
	SDG&E's Not Procurement Verified with Generation Data		SDG&E's Total Procurement	
Fuel Type	Number of Purchases	Energy Procured (MWh)	Number of Purchases	Energy Procured (MWh)
Biomass	0	0	1	298,945
Biogas	2	24,867	11	218,223
Geothermal	0	0	0	0
Municipal Solid Waste	0	0	0	0
Small Hydro	4	9,267	5	11,764
Solar	0	0	0	0
Wind	0	0	3	296,434
Various From Net Metering	0	0	0	0
Totals	**6**	**34,134**	**20**	**825,366**

Investor-Owned Utility Procurement Verification

If staff found a discrepancy in which procurement appears to exceed generation by more than 5 percent, staff did not include the "excess" procurement as RPS-eligible.

For example, if data shows that a facility generated 100 MWh and the IOU reported procurement of 108 MWh from that facility, staff accounted for 100 MWh as eligible for the APT if the excess could not be otherwise verified. Allowing for a 5 percent variation accounts for slight differences in data sources such as possible rounding errors when comparing data sources that use differing energy units (for example, GWh or MWh versus KWh) or differences in the time period over which data were captured or reported.

Following this approach, the Energy Commission staff requested invoices from the IOUs for 17 facilities that they procured from in 2005 (9 for PG&E, 7 for SCE, and 1 for SDG&E) in which procurement appeared to exceed generation by more than 5 percent. The Energy Commission received those invoices and found that they proved the veracity of the specific purchases from these facilities. This methodology was also applied to 2004 procurement. For 2004, the Energy Commission staff requested invoices from the IOUs for 18 facilities that they procured from (8 for PG&E and 2 for SDG&E) in which procurement appeared to exceed generation by more than 5 percent. The Energy Commission received those invoices and found that they proved the veracity of the specific purchases.

For specific purchases in which procurement exceeded generation by 5 percent or less in 2004 and in 2005 and for procurement in which no generation data was available, an additional analysis was performed. Energy Commission staff randomly selected 10 specific purchases from 2004 and 10 specific purchases from 2005 from both PG&E and SCE along with 2 specific purchases made by SDG&E for both 2004 and 2005. Staff requested invoices for those purchases from each of the utilities. The comparison between those specific purchases and the invoices will be published in the next edition of the *RPS Verification Report*.

Conversely, Energy Commission staff's comparison of generation and procurement found that in some cases the generation exceeded procurement by more than 5 percent. In such cases, staff did not conduct further research to identify the source of the discrepancy but rather was satisfied that the available generation data supported the specific purchase; the facility produced as much or more energy than was claimed by the utility.

Possible explanations for excess generation include that the excess could be sold to another utility, trader, or other entity. Also, the amount procured may reflect line losses such that more energy is generated than is delivered to the sink. Also, verifying procurement with generation is especially difficult for wind facilities. Individual wind turbines within a group of turbines that collectively comprise a wind facility are sometimes sold to a new party. This leads to difficulties locating owners of facilities who could provide generation data and can result in variances in record keeping by the IOUs and the facility owners. For example, in 2005 the Seawest Energy-Seawest facility reported to the Public Interest Energy Research Program's Wind Performance Reporting System (WPRS) that it generated 975 MWh while PG&E claimed 32 MWh of procurement from the facility. Also, for all technologies,

the comparison of generation and procurement requires an element of professional judgment. The IOU may report a project by one name but sources of generation data may identify a project by a different name. For example, SCE procured 361,053 MWh from Colmac Energy Incorporated in 2005. In the spreadsheet that reports annual generation by generating facilities based on reports submitted by those generators to the Energy Commission, the Colmac Energy Incorporated Plant is referred to as the Mecca Plant.

While the Energy Commission recognizes the limitations of the interim tracking system, it is important to recognize that the *Verification Report* reflects staff review of each of the 482 specific purchases reported by the IOUs. The methodology and results have benefited from public input and are sound.

APPENDIX

The Appendix includes modified versions of the 2004 CEC-RPS-Track Filings 2005 CEC-RPS-Track filings for PG&E, SCE, and SDG&E. The modifications include identification numbers that were not entered in the IOUs' original filings. For example, an IOU may have included a generator's CEC-RPS-Certification Number but not the EIA Number or any other identification numbers. Staff included the EIA Number and/or applicable identification number for generators once those numbers were located.

A column was also added to the form to show procurement from generating facilities by other retail sellers — such as energy service providers and publicly owned utilities — that was reported to the SB 1305 Power Source Disclosure Program. The sum of the information reported to the Power Source Disclosure Program and the procurement information reported to the Energy Commission in the CEC-RPS-Track form was compared to generation totals reported to the Energy Commission and the Energy Information Administration. The modified CEC-RPS Track filing compares each IOU's procurement from each generator to the generation totals when available.