

TRACKING SYSTEM OPERATIONAL DETERMINATION

DRAFT JOINT AGENCY STAFF REPORT

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TABLE OF CONTENTS

CHAPTER 1: Introduction	1
CHAPTER 2: WREGIS History	3
CHAPTER 3: Joint Agency Process	5
CHAPTER 4: Criteria For Evaluation.....	6
CHAPTER 5: Rationale, Methods, Evaluation and Conclusions	7
Condition 1: Tracking System is “operational.”	7
WREGIS has been launched, and software meets specifications of the contract.	7
Entities participating in California’s RPS are registered with WREGIS.	8
The Energy Commission has established processes to verify the RPS-eligibility of generating units.	9
Certificates have been created.	11
The WREGIS Final Operating Rules would not preclude any reasonably foreseeable CPUC REC trading rules.	12
Condition 2: Capable of independently verifying the electricity generated by an eligible renewable energy resource and delivered to the retail seller	15
History	15
Current Status	15
Energy Commission’s Interim Tracking System	15
Interim Conclusion	18
Condition 3: Protecting against double counting.....	18
History	18
Current Status	19
Interim Conclusion	19
LIST OF WREGIS ACCOUNT HOLDERS:	20

ABSTRACT

The *Draft Joint Agency Staff Report and Appendix* respond to a legislative directive that requires the California Public Utilities Commission and the California Energy Commission to conclude that the renewable energy generation tracking system established under Public Utilities Code Section 399.13 subdivision (c) is operational, is capable of independently verifying the electricity generated by an eligible renewable energy resource and delivered to the retail seller, and can ensure that renewable energy credits shall not be double counted by any seller of electricity within the service territory of the Western Electricity Coordinating Council (WECC) prior to the California Public Utilities Commission authorizing the use of renewable energy credits. This report proposes the criteria, method and preliminary evaluation in concluding whether the tracking system is operational.

Keywords: Tracking system, WREGIS, tradable RECs, renewable energy credits

CHAPTER 1: Introduction

The California Renewables Portfolio Standard (RPS) Program was established by Senate Bill 1078¹ as codified in California Public Utilities Code Section 399.11, et seq. The statute required that each retail seller of electricity increase its total procurement of eligible renewable energy resources by at least 1 percent of annual retail sales per year so that 20 percent of its retail sales are supplied by eligible renewable energy resources by 2017. In 2006, Senate Bill 107² accelerated the renewable procurement target to reach 20 percent renewable procurement by 2010.

To verify compliance with the RPS, SB 1078 charged the California Energy Commission (Energy Commission) with designing and implementing an accounting system “to verify compliance with the renewable portfolio standard by retail sellers, to ensure that electricity generated by an eligible renewable energy resource is counted only once for the purpose of meeting the renewables portfolio standard of this state or any other state, and to verify retail product claims in this state or any other state.”³

SB 107 granted the California Public Utilities Commission (CPUC) the ability to authorize the use of tradable renewable energy credits (RECs) toward RPS obligations.⁴ It is the industry standard that one REC represents 1 megawatt-hour (MWh) of electricity generation from renewable sources. However, before authorization of tradable RECs, the CPUC and the Energy Commission must jointly conclude that the tracking system is operational, capable of independently verifying that all renewable energy used for RPS compliance is generated by an eligible facility and delivered to the retail seller, and can ensure that renewable energy credits shall not be double counted by any seller of electricity within the service territory of the Western Electricity Coordinating Council (WECC). This *Draft Joint Agency Staff Report (Draft Report)* proposes the criteria and the evaluation methods to be used to make a determination of whether the tracking system meets these requirements.

The Western Renewable Energy Generation Information System (WREGIS), designed to fulfill the Energy Commission’s obligation to track and verify renewable energy generation, was launched in June 2007. Consistent with the Energy Commission’s RPS Eligibility Guidebook,⁵ 2008 is the first calendar year that WREGIS data will be reported to the Energy Commission to verify RPS procurement. All generating facilities, retail sellers, procurement entities, and third parties participating in California’s RPS were required to register with WREGIS by January 1, 2008, with the exception of California’s three large investor-owned utilities (IOUs),⁶ which must register with and use WREGIS to verify RPS compliance by May 1, 2008. Energy Commission

¹ SB 1078 (Sher, Chapter 516, Statutes of 2002)

² SB 107 (Simitian, Chapter 464, Statutes of 2006)

³ Public Utilities Code Section 399.13 (b), as enacted by SB 1078

⁴ Public Utilities Code Section 399.16

⁵ *Renewables Portfolio Standard (RPS) Eligibility Guidebook* (<http://www.energy.ca.gov/2007publications/CEC-300-2007-006/CEC-300-2007-006-ED3-CMF.PDF>) (THIRD Edition), publication # CEC-300-2007-006-ED3-CMF, January 2008.

⁶ California’s three largest investor-owned utilities are: Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company.

staff currently verifies the delivery of renewable energy to retail sellers without the use of WREGIS.

To develop a record on whether the CPUC should authorize the use of tradable RECs, the assigned administrative law judge issued a ruling in July 2007 asking for comments on tradable RECs as a compliance tool for the RPS program. Subsequently, in September 2007, the CPUC Energy Division held a workshop on REC trading and developed a *Straw Proposal for tradable REC compliance rules (Straw Proposal)*. The administrative law judge issued a post-workshop ruling on October 16, 2007, asking for further comments on tradable RECs and the *Straw Proposal* by November 13, 2007, with reply comments due December 5, 2007.

To determine whether the tracking system meets the statutory requirements, the CPUC and Energy Commission (“Commissions”) are using their adopted collaborative process procedures.⁷ This report evaluates whether the tracking system satisfies the legislative mandates and that the system be deemed operational by both the Energy Commission and CPUC before tradable RECs are authorized to satisfy any of the requirements of the RPS program.

⁷ See CPUC February 3, 2003, Administrative Law Judge Ruling Issuing Workplan and Collaboration Guidelines as well as the March 13, 2003, Energy Commission “Committee Order on RPS Proceeding and CPUC Collaborative Guidelines,” Order No. 03-0305-04.

CHAPTER 2: WREGIS History

SB 1078 charged the Energy Commission with developing a tracking system for implementing California's RPS and ensuring that renewable energy output is counted only once for RPS purposes in California or any other state. In August 2003, the Energy Commission and the Western Governors' Association surveyed regulators, electric utilities, market participants, tribes, developers, and other stakeholders to solicit input on the requirements of a renewable energy tracking system. These early stakeholder sessions led the Western Governors' Association and the Energy Commission to identify specific goals and general characteristics of the system that has come to be identified as WREGIS.

In January 2004, the development process for WREGIS began by forming working committees composed of interested stakeholders. The Operational Rules Committee was responsible for developing the functional requirements and business rules for WREGIS, resulting in the Interim Operating Rules issued in June 2004. The Institutional Committee was responsible for recommending the institutional home for WREGIS and establishing its governance structure. In June 2004, the Institutional Committee recommended that the WECC be the institutional home of WREGIS.

In July 2004, the WECC agreed to serve as the institutional home of WREGIS with the understanding that the Energy Commission would be the "financial backstop" for the program, ensuring that the WECC would incur no costs for housing WREGIS. WREGIS would be funded by user fees, and in the event of a shortfall, the Energy Commission would reimburse the WECC. The WECC Board of Directors adopted a resolution to provide the administrative services for WREGIS for a three-year trial period that would begin once WREGIS was online. The WECC's commitment was formalized in a contract approved by the WECC Board of Directors in July 2006 and by the Energy Commission in August 2006.

In September 2004, the Institutional Committee issued a report that included recommendations for the governance and fee structures for WREGIS. It was decided that WREGIS would be governed by the WREGIS Committee, which would function as a WECC Board Committee. The structure and protocols of the WREGIS Committee were formalized in the WREGIS Charter, which was approved by the WECC Board of Directors in December 2004. An Interim WREGIS Committee was established to develop the protocols and processes for convening a Stakeholder Advisory Committee and conducting the election of WREGIS Committee members. The Stakeholder Advisory Committee also brings issues regarding WREGIS to the attention of the WREGIS Committee. The permanent WREGIS Committee convened in January 2006. Three members of this committee are appointed and represent the Western Governors' Association, the WECC, and Energy Commission. The remaining four positions are elected by the Stakeholder Advisory Committee.

In September 2005, the California Department of General Services released a request for proposals for the System Development and Technical Operations Contractor. The request for proposals specified that an existing renewable energy registry and tracking system should be modified to meet the functional requirements of WREGIS. Final proposals for the System Development and Technical Operations Contractor were received in June 2006, and the contract was awarded to APX, Inc., (APX) in September 2006.

The WREGIS administrative staff members were hired as WECC employees in November and December of 2006 and began to administer the WREGIS program from the WECC headquarters in Salt Lake City, Utah.

The Energy Commission worked with APX to further define the functional requirements of WREGIS, and APX subsequently modified the base system to meet these specifications. After months of system design, modification, and testing, WREGIS launched on June 25, 2007.

CHAPTER 3: Joint Agency Process

The Commissions are using their adopted collaborative process procedures to determine whether the tracking system is operational consistent with the requirements of SB 107.⁸ The Commissions' priorities for this task are to develop robust evaluation criteria and to vet the criteria through a public workshop.

Collaborative Commission staff propose a list of criteria to evaluate the statutory requirements and then suggest methods for researching, testing and evaluating the status of the tracking system functionality for each criterion. The Commissions' staffs jointly wrote this draft report outlining the proposed criteria and method that will be used to determine whether the tracking system is operational as required by SB 107 and applying them to make an interim evaluation. The Energy Commission staff will primarily evaluate the criteria that require technical understanding of WREGIS software. The CPUC staff will evaluate the tracking system for compatibility with REC trading rules and provide an independent perspective on the tracking system and on Energy Commission processes for using that system for RPS compliance.

The expected process follows:

- Energy Commission holds workshop on *Draft Report* and invites stakeholders and decision-makers from both agencies
- Stakeholders submit comments to Energy Commission after the workshop
- Commissions review comments and jointly revise *Draft Report*
- CPUC issues revised draft Resolution approving *Draft Report*
- Parties comment on CPUC draft Resolution containing *Draft Report*
- Commissions review comments and, as necessary, revise and update report
- Adopt identical final report at an Energy Commission business meeting and CPUC commission meeting

The process and schedule will be finalized after discussion at the Energy Commission's workshop.

⁸ See CPUC February 3, 2003, Administrative Law Judge Ruling Issuing Workplan and Collaboration Guidelines as well as the March 13, 2003, Energy Commission "Committee Order on RPS Proceeding and CPUC Collaborative Guidelines," Order No. 03-0305-04.

CHAPTER 4: Criteria For Evaluation

SB 107 sets three conditions the Commissions must evaluate before determining whether the tracking system established under Public Utilities Code Section 399.13 (c) is sufficient to allow tradable RECs. This chapter of the report identifies the criteria and method for evaluation, and Chapter 5 describes the Commissions' preliminary assessment of whether the conditions have been met using interim evaluations based on the proposed methods. The three conditions set forth in statute are whether the tracking system is:

1. Operational.
2. Capable of independently verifying the electricity generated by an eligible renewable energy resource and delivered to the retail seller.
3. Able to ensure that renewable energy credits shall not be double counted by any seller of electricity within the service territory of the WECC.⁹

While the second and third conditions are more specific and straightforward, the first condition requires some interpretation, and collaborative staff chose to develop criteria to evaluate what it means to be "operational." The following lists the five criteria, which are described in more detail in Chapter 5, that collaborative staff propose using to determine whether the tracking system is "operational":

- a. WREGIS has been launched, and software meets specifications of the contract.
- b. RPS-obligated load-serving entities (LSEs) and RPS generators are registered with WREGIS.
- c. The Energy Commission has established processes to verify the RPS-eligibility of generating units.
- d. Certificates have been created.
- e. The WREGIS Final Operating Rules would not preclude any reasonably foreseeable CPUC tradable REC trading rules.

⁹ Public Utilities Code Section 399.16(a)(1)

CHAPTER 5: Rationale, Methods, Evaluation and Conclusions

Collaborative staff propose using a variety of methods to evaluate the three conditions that SB 107 set forth to determine whether the tracking system is operational. This section provides an interim evaluation analysis of the conditions described in Chapter 4 and reaches preliminary conclusions about whether the criteria have been satisfied and/or additional steps may be required.

Condition 1: Tracking System is “operational.”

The five criteria proposed to determine what it means to be “operational” and the interim evaluation and preliminary conclusions regarding each criterion are described in detail below.

WREGIS has been launched, and software meets specifications of the contract.

Rationale

For the tracking system to be considered operational, the Commissions need assurance that WREGIS is up and running and capable of meeting all of the functional requirements established by the Energy Commission to meet its legislative mandate to “develop and implement an accounting system.”

History

The Energy Commission’s contract with APX set forth user acceptance testing protocols to ensure that the WREGIS software operates as specified in the contract. To launch WREGIS, user acceptance testing had to be completed and all known defects fixed. The contract with APX specified that the system would need to be up and running for a trial period of 90 days before “final acceptance” of the system. “Final acceptance” of the system would signify the end of the implementation phase and the start of the operations phase.

User acceptance testing took place in June 2007 and was conducted by the WREGIS Project Team and a small group of stakeholders. WREGIS functional requirements were tested during user acceptance testing. These functional requirements were defined in more than 400 pages in the contract. The functional requirements were divided into the following seven sections: Account Holder Registration and Updates, Generating Unit Registration and Updates, Establish and Maintain Subaccounts, Create and Deposit WREGIS Certificates, Manage WREGIS Certificates, Access Assignments and Updates, and Report on WREGIS Data and Related Features.

The user acceptance testing process was completed on June 21, 2007. On June 25, 2007, WREGIS was officially launched. At that time account holders could begin to register and sign up their generating units.

During the 90-day trial period, and before the WREGIS final acceptance, seven types of tests were conducted by APX and Energy Commission staff. The most thorough level of testing occurred at the coding level. Developers tested their program modifications as defined in the design documents to ensure that all codes were written properly. The second test type, the unit test, ensured the functionality of the system as it spanned multiple components and focused on processes that began in one module or component and completed in another. The integration test verified that interfaces defined in the interface control documents with external data providers worked properly. The interface control documents describe the structure and substance of data entered into the system by qualified reporting entities and program administrators. At a slightly higher level of complexity was the system test, conducted by the testing team to test whole system functionality. This level of testing was performed when all system modifications were complete for a particular build phase. After these tests were satisfactorily completed, staff from Pacific Gas and Electric Company, Southern California Edison Company, San Diego Gas & Electric Company, the WECC, and the Energy Commission conducted user acceptance testing to ensure to Energy Commission staff's satisfaction that the system would perform as required. Concurrently, performance testing demonstrated the processing and response times of critical functions and transactions under various operational conditions (for example, scenario scripts and system load and stress). Finally, a disaster recovery test was performed to assure that proper procedures would be followed in the event of a catastrophic occurrence.

All code, unit, integration, and system tests passed without defects before user acceptance testing began in June 2007. Any defects that were discovered during user acceptance testing were reported to APX, who fixed most defects within a few days, and all defects were fixed prior to launch. The test cases that had been reported as containing defects were then retested and found to be free of defects. All required functionalities were part of the system and working correctly at the time of the WREGIS launch.

Current Status

The 90-day trial period ended on September 23, 2007. On October 5, 2007, the Energy Commission notified APX staff that the deliverables required for the completion of the implementation phase had been accepted. This constituted "final acceptance" of the WREGIS software and moved the project into the operational phase.

Interim Conclusion

The notification to APX staff and subsequent payment by the Energy Commission for the completion of the implementation phase confirm that the WREGIS software functions as specified in the contract.

Entities participating in California's RPS are registered with WREGIS.

Rationale

To have a comprehensive tracking system that encompasses RPS related activity, generating facilities, retail sellers, procurement entities, and third parties participating in California's RPS should be registered with and use WREGIS. This becomes especially important when the Energy Commission's interim tracking system is no longer being used to track RPS procurement and generation.

History

According to the Energy Commission's RPS Eligibility Guidebook, all generating facilities, retail sellers, procurement entities, and third parties participating in California's RPS are required to register as account holders with WREGIS by January 1, 2008, with the exception of the three IOUs (Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company), which have until May 1, 2008, to sign up and begin to use WREGIS. As of March 7, 2008, there are 88 approved account holders with WREGIS. To be approved, the account holder must have submitted a signed Terms of Use. The Terms of Use is the agreement between an account holder and WREGIS.

Current Status

Some potential account holders have had concerns regarding the Terms of Use published on June 22, 2007, particularly regarding indemnification for intellectual property right infringement. As a result, they have not signed the Terms of Use. The parties are concerned that if the System Development and Technical Operations Contractor infringed on a copyright for software being used in WREGIS, the injured party could take legal action. At this time, the parties are developing a revised version of the Terms of Use to propose to the WREGIS Committee.

A list of all account holders currently registered in WREGIS is provided in Appendix A.

Interim Conclusion

As of March 7, 2008, many of the required entities were registered with WREGIS but many key entities were not. The CPUC and the Energy Commission will confirm all entities' registration status as of May 1, 2008, the required date for all RPS participants to register with and begin to use WREGIS. Likewise, the Energy Commission and parties are working together to address the concerns.

The Energy Commission has established processes to verify the RPS-eligibility of generating units.

Rationale

For the Commissions to be able to meet their respective legislative mandates regarding the RPS, WREGIS certificates will need to indicate whether they are eligible for the California RPS. While all the information needed to determine eligibility is included within the WREGIS certificate, staff from both Commissions feels that the administrative burden would be significantly less if the WREGIS certificates included the California RPS designation. To achieve this goal, the Energy Commission staff and WREGIS administrator need to implement an efficient and timely process to verify California RPS eligibility for all California RPS-eligible generating units.

History

A generating unit must be certified by the Energy Commission as California RPS-eligible for its renewable energy to count toward California's RPS compliance.¹⁰ When generating units register

¹⁰ *Renewables Portfolio Standard (RPS) Eligibility Guidebook*, pgs. 1, 28
(<http://www.energy.ca.gov/2007publications/CEC-300-2007-006/CEC-300-2007-006-ED3-CMF.PDF>)
(THIRD Edition), publication # CEC-300-2007-006-ED3-CMF, January 2008.

with WREGIS, they provide WREGIS with their California RPS identification numbers (if they have a California RPS identification number). If the generating unit has not yet received a California RPS identification number, the Energy Commission program administrator will provide the RPS identification number to the WREGIS administrator once RPS certification has been obtained. If the generating unit wishes its WREGIS certificates to indicate that its generation is California RPS-eligible, the generating unit will indicate during registration or any time thereafter that the facility is eligible for the California RPS. The eligibility for a particular program (such as California RPS) will not be shown on the WREGIS certificate until the information is verified by the appropriate program administrator (in this case, Energy Commission RPS staff), and confirmed by the WREGIS administrator.

Energy Commission RPS staff (program administrator) will upload RPS eligibility information into WREGIS monthly using a secure login and password. The program administrator will provide a list of all generating units that have been approved as eligible for the California RPS via an electronic file following the standardized format specified in the *Interface Control Document for Program Administrators*. The uploaded data automatically updates program-specific information to verify each generating unit's eligibility for the California RPS.

Current Status

In California, the following California RPS eligibility information must be included in the file to be uploaded to WREGIS by the Energy Commission:

- Program (CA)
- UNITID (WREGIS Unit ID)
- Fuel Type
- Attribute1 (Y/N regarding eligibility status for the CA RPS Program)
- Attribute2 (Alphanumeric CA RPS Identification Number)
- Attribute3 (MM/YYYY – Good Through Date – identifying when the generating unit is no longer eligible in the California RPS program)¹¹
- Attribute4 (Y/N indicating whether the California supplemental energy payment was received)¹²

¹¹ A response in the good-through date field is required by WREGIS. The California RPS recently removed its good-through date requirement; once certified by Energy Commission staff as California RPS-eligible, generating units are considered to be California RPS-eligible for the lifetime of the facility or until such a time when the generating unit is considered to be ineligible for the California RPS. Generating units are no longer required to recertify every two years, as was previously the case under the *RPS Eligibility Guidebook*. Energy Commission staff will enter a date five years from the current year as a proxy date when uploading eligibility data to WREGIS.

¹² The supplemental energy payment field is a holdover from when the Energy Commission awarded supplemental energy payments to cover the above-market cost of eligible renewable energy. The Energy Commission is no longer charged with awarding supplemental energy payments. Effective January 1, 2008, the responsibility for approving above-market costs for eligible renewable energy now rests with the CPUC pursuant to Senate Bill 1036 (Perata, Chapter 685, Statutes of 2007). Since the Energy Commission is no longer awarding supplemental energy payments, an "N" will be entered in this field. This field will remain in the system until Energy Commission staff goes through the WREGIS change and issue management process to have the attribute removed from the file upload, if necessary.

- Attribute5 (Y/N indicating whether the generating unit is eligible for supplemental energy payments)¹³

Once the file has been uploaded by the program administrator, the WREGIS administrator will verify any changes to generating units that are registered with WREGIS. If the uploaded file contains information about generating units that are not yet registered with WREGIS, WREGIS will not recognize and process those data.

Interim Conclusion

Collaborative staff have reviewed this process and agree that it will result in a timely and accurate verification of RPS eligibility of generating units registered with WREGIS.

Certificates have been created.

Rationale

Without the creation of WREGIS certificates, ensuring that the tracking system is operational and able to meet the legislative mandates of SB 107 would not be possible. WREGIS certificates represent the renewable and environmental attributes needed for the LSEs to comply with the RPS.

History

WREGIS certificates are created once generation data has been uploaded into WREGIS by a qualified reporting entity. A generating unit owner must select a qualified reporting entity to report its generation data to WREGIS or, if eligible, may self-report generation data. The qualified reporting entity serves as an independent source of metered generation data that will result in the creation of WREGIS certificates. Reporting entities are WREGIS account holders and upload data files containing generation data for the generating units that have selected them during the registration process. WREGIS verifies the format of the file to ensure that the data format is correct; once the data format has been validated, the data are entered into WREGIS.

Once the generation file has been uploaded, generating unit owners who have registered as account holders within WREGIS are notified that generation data has been uploaded for their generating units and are ready to be reviewed. The account holder may accept or dispute the data. If the data are accepted, after 90 days¹⁴ have passed from the end of the generation period, WREGIS certificates will be created.

¹³ As with Attribute4, this is a holdover regarding supplemental energy payments. All generating units will automatically receive an "N" as no generating units are eligible for supplemental energy payments.

¹⁴ The 90-day requirement coincides with the 90-day settlement period associated with the California Independent System Operator. All generation is subject to the same timeline so that no individual generating unit has an advantage over another; for example, if the qualified reporting entity selected by a generating unit had a shorter settlement period than the California Independent System Operator,

Current Status

In January 2008, PacifiCorp became the first registered qualified reporting entity to upload generation data to WREGIS. The data reported were for the generation periods September 2007 through October 2007.

Interim Conclusion

Certificates for PacifiCorp were successfully created in the January 2008 certificate cycle, which occurred on January 30, 2008. Energy Commission staff received confirmation from the WREGIS administrator on February 14, 2008, that the WREGIS certificates created for PacifiCorp accurately reflect the information of the respective generating units registered with WREGIS.

The WREGIS Final Operating Rules would not preclude any reasonably foreseeable CPUC REC trading rules.

Rationale

SB 107 requires that the Commissions deem the tracking system operational before allowing tradable RECs to be used for RPS compliance purposes. The Commissions must assess whether WREGIS is consistent with any reasonably foreseeable REC trading rules that may be established by the CPUC. If WREGIS is unable to accommodate proposed REC trading rules, a determination will need to be made regarding whether WREGIS should be modified.

History

The Commissions recognize that WREGIS will be used to verify RPS generation for many states and that the system would not be tailored specifically to California's REC trading regime, if the CPUC were to authorize one for California RPS compliance. Consequently, the proposed method to evaluate whether the tracking system is operational for implementing REC trading is to assess whether the adoption of any potential REC trading rules or definitions for California's RPS would be prevented by the current functionality of WREGIS. The staff do not expect that the tracking system would necessarily track REC trading compliance according to the CPUC rules.

The Commissions used the CPUC's *Straw Proposal* on REC trading, appended to the October 2007 administrative law judge ruling seeking post-workshop comments on tradable RECs, to evaluate whether WREGIS functionalities would prevent or limit the implementation of REC trading for RPS compliance.¹⁵ This *Straw Proposal* identifies a number of compliance rules that may govern a REC trading regime: a) market participants, b) tradable REC usage limits, c) flexible compliance: banking, d) flexible compliance: earmarking, e) treatment of bundled contracts and f) cost recovery. In addition, the October ruling asked for input about the attributes (e.g. avoided emissions) that should be associated with any RECs allowed for RPS compliance.

this could lead some generating units to receive their WREGIS Certificates sooner, which could create unfair circumstances.

¹⁵ <http://162.15.7.24/EFILE/RULINGS/73928.htm>

Current Status

The CPUC has received comments from parties in response to specific questions posed in the Ruling and on the *Straw Proposal*. The CPUC has not taken any action on the *Straw Proposal*. It could adopt, reject, or modify the *Straw Proposal*.

Interim Conclusion

After analyzing each aspect of the *Straw Proposal*, collaborative staff has determined that WREGIS will not prevent the implementation of any of the six categories of proposed compliance rules in the *Straw Proposal* as noted above. While WREGIS does not necessarily conform to a few of the proposed rules (for example, WREGIS Certificates do not have expiration dates), the software does not limit the CPUC's ability to implement any of the rules. CPUC staff does not find it to be a problem that WREGIS will not track LSEs' use of flexible compliance rules (for example, banking, borrowing) since the CPUC already requires that each LSE file a compliance spreadsheet, and the compliance spreadsheet will continue to track LSEs' compliance with such rules.¹⁶ In fact, in several instances, WREGIS may provide useful data to verify the information that is tracked in the compliance spreadsheets. For example, WREGIS certificates will identify the month in which the renewable energy associated with the WREGIS certificate was generated, and the CPUC can use that information to verify whether LSEs' use of banking in their compliance spreadsheets was properly employed. Below, the Commissions analyze the interactions between the proposed CPUC compliance rules in the *Straw Proposal* and WREGIS functionalities.

Market Participants

The *Straw Proposal* sets no limits on participation. WREGIS similarly allows trading between any entities registered with WREGIS.

Tradable REC Usage Limits

WREGIS functionality would not affect this proposed compliance rule. The *Straw Proposal* requires LSEs to enter into a certain quantity of long-term bundled contracts and/or bundled contracts with new facilities before buying any short-term REC contracts.¹⁷ The CPUC will be able to monitor compliance with this contracting quota using the CPUC Compliance Spreadsheets. WREGIS functionality will not affect compliance with this rule because it verifies renewable energy generation, not contracting obligations.

Flexible Compliance Banking

In the *Straw Proposal*, the CPUC staff proposes to allow RECs for RPS compliance only if they are retired in WREGIS within three compliance years from which they were generated. While WREGIS Certificates do not have expiration dates and WREGIS does not have the functionality to restrict the retirement of RECs for RPS compliance with different vintage dates, WREGIS will not prevent the implementation of this proposed rule. In fact, WREGIS Certificates will identify the generation month for each WREGIS Certificate, providing data to the CPUC that may help determine compliance with this proposed banking rule.

Flexible Compliance Earmarking

¹⁶ See Administrative Law Judge's Ruling Adopting Standardized Reporting Format, Setting Schedule for Filing Updated Reports and Addressing Subsequent Process.
<http://docs.cpuc.ca.gov/efile/RULINGS/65470.pdf>

¹⁷ Long-term contracts have a duration of 10 years or longer. Bundled contracts are power purchase agreements for both energy and green attributes.

WREGIS functionality would not affect this proposed compliance rule. Earmarking is a rule that will be tracked within the CPUC compliance spreadsheets.

Treatment of Bundled Contracts

The *Straw Proposal* distinguishes between RECs that may be unbundled and traded from currently bundled RPS contracts and RECs that may be procured unbundled. The *Straw Proposal* allows LSEs to unbundle RECs from currently bundled RPS contracts starting in 2009 and to unbundle and sell RECs on a forward basis from CPUC-approved RPS projects that are not yet online. The *Straw Proposal* does not, however, allow the unbundling of MWhs that are earmarked. WREGIS will not affect any of these proposed rules, since it does not distinguish RECs procured through unbundled contracts from those procured through bundled contracts. Instead, compliance spreadsheets filed with the CPUC will monitor compliance with these rules.

Definition of a Renewable Energy Credit

In addition to the above rules from the *Straw Proposal*, the attributes of a REC used for RPS compliance are a component of the REC trading regime that will be established if the CPUC approves REC trading. At this time, the characterization of a WREGIS Certificate may be inconsistent with some of the options for characterizing a REC as defined by the CPUC.

Interim Conclusion

The WREGIS final operating rules would not prevent any reasonably foreseeable REC trading rules, but as these protocols are further developed and finalized, changes in WREGIS operating rules may seem advisable. Also, the WREGIS Certificate definition should be consistent with the definition of “renewable energy credit” in Public Utilities Code Section 399.12 (h). The CPUC compliance spreadsheet must be updated to verify REC trading rules if REC trading for RPS compliance is approved. Further work may be required on this criterion.

Condition 2: Capable of independently verifying the electricity generated by an eligible renewable energy resource and delivered to the retail seller

History

RPS delivery rules for RPS-eligible energy require that electricity be either generated in state or scheduled for consumption by California end-use retail customers.¹⁸ The statute requires that energy associated with RECs be “delivered to a [California] retail seller, the [California] Independent System Operator, or a local publicly-owned electric utility.”¹⁹ Generating units that are located within the state or that have their first point of interconnection to the transmission network within the state satisfy the statutory delivery requirements and do not require further verification of delivery²⁰. However, energy deliveries from all generating units located out-of-state that qualify for the RPS must be verified to assure that they meet the RPS delivery requirements. WREGIS software is not currently configured to verify that power from out-of-state generating units has been delivered into California. The Energy Commission has been verifying out-of-state deliveries into California using an interim process since 2004. The process is underway to integrate out-of-state delivery verification into WREGIS software, but until that time, Energy Commission staff will continue to use the interim process.

Current Status

Energy Commission’s Interim Tracking System

Since 2004, the Energy Commission has tracked and verified the large IOUs’ RPS procurement. This system is being extended to cover all RPS-obligated LSEs, including electric service providers, community choice aggregators, small utilities, and multi-jurisdictional utilities. Currently, the interim system is used as a tool in verifying compliance with the California RPS. For 2008 generation, the interim system will be used to verify procurement for Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company from January through April, and WREGIS data will be used for the remainder of the year. The robustness of the interim system is limited by the availability and quality of generation data against which procurement data is compared. For all other RPS-obligated entities, WREGIS will be used as a tool to verify compliance beginning in January 2008.

¹⁸ Public Resources Code Section 25741 (a) and Public Utilities Code Section 399.12 (b). Energy Commission-300-2007-006-ED3-CMF, California Energy Commission, January 2008, Section D: Delivery Requirements, pg. 23

¹⁹ Public Utilities Code Section 399.16(a)(3)

²⁰ Public Resources Code Section 25741(b)(2)

The interim tracking process is intended to verify:

- The California RPS eligibility of the renewable energy facilities from which each LSE procured energy.
- The amount of energy procured by each LSE from each California RPS-eligible facility, to the extent possible.
- That California RPS procurement exclusively serves California's RPS and does not support another renewable energy market claim, to the extent possible.
- That the California RPS energy delivery requirements are satisfied by out-of-state facilities.

The first step in the interim tracking system is to confirm, using the Energy Commission's RPS eligibility database, that the energy procured was generated by an RPS-certified facility. Next, information gathered from LSEs, generation facilities, and other sources is used to compare the LSEs' RPS procurement data with generation data.

In most cases, facility data are compiled from more than one source. Self-reported generation data are collected from the U.S. Energy Information Administration's website, which provides monthly generation from facilities with a capacity greater than 1 megawatt. The Energy Commission also uses self-reported data submitted from owners of electric power plants larger than 1 megawatt located in California. The data collected include the nameplate capacity, fuel type, generation, and fuel usage. The staff also reviews data collected from other programs within the Energy Commission.²¹

Additional generation data come from the RPS certified generating facilities. On an annual basis, a facility that is certified as RPS-eligible with the Energy Commission must submit data on its monthly generation, including any generation sold to an entity that does not qualify as a retail seller for purposes of the California RPS under Public Utilities Code Section 399.12, Subdivision (c). The generating facilities annually report their generation data to the Energy Commission for the previous year using the Energy Commission-RPS-GEN form and must report by May 1 (or the next business day) of each year. For cases in which the retail seller certifies a facility on the facility's behalf, the retail seller is responsible for reporting that facility's generation data.

Energy Commission staff compares the amount of RPS-eligible energy procured by the IOUs and the total amount of energy generated as reported by the facilities. 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. If two or more LSEs procured energy from the same facility, the cumulative amount of energy procured from that facility is compared with the total amount of energy generated by that facility. If procurement exceeds generation, the Energy Commission will report the discrepancies. If staff finds a discrepancy in which procurement exceeds generation by more than 5 percent,²² staff does not include the excess procurement as RPS-eligible.

²¹ Examples of programs within the Energy Commission that supply generation data include: Existing and New Renewable Facilities Programs, Public Interest Energy Research Program, and the Power Source Disclosure Program.

²² Discrepancies of less than 5 percent are allowed to account for possible rounding errors when comparing data sources that use differing energy units (for example, gigawatt-hour or megawatt-hour versus kilowatt-hour).

Staff then determines, to the extent possible, that RPS-eligible energy procured by the IOUs was counted only once in California or any other state. The primary data source is an annual report to the Energy Commission submitted by retail sellers as part of the Power Source Disclosure Program that lists the generating facilities from which the retail sellers procured electric generation for the previous year. Using these data, LSE procurement data are cross-referenced with retail sales made by other LSEs in California, including publicly owned electric utilities. Additionally, the Energy Commission verifies, to the extent possible, that the generation from renewable facilities claimed by the California IOUs for RPS compliance was not claimed by retail providers in other states by collaborating with state agencies in Oregon and Washington.

Finally, for out-of-state facilities, staff annually verifies that procurement satisfies RPS delivery requirements.²³ In accordance with the policies of the North American Electricity Reliability Council (NERC), electricity delivered across control areas²⁴ must be tagged with what is commonly referred to as a NERC “E-tag.” The Energy Commission requires retail sellers to submit summary reports of NERC E-tag transactions to document delivery of RPS electricity from out-of-state facilities. Generation of RPS certified facilities under power purchase agreements with a retail seller and NERC E-Tag documentation of delivery must be reported annually to show generation and delivery per month for the previous calendar year. The NERC E-Tag must reference the RPS certification number of the facility for which deliveries are being matched with generation. The Energy Commission staff then compares the total amount generated in the previous calendar year with the total amount delivered in the previous calendar year, and the lesser of the two amounts may be accounted for as RPS-eligible.

Also, in addition to the Energy Commission’s interim delivery verification process, the Energy Commission and CPUC have developed a method for pre-verifying delivery from out-of-state generating units in contracts that IOUs have submitted to the CPUC for approval. This is important because it will enable both Commissions to review out-of-state delivery mechanisms before the projects are approved, providing the generator, the IOU, and the Commissions more confidence that all WREGIS certificates that indicate they are California RPS-eligible will also satisfy the California RPS delivery requirements.

In the interim tracking system, most generation data are self-reported by the generating units. WREGIS requires that a registered qualified reporting entity upload generation data that is based on meter-read data, with the exception of small-scale generating units that are allowed to self-report. While some LSEs will be allowed to act as qualified reporting entities and submit meter data to WREGIS for the creation of certificates, these LSEs must follow the *Interface Control Document* guidelines for a qualified reporting entity, which requires independent verification and validation of the generation data.

Delivery verification functionality to be added to WREGIS

To add the delivery functionality to WREGIS, WREGIS staff is conducting a stakeholder process to define the functional requirements related to the verification of delivery. Many states and provinces require that the energy be delivered into the state or province to qualify for their particular renewable energy program, including California. To ensure that WREGIS satisfies the requirements of the broader stakeholder group, it is important to ensure that the needs of all affected states and provinces are being met. Once the functionality has been defined and approved by the WREGIS Committee, including approval of the cost and schedule, the

²³ These delivery requirements do not apply to facilities located outside California whose first point of interconnection to the WECC transmission system is located in California consistent with the requirements of Public Resources Code Section 25741 (b)(2).

²⁴ The WECC now refers to control areas as balancing authorities.

functionality will be tested and put into the performance environment. The process for adding to WREGIS the ability to track out-of-state delivery follows:

1. Energy Commission staff prepares an issue brief on the proposed change to track out-of-state delivery.
2. WREGIS administrative staff enters the issue brief into the WREGIS change control system required for review of changes.
3. The WREGIS Committee is given the issue brief at its next meeting and may either vote to approve or reject, or ask for more information.
4. If approved by the WREGIS Committee, the Change Control Subcommittee²⁵ reviews the change.
5. The Change Control Subcommittee submits the change request to APX to develop a solution, including an estimate of cost and schedule.
6. APX develops a method to add the functionality to WREGIS.
7. The WREGIS Committee reviews APX's estimates; if the WREGIS Committee approves the cost and schedule estimates, then the Energy Commission contract manager approves the work authorization to allow APX to begin work.

Steps 1 through 5 of the above process have been completed. The WREGIS Committee approved the issue brief on August 13, 2007, and asked for further information regarding any other state programs that also require proof of delivery. The Change Control Subcommittee reviewed and approved the change on August 14, 2007, and submitted the change request to APX on August 28, 2007. APX is currently developing the method for the functionality and will bring the cost and schedule estimates to the WREGIS Committee after its proposal is complete. While California and Oregon have participated in defining the functionality of verifying delivery, other state and provincial representatives within WECC, although solicited, have yet to become involved in the stakeholder process.

Interim Conclusion

A process is in place to determine deliverability, but as this function is integrated into WREGIS, further work may be required on this criterion.

Condition 3: Protecting against double counting

History

WREGIS issues a unique serial number for each WREGIS certificate that has been created. The use of unique serial numbers prevents different account holders from claiming the same WREGIS certificate for compliance or voluntary programs. Additionally, the functionality for retiring and

²⁵ The Change Control Subcommittee is one of three working subcommittees within WREGIS. The Change Control Subcommittee reviews and evaluates all program change requests and program issues to provide recommendations to the WREGIS Committee.

reserving WREGIS certificates only allows the WREGIS certificate to be applied to a single renewable energy program.²⁶

Generation data claimed by LSEs to satisfy the RPS must be tracked in WREGIS and represented by WREGIS certificates (1 WREGIS certificate = 1 MWh) of renewable energy generation). All registered WREGIS account holders must attest that they are not reporting generation data for generation that has been reported to another tracking system and that they are not selling RECs representing the same generation data outside WREGIS.

Current Status

During user acceptance testing, which was conducted before the launch of WREGIS, Energy Commission staff tested the functionality of WREGIS and determined that there were no instances in which more than one WREGIS certificate was created for a MWh of renewable energy generation. Additionally, when retiring or reserving the WREGIS certificates, only one renewable energy program could be selected. This testing confirms that WREGIS is able to protect against double-counting and can ensure no double-counting has occurred within the system.

Interim Conclusion

Energy Commission staff is confident that the experience in user acceptance testing with respect to the reserve functionality within WREGIS and WREGIS certificates enables WREGIS to ensure no double counting of WREGIS certificates.

²⁶ There are some exceptions. Some states, such as Arizona allow the “double-use” of renewable energy certificates. “Double-use” is the use of a single renewable energy certificate for two separate purposes. Only if a state/provincial or voluntary program specifies that “double-use” is allowed will WREGIS allow it within the functionality. Currently only solar thermal in Arizona may use a WREGIS Certificate for more than one purpose.

APPENDIX

LIST OF WREGIS ACCOUNT HOLDERS:

3Phases Renewables
3Degrees Group, Inc.
Aire Systems
Amerex Energy
APS Energy Services Company , Inc.
Avista Utilities
Benton PUD
Bicent Power, LLC
Bonneville Environmental Foundation
Buena Vista Energy, LLC
California Energy Commission
California Power Partners Inc
CE2 Environmental Market LP
CE2 Environmental Opportunities I LP
City of Riverside Public Utilities
City of San Diego - MWW
Colorado Public Utilities Commission
Constellation Energy Projects and Services Group
Constellation NewEnergy
Coral Power, LLC
County of Solano
Covanta Delano, Inc.
DeLiddo & Associates, Inc. dba DEERS
e5 Clean Energy, Inc.
East Bay Municipal Utility District
El Paso Electric Company
Element Markets
Envirepel Energy
enXco, Inc.
Falls Creek, H.P., L.P.
Fat Spaniel Technologies, Inc.
Gas Recovery Systems LLC
Geysers Power Company, LLC
Glu Networks, Inc.
Green Mountain Energy Company
Green-e
Grey K Renewable Energy Limited
Hybrid Energy Homes
Idaho Power Company
Jay James Castino, PE
Klickitat County PUD
Kumeyaay Wind LLC
LL&P Wind Energy, INC.
M-S-R Public Power Agency
Metropolitan Water District of Southern California
Minnesota Methane LLC
MMA Renewable Ventures
Modesto Irrigation District
New Mexico Public Regulation Commission
NorthWestern Energy
Oregon Department of Energy
PacifiCorp
Pilot Power Group, Inc.
PNGC Power
Powerex Corp.
PPM Energy, Inc.
Public Utility District No. 1 of Chelan County
PUD No 1 of Franklin County
Puget Sound Energy
Raser Technologies, Inc.
Redding Electric Utility
Renewable Choice Energy
Robertson Bryan
Sacramento Municipal Utility District
San Diego Water Authority
Sanitation Districts of Los Angeles County
Sempra Energy Solutions LLC
Shoot4themoon Properties, Inc.
Sierra Pacific Industries
Snohomish Co. PUD #1
Solar Integrated Technologies
Solar Power Partners, Inc.
SolFocus, Inc
Sterling Planet, Inc.
Strategic Energy, LLC
Sun Run Generation
SunEdison
Telocaset Wind Power Partners, LLC
Tieton Hydropower, LLC
Tioga Energy
Utica Power Authority

Viasyn, Inc.
Victorville Municipal Utilities Services

Village Green Energy, Inc.