STOEL RIVES LLP
ATTORNEYS AT LAW

500 Capitol Mall, Suite 1600
Sacramento, California 95814
main 916.447.0700
fax 916.447.4781
www.stoel.com

SETH D. HILTON
Direct (415) 617-8943
sdhilton@stoel.com

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VIA EMAIL AND HAND DELIVERY

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DATE 9-12-11
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California Energy Commission
Dockets Office, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket No. 11-RPS-01 (also refer to Docket 03-RPS-1078)
Duke Energy Corporation's Comments on CEC's 33 Percent RPS Regulations

Duke Energy Corporation ("Duke") submits the following comments on the California Energy Commission's ("CEC") 33 Percent Renewables Portfolio Standard Publicly Owned Electric Utility Regulations Concept Paper ("Concept Paper").

INTRODUCTION

Duke has participated in the California Public Utility Commission Rulemaking R.11-05-005, and submitted comments and reply comments in response to Administrative Law Judge Anne Simon's July 12, 2011 Ruling concerning portfolio content categories for the Renewable Portfolio Standard program. Duke also participated in the September 1, 2011 staff workshop on the Concept Paper. Per staff's request during that workshop, Duke is submitting its comments and reply comments in R.11-05-005, attached hereto as Exhibits A and B.

Duke also submits the following comment on the foundational issues raised by staff in the Concept Paper.

COMMENTS

Staff's Recommendation as to "Foundational Issues"

a) Meaning of "consistent with" and "in the same manner as" (Public Utilities Code Sections 399.30 (c)(3), 399.30 (d)(1), 399.30 (d)(2), 399.30 (d)(3))

i) Options:

(1) Always same as those for retail sellers

(2) In spirit of rules for retail sellers; up to POUs and Energy Commission to define for specific cases

(3) Some rules the same as those for retail sellers (for instance, definitions of portfolio content categories), and some in the spirit of the rules for retail sellers, as determined by POUs and the Energy Commission

ii) Staff recommendation: Option (3); the law should be applied to all entities using the same rules to the extent practicable. In areas in which different rules apply to POUs, those rules will be as consistent as possible with those for retail sellers. (In response to this particular issue, staff requests that stakeholders specify which rules should be the same for POUs and retail sellers and what criteria should be used to determine "in the spirit of." Please include rationale.)

Duke's Comments

Duke supports CEC Staff's view that the 33 Percent Renewable Portfolio Standard ("RPS") Regulations for Publicly Owned Electric Utilities should, to the extent possible, be the same rules as apply to retail sellers and be consistent with the rules and regulations adopted by the California Public Utilities Commission, especially with regard to portfolio content categories. Such consistency will ensure a more viable market and will decrease costs for both developers and utilities, including public utilities. Duke also encourages CEC Staff to work with the California Air Resources Board ("CARB") to ensure that CARB's cap and trade regulations are consistent with CEC's proposed 33 Percent RPS Regulations. Inconsistent regulations will only increase the regulatory burden on developers, leading to added costs both for developers and for publicly-owned utilities.

Duke appreciates the opportunity to submit these comments and looks forward to continued participation in this proceeding.

Respectfully submitted,

Allen C. Smith for

Seth D. Hilton
SDH:kjh
Enclosures

EXHIBIT A

DUKE ENERGY CORPORATION'S OPENING COMMENTS ON
IMPLEMENTATION OF NEW PORTFOLIO CONTENT CATEGORIES FOR RPS PROGRAM
(DATED AUGUST 8, 2011)

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BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration of California Renewable Portfolio Standard Program.	Rulemaking 11-05-005 (Filed May 5, 2011)

COMMENTS OF DUKE ENERGY CORPORATION ON IMPLEMENTATION OF NEW PORTFOLIO CONTENT CATEGORIES FOR THE RENEWABLE PORTFOLIO STANDARD PROGRAM

Seth D. Hilton
STOEL RIVES LLP
555 Montgomery Street, Suite 1288
San Francisco, CA 94111
Telephone: (415) 617-8913
Email: sdhilton@stoel.com

Attorneys for Duke Energy Corporation

Dated: August 8, 2011

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration of California Renewable Portfolio Standard Program.	Rulemaking 11-05-005 (Filed May 5, 2011)

COMMENTS OF DUKE ENERGY CORPORATION ON IMPLEMENTATION OF NEW PORTFOLIO CONTENT CATEGORIES FOR THE RENEWABLE PORTFOLIO STANDARD PROGRAM

Duke Energy Corporation ("Duke Energy") submits the following comments in response to Administrative Law Judge Anne Simon's July 12, 2011 Ruling concerning portfolio content categories for the Renewable Portfolio Standard program.

I. INTRODUCTION

Duke Energy is a diversified electric utility with subsidiaries that develop renewable energy and commercial transmission projects throughout the United States. Duke Energy Generation Services Holding Company ("Duke Energy Renewables") owns and operates 1,008 MW of wind and 24 MW of solar photovoltaic (PV) generating assets in 9 states, and is developing a 36 MW energy storage project in conjunction with a commercial wind farm in Texas. Duke Energy Renewables has also partnered with Integrys Energy Services and Smart Energy Capital to build and finance distributed generation rooftop and ground-mounted solar PV projects throughout the United States.

Duke Energy is also developing several transmission projects that involve multiple states in WECC, ERCOT, MISO and PJM. Duke Energy Transmission Holding Company ("DECT") and American Electric Power are jointly developing the Pioneer Project, which is a FERC-

approved $1 billion high-voltage transmission project with both reliability and renewable integration benefits in PJM and MISO. DECT entered into a joint venture with American Transmission Company, Duke-American Transmission Company, to build, own and operate several transmission projects. Duke Energy has an extensive development pipeline of 5,000 MW of wind, 1,000 MW of solar, and numerous transmission projects.

Duke Energy is involved in the development of both renewable generation and transmission projects within the Western Electricity Coordinating Council, or WECC. Both its generation and its transmission projects include projects intended to provide renewable energy to California as part of California's efforts to achieve the 33% Renewable Portfolio Standard set by Senate Bill 2 (1x). Duke Energy is actively developing renewable energy projects to serve California customers with a diverse mix of least-cost best fit renewable energy resources. Duke Energy therefore has a strong interest in how the Commission will ultimately interpret and implement SB 2 (1x), and its provisions governing the use of out-of-state generation to meet California's Renewable Portfolio Standard.

II. GUIDING PRINCIPLES

Duke Energy appreciates the Commission's interest in ensuring that its implementing decisions provide clarity concerning the three portfolio content categories, thereby providing regulatory certainty to developers like Duke Energy. Duke Energy also urges the Commission to adopt a framework that allows the full and fair participation of projects from out-of-state in the State's efforts to achieve its RPS. Providing opportunities to out-of-state projects will provide numerous benefits. Included among them are the significant price benefits that utilities and their customers will receive if out-of-state generation can compete on an equal basis with in-state generation. As numerous parties have noted previously in connection with the Energy Division's

April 23, 2010 Workshop in R.08-08-009, active participation of out-of-state resources in California's efforts to achieve a 33% RPS will both lower costs and mitigate price volatility. It would also assist in meeting the express intent of SB 2 (1x) to achieve "stable retail rates" and a "diversified and balanced portfolio." Public Utilities Code § 399.11(b)(6) & (5).

Furthermore, as the Commission and the California Independent System Operator consider how to address the intermittency associated with certain types of renewable generation, Duke Energy notes that the Cal ISO has recognized a geographically diverse renewable generation fleet can help mitigate that intermittency. In its response to petitions for modification of D.10-03-021, the Cal ISO stated:

> From an operations perspective, a geographically diversified supply of renewable generation can help mitigate operational challenges posed by the intermittency of wind and solar generation. Of particular importance in this regard is the greater diversity of weather conditions that exist over larger geographic areas during any given operating hour, and the impact of such weather diversity in reducing the aggregate variability of output of wind and solar resources....
>
> As a result, the operational challenges of managing the inherent intermittency of solar and wind resources can be reduced by diversifying the geographic locations of these resources.

Duke Energy therefore requests that the Commission give due consideration to providing opportunities for out-of-state generation in its implementation of SB 2 (1x).

III. RESPONSE TO QUESTIONS

Duke Energy provides below responses to the following questions: 1, 2, 4 – 7, 9, 11 – 14, 21 – 23. In some cases, where suitable, a single response is provided for multiple questions.

A. Response to Questions 1, 2, & 8

Section 399.16(b)(1) is ambiguous in that it frequently uses the term "product" or "products" when it appears that the intent is to refer to generation facilities, not the product of

those facilities. For example, Section 399.16(b)(1) refers to "electricity products that... have a first point of interconnection with a California balancing authority....", or "electricity products that... have an agreement to dynamically transfer electricity...." Questions 1, 2, and 8 provide language that does not appear to fully address the ambiguity. Duke Energy suggests that the language of the statute should be read as follows:

> Procurement transactions with eligible renewable energy resources that meet either of the following criteria:
>
> (A) Have a first point of interconnection with a California balancing authority, have a first point of interconnection with distribution facilities used to serve end users within a California balancing authority area, or that schedule electricity into a California balancing authority without substituting electricity from another source....
>
> (B) Have an agreement to dynamically transfer electricity to a California balancing authority.

B. Response to Question 2

See Section III.A, *supra.*

C. Response to Question 4

Section 399.16(b)(1)(A) should be interpreted to include energy that is scheduled and delivered real-time into a California balancing authority area on a firm basis. Such energy, along with energy that is dynamically scheduled from a project as contemplated by Section 399.16(b)(1)(B) , should be included in the first portfolio content category. The phrase "without substituting from another source" does not affect this interpretation, because the treatment of any ancillary services provided in connection with such real time scheduling and delivery is already addressed in Section 399.16(b)(1)(A).

The language of Section 399.16(b)(1)(A) referenced in this question, "... scheduled from the eligible renewable energy resource into a California balancing authority *without substituting*

electricity from another source" (emphasis added) appears to be an attempt by the legislature to distinguish transactions in the first portfolio content category from a "firmed and shaped" transaction where another *generation* source provides a portion of the energy ultimately scheduled into a California balancing authority. Firmed and shaped transactions are included in the second portfolio content bucket pursuant to Section 399.16(b)(2) and are more fully described in Section III.J below.

Even in a situation where electricity is substituted "from another source," Duke Energy urges the Commission to interpret the "from another source" language to mean "another *generation* source" in determining whether such electricity should be counted in portfolio content category one or two. This interpretation would be important in instances where an intermittent wind or solar resource used some form of energy storage to firm and shape its generation. As long as the storage facility was storing only energy from the renewable energy resource, then the eligible renewable energy stored and then released by the storage facility should be categorized as qualifying for the first portfolio content category. For example, a battery storage[1] facility might be charged at night with excess energy from wind resources, and then that stored energy could be used to support wind and other renewable energy resources during peak load periods. This interpretation will also be important in the context of the Commission's ongoing efforts to implement AB 2514.

Duke Energy also suggests that the quoted section should not be read to exclude from the

[1] This reference to battery storage technology is for purposes of illustration only. Other devices that might be used to store renewable energy include pumped storage hydro, compressed air energy storage (CAES), flywheels, vehicle-to-grid (V2G) electric vehicle batteries, hydrogen fuel cells, or other storage technologies yet to be developed. The Commission should consider how to account for energy that is stored in and re-delivered from storage devices either in this proceeding or in its proceeding under AB 2514.

first portfolio content category generation that is being firmed and shaped by another *renewable* resource. The legislature's intent in enacting the quoted language was to prevent generation from a non-renewable resource from counting toward a utility's RPS compliance obligation. In situations where the other source is also renewable, the proscription should not apply and all energy delivered to the California balancing authority area pursuant to the transaction should qualify for the first portfolio content category.

D. Response to Question 5

In Decision 10-03-021, the Commission authorized the use of Tradable Renewable Energy Credits ("TRECs") for RPS compliance. The Decision distinguished between "bundled" (energy plus renewable energy credits) transactions and TREC (or REC-only) transactions, imposing a cap on the amount of TRECs that could be used for RPS compliance. D.10-03-021, however, left open the question of whether energy delivered to California via firm transmission, or through a firming and shaping arrangement, would qualify as a bundled transaction, or as a TREC transaction subject to the cap. The Decision instructed the Director of the Energy Division, in Ordering Paragraph #26, to take appropriate steps to obtain information that would enable a definitive determination of how to classify transactions for RPS procurement that included firm transmission arrangements but not dynamic transfers to a California balancing authority area.

In compliance with this directive, the Energy Division conducted a workshop in April 2010 and solicited pre- and post-workshop comments on how to classify such arrangements. This work by the Energy Division is helpful in understanding the nature and variety of firm transmission transactions. However, that work was directed toward determining whether a transaction was a "bundled" or a TREC transaction, as those categories were defined in D.10-03-

021. This proceeding, in contrast, must address the precise statutory language set forth in SB 2 (1x), which defines transactions into three "portfolio content categories," not into "bundled" or TREC transactions. Due to the need to interpret the specific statutory language, the Energy Division's work, while helpful, is not directly applicable to this proceeding.

E. Response to Question 6

The California Energy Commission currently uses NERC e-tags to verify deliveries of renewable energy to California to determine whether the RPS delivery requirements (since eliminated by SBx1-2) were met. E-tags could also be used to show, track and verify that energy was scheduled into California without substituting energy from another source. However, as explained above, energy from some sources, such as energy storage or an eligible renewable resource, should not disqualify a facility from meeting the requirements of the first portfolio content category.[2]

F. Response to Question 7

For intermittent resources scheduling energy into California, as with intermittent resources located within California, the resource may generate more or less than its schedule over a given time period. Thus, the metered output of the eligible renewable energy resource could be more than or less than the import schedule into the California balancing authority. In the event that the output of the facility is less than its import schedule, ancillary services provided by another generation source could make up that balance.

For example, a wind project could submit an hourly import schedule along a firm transmission pathway to the CAISO balancing authority area. The project's generation in real

[2] The Commission should also consider how verification might work in the energy storage context, although such questions might be left to R.10-12-007, the Commission's rulemaking implementing AB 2514.

time would deviate from the submitted schedule at least part of the time due to the intermittent nature of wind generation. The project would typically contract with a third party to provide balancing authority services. That third party would provide ancillary services real time to maintain a consistent import schedule into the CAISO.

The phrase "but only the fraction of the schedule actually generated by the eligible renewable energy resources shall count toward this portfolio category" may be intended to exclude energy provided as ancillary services from an alternate energy source under an assumption the facility providing ancillary services would not be an eligible renewable energy resource, and thus its generation should not count toward a utility's RPS compliance obligation.

For compliance purposes, the portion of the energy supplied by ancillary services could be excluded simply by comparing the metered output of the eligible renewable energy resource to its import schedule. In the event that the metered output of the resource was less than the schedule, only the metered output, not the full schedule, would count for compliance purposes. Duke Energy suggests that, in comparing the scheduled and the metered output, the Commission set a reasonable time period over which the lesser of the metered output or the scheduled imports would count for California RPS compliance purposes. In implementing the delivery requirements previously applicable to out-of-state eligible renewable energy resources, the CEC concluded that it would compare "the amount of RPS-eligible electricity generated by the RPS-eligible facility per calendar year with the amount of electricity delivered into California for the same calendar year and the lesser of the two amounts" would be counted as RPS-eligible. *See Renewable Portfolio Standard Eligibility Guidebook* (4th ed.) at 39. A similar comparison over the calendar year could determine the amount electricity eligible under the first portfolio content category.

Comparing the metered output of the facility to the import schedule over a shorter period of time could have adverse consequences for the management of the transmission system. Should such a rule be implemented, generators would run the risk of generating in excess of their import schedule more frequently, and losing the opportunity to qualify that energy as belonging to the first portfolio content category. This would in turn motivate generators to schedule for their maximum output, rather than expected output, to ensure that the facility would not generate in excess of its schedule and therefore be unable to count that excess generation as RPS-eligible. The penalties paid for failing to meet the schedule could potentially be offset by the revenue gained from the sale of additional RPS-eligible energy. Scheduling in this manner, however, would in turn result in the need for additional ancillary services, and would increase the costs to operate the transmission system as a whole. Comparing the import schedule to the metered output over the course of a calendar year, consistent with the CEC's current practice, would comply with the intent of the legislation, while not creating an incentive for generators to schedule in excess of what they otherwise would, with adverse consequences to the transmission system.

Duke Energy also notes that if the real-time ancillary services were acquired from an energy storage facility that stored renewable energy, such ancillary services should be treated as "actually generated by the eligible renewable energy resources." For example, a pumped storage hydro facility could accept deliveries of excess wind energy during light load hours and then re-deliver that energy, net of round-trip losses, the next day during high load hours. Temporary storage in the pumped hydro facility would not change the original generation source.

G. Response to Question 8

See Section III.A, *supra.*

H. Response to Question 9

"Unbundled renewable energy credit" should be defined as "a renewable energy credit that is procured separately from the RPS-eligible energy with which the REC is associated." SB 2 (1x) removed the delivery requirement previously contained in Public Resources Code § 25741 that had previously been interpreted to require the delivery of energy even with the sale of an unbundled REC. A representative transaction involving an "unbundled renewable energy credit" might involve an Idaho wind facility selling energy to Idaho Power under a QF contract. In that scenario, the wind facility would retain the right to the unbundled RECS, and should be free to market those RECs to California utilities for RPS compliance purposes.

I. Response to Question 11

The phrase "or any fraction of the electricity generated" should be interpreted to mean "any portion of the electricity generated by an eligible renewable energy resource that does not meet the requirements of the first or second portfolio content categories." For example, if a generation resource's metered output is in excess of its import schedule for the month, Duke Energy proposes that the amount in excess of the import schedule would not meet the requirements of the first portfolio content category (see response to Question No. 7). However, that generation would create renewable energy credits that could otherwise be sold to California utilities for RPS compliance. These unbundled RECs should be treated identically to unbundled RECs from any other generation facility, including facilities that are solely selling RECs to a California utility.

J. Response to Question 12 and 13

As a practical matter, intermittent energy is usually both "firmed" and "shaped" as part of

a single firming and shaping transaction. The energy is "firm" in the sense that the obligation to deliver it is not unit contingent and can only be excused in very unusual cases of uncontrollable force. It is "shaped" in the sense that it is converted from a variable, intermittent resource with significant pre-schedule and intra-hour variability into a flat and firm product deliver to CAISO. In a typical transaction, the eligible renewable generator would enter into a firming and shaping agreement with a firming and shaping party that agrees to purchase and accept all of the energy delivered by the intermittent facility as and when generated. It is also possible that the utility purchaser might self-supply firming and shaping services, or that it might engage a third party to provide the firming and shaping services to it. The energy generated is typically measured across a measuring period, which may distinguish between energy generated off peak and energy generated on peak. The generator retains the green attributes from the electricity generated and delivers them to the utility purchaser. During an agreed-upon re-delivery period, the shaping and firming party would schedule and deliver the measured energy to the CAISO as a firmed and shaped product that eliminates variability (e.g., as firm energy in 25 MW blocks). The firmed and shaped electricity itself may be acquired "from another source" (i.e., a source other than the original renewable generator), which is why Section 399.16(b)(1)(A) includes the phrase "without substituting electricity from another source" to distinguish between the first and second portfolio content categories. See Section III.C, *supra.*

For example, assume a facility delivers 5,555 MWh intermittently during the course of a measuring week, with 3,659 MWh delivered during off peak hours and 1,896 MWh delivered during on peak hours. The shaping and firming party could commit to deliver the energy into the CAISO during a re-delivery week, with 3,659 MWh to be delivered in flat blocks during off-peak hours and 1,896 MWh to be delivered in flat blocks during on-peak hours. The shaping and

firming party could be a party with load (for example, a utility) that would physically absorb the intermittent energy into its system and thereafter re-deliver it during the re-delivery period; alternatively, and more likely, it would be a company with a trading desk willing to sell intermittent energy into the market as it is generated and then purchase and re-sell the energy at the delivery point as a flat and firm product.

Questions 12 and 13 suggest that the Commission is contemplating defining "firmed" and "shaped" as two separate concepts. Since a firming and shaping party does not usually firm without shaping, or shape without firming, the Commission should consider defining "firmed and shaped" as a single concept. In addition, as noted in Section III.C *supra*, the Commission should consider treating energy delivered in transactions that are firmed and shaped by stored renewable energy or renewable energy as qualifying for the first portfolio content category.

K. Response to Question 14

"Incremental electricity" should be defined as any transaction which results in additional energy being scheduled into a California balancing area. The intent of the legislation appears to be an attempt to exclude transactions where unbundled RECs are simply paired with pre-existing import arrangements. Determination of whether the energy is incremental should be determined from the structure of the transaction, and does not depend on the characteristics of the electricity ultimately delivered into a California balancing authority area. To ensure that the transaction resulted in the delivery of incremental energy, the Commission could simply require that the firming and shaping agreement for the importation of energy into California expressly identify the associated power purchase agreement with the utility, thus ensuring that pre-existing arrangements for the importation of energy would not be paired with new RPS transactions.

L. Response to Question 16

There are circumstances under which a transaction that might be identified as a firming and shaping arrangement might nevertheless meet the requirements of the first portfolio content category. Presumably, the legislature imposed limits on firming and shaping arrangements because, although firming and shaping arrangements provide significant benefits to California, the energy delivered to California under these arrangements might be generated in part by a non-renewable energy facility. However, in circumstances where the party supplying firming and shaping services is providing that generation from eligible renewable energy resources, or from energy storage, the legislature's concern would be inapplicable, and the transaction should qualify for the first portfolio content category.

For example, wind facilities might use pumped storage to store their output, and then deliver a firmed and shaped product to California using the pumped storage. If the only generation stored at the pumped storage facility was from wind facilities that were eligible renewable energy resources, then that generation, delivered to California as a firmed and shaped product, should nevertheless qualify for the first portfolio content category, as the source of the generation would be entirely renewable.

M. Response to Question 21 and 22

As an initial matter, under the previous iteration of the RPS, the California Energy Commission was tasked with determining whether delivery had occurred for purposes of RPS compliance. It may make sense for a single agency to be tasked with determining the portfolio content category of a transaction, to the extent that the California Energy Commission and California Public Utilities Commission adopt identical definitions of the three categories. Regardless of the entity doing the evaluation, historically it has been sufficient for the utility

seeking approval of the power purchase agreement to provide a description of the transaction. This practice should be continued, with the burden placed on the utility to provide a sufficiently detailed explanation of the transaction to show how the transaction should be categorized. Requiring additional documentation would be problematic, in that the utility may not have access to documents such as the firming and shaping agreement. Past practice has been to provide the utility with a copy of the firming and shaping agreement with the commercial terms redacted. However, there has historically been no requirement that the utility provide such documentation to the Commission, nor is it necessary now.

Verification of post-contract deliveries, consistent with current practice, would provide sufficient insurance that power was actually being procured consistent with the claimed categorization. E-tags could be used to document the source and the delivery to a California balancing authority. For transactions within the first portfolio content category, e-tags would show the source of the energy (which would be required to be an eligible renewable energy resource (or storage facility, consistent with Duke Energy's recommendation in response to Question 4), and would show that the energy was scheduled and delivered to a California balancing authority area. For transactions in the second portfolio content category, e-tags would also show the delivery of incremental generation to a California balancing authority area.

N. Response to Question 23

As noted above, procurement from eligible renewable energy resources located outside of California balancing authority areas will provide numerous benefits, including reducing RPS compliance costs, mitigating price volatility, and reducing the aggregate variability of output of wind and solar resources, thereby mitigating the operational challenges posed by wind and solar generation. Delivery through dynamic transfer arrangements, via firm transmission even in the

absence of dynamic transfer arrangements, or through firmed and shaped transactions all provide significant benefits to California utilities and the California ratepayer.

Deliveries through dynamic transfer arrangements allow generation to be received into the CAISO control area as if that generation was located within California, thereby providing the benefits of in-state generation with the additional benefits of out-of-state generation noted above. Similarly, scheduling and delivering energy real-time via firm transmission, even without a dynamic transfer arrangement, provides similar benefits, with an added benefit that the CAISO does not bear the obligation of providing ancillary services. Both dynamic transfer arrangements and real-time deliveries via firm transmission should be included in the first portfolio content category.

Though firmed and shaped transactions are subject to procurement limits in SB 2 (1x), and were initially excluded from the definition of bundled transactions in D.10-03-021, there are numerous benefits provided by firmed and shaped transactions as well. Firmed and shaped transactions allow for the more efficient use of the transmission system. The resulting reduction in transmission costs can mean lower procurement costs for utilities and their ratepayers. Firmed and shaped transactions also provide additional, incremental energy to California. Nor are the environmental benefits of the renewable generation lost as a result of firming and shaping the output. Even if the product delivered to California was generated by a source other than an eligible renewable energy resource, those deliveries must be equal to generation from the eligible renewable energy resource. At the time the eligible renewable energy resource generates the energy that will later be firmed and shaped, it will replace other sources of generation. In the WECC, the generation is most likely offsetting fossil-fuel fired generation, including coal. In fact, depending on the generation mix where the renewable facility is located, it may reduce

greenhouse gas and other hazardous emissions by a greater amount than a facility located in California. And given the nature of greenhouse gas emissions, reductions do not have to occur in California to provide benefits to Californians.

Given the numerous benefits that generation located outside of a California balancing authority area can provide under any of the three delivery options discussed above, Duke Energy urges the Commission to carefully consider how it can best ensure that such generation can participate fully and fairly in California's RPS efforts.

DATED: August 8, 2011

/s/ Seth D. Hilton
Seth D. Hilton
STOEL RIVES LLP
555 Montgomery Street, Suite 1288
San Francisco, CA 94111
Telephone: (415) 617-8913
Email: sdhilton@stoel.com

Attorneys for Duke Energy Corporation

VERIFICATION

I am the attorney for Duke Energy Corporation and am authorized to make this verification on Duke Energy's behalf. Duke Energy is unable to verify the foregoing document in person as Duke Energy is located outside of the County of San Francisco, where my office is located. I have read the foregoing **COMMENTS OF DUKE ENERGY CORPORATION ON IMPLEMENTATION OF NEW PORTFOLIO CONTENT CATEGORIES FOR THE RENEWABLE PORTFOLIO STANDARD PROGRAM** and am informed and believe, and on that ground allege, that the matters stated are true and correct to the best of my knowledge.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 8th day of August, 2011, at San Francisco, California.

/s/ Seth D. Hilton
Seth D. Hilton
STOEL RIVES LLP
555 Montgomery Street, Suite 1288
San Francisco, CA 94111
Telephone: (415) 617-8913
Email: sdhilton@stoel.com

Attorneys for Duke Energy Corporation

EXHIBIT B

DUKE ENERGY CORPORATION'S REPLY COMMENTS ON
IMPLEMENTATION OF NEW PORTFOLIO CONTENT CATEGORIES FOR RPS PROGRAM
(DATED AUGUST 19, 2011)

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BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration of California Renewable Portfolio Standard Program.	Rulemaking 11-05-005 (Filed May 5, 2011)

REPLY COMMENTS OF DUKE ENERGY CORPORATION ON IMPLEMENTATION OF NEW PORTFOLIO CONTENT CATEGORIES FOR THE RENEWABLE PORTFOLIO STANDARD PROGRAM

Seth D. Hilton
STOEL RIVES LLP
555 Montgomery Street, Suite 1288
San Francisco, CA 94111
Telephone: (415) 617-8913
Email: sdhilton@stoel.com

Attorneys for Duke Energy Corporation

Phillip C. Grigsby
SVP Commercial Transmission, Strategy & Policy
Duke Energy Corporation
400 S. Tryon Street, Mail code: ST-06I
Charlotte, NC 28201-1007
Telephone: 704-382-2091
Email: Phillip.grigsby@duke-energy.com

Dated: August 19, 2011

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Implementation and Administration of California Renewable Portfolio Standard Program.	Rulemaking 11-05-005 (Filed May 5, 2011)

REPLY COMMENTS OF DUKE ENERGY CORPORATION ON IMPLEMENTATION OF NEW PORTFOLIO CONTENT CATEGORIES FOR THE RENEWABLE PORTFOLIO STANDARD PROGRAM

Duke Energy Corporation ("Duke Energy") submits the following reply comments in response to Administrative Law Judge Anne Simon's July 12, 2011 Ruling concerning portfolio content categories for the Renewable Portfolio Standard program.

I. INTRODUCTION

Administrative Law Judge Anne Simon's July 12, 2011 Ruling produced a wealth of comments from numerous parties. Duke Energy's own comments are in agreement with many of the positions taken by parties in those comments, including the matrix submitted jointly by Pacific Gas and Electric ("PG&E") and other parties. However, Duke Energy is concerned that a number of parties proposed requirements for satisfying the first and second portfolio content categories that appear nowhere in Senate Bill ("SB") 2 (1x). These additional requirements, as discussed in detail below, are inconsistent with the Legislature's intent as expressed in SB 2 (1x), are unnecessary for achieving the goals of SB 2 (1x), and risk increasing compliance costs by imposing unnecessary restrictions on the market. Duke Energy urges the Commission to

implement SB 2 (1x) as written, and to decline the invitation to supplement the statute with additional requirements beyond those adopted by the Legislature.

II. RESPONSE TO QUESTIONS

Duke Energy provides additional responses to the questions below to address issues raised by the parties in initial comments.

A. Response to Questions 1

As Duke Energy noted in its opening comments, Section 399.16(b)(1) is ambiguous in that it frequently uses the term "product" or "products" when it appears that the intent is to refer to eligible renewable energy resources, not the product of those resources. Duke Energy suggested that products in certain cases should be read as referring to the eligible renewable energy resources themselves, not the products of those resources. PG&E, in its opening comments, stated that generally "electricity products" should be defined as the output from an RPS-eligible generating facility.[1] PG&E further commented that compliance verification through WREGIS is done on the basis of products, i.e., RECs, rather than by transaction. Duke Energy also notes that a single transaction might potentially involve products that could qualify for different portfolio content categories, and SB 2 (1x) should not be read as requiring a single transaction to be placed in a single portfolio content category. Based upon its own earlier comments and PG&E's opening comments, Duke Energy suggests that the first sentence of Section 399.16(b)(1), which states "Eligible renewable energy resource electricity products that meet either of the following criteria:..." should be read as: "Products produced by eligible renewable energy facilities that meet either of the following criteria:..."

[1] *See* PG&E Comments, p. 6.

B. Response to Question 3

Numerous parties provided a comprehensive list of all "California balancing authorit[ies]" as defined by Section 399.12(d). A few parties went farther, however, and suggested some criteria that could be used to determine whether a new balancing authority was a "California balancing authority" within the meaning of Section 399.12(d). Duke Energy agrees with NextEra[2] and others[3] that stated that establishing such criteria would be premature. If and when a new balancing authority is created, the Commission can then consider whether it meets the definition of "California balancing authority" while considering the specific facts of that particular balancing authority, rather than trying to establish the criteria in a vacuum.

Duke Energy does note, however, that the borders of a California balancing authority such as the CAISO may change over time. For example, a recent market notice from the CAISO indicated that it had signed a memorandum of understanding with Valley Electric Association, a cooperative providing retail electric service to its members in Nevada and California, as a first step in Valley Electric becoming a member of the CAISO. Such expansions should not jeopardize a balancing authority's status as a California balancing authority. Furthermore, the expanded balancing authority area should be recognized when determinations are made concerning which portfolio content category should apply to a certain product. For example, if and when Valley Electric becomes a member of the CAISO, having a first point of

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[2] *See* NextEra Comments, p. 3.

[3] *See* San Diego Gas and Electric Co. ("SDG&E") Comments, p. 3; Iberdrola Comments, p. 3; IEP Comments p. 3.

interconnection with Valley Electric should qualify a resource as meeting the requirements of Section 299.16(b)(1)(A).

C. Response to Question 4

Several parties, including the Division of Ratepayer Advocates, proposed that energy "scheduled into a California balancing authority without substituting electricity from another source" for purposes of Section 399.16(b)(1)(A) must use firm transmission.[4] As PG&E[5] and others noted, however, nothing in SB 2 (1x) requires a particular quality or type of transmission. Duke Energy urges the Commission to decline to adopt additional requirements such as firm transmission where such requirements do not have a statutory basis. Non-firm transmission or conditional firm transmission could potentially be used by itself or in combination with firm transmission to meet the requirements of Section 399.16(b)(1)(A), and such transactions could be verified just as transactions using firm transmission would be verified. Limiting the options of facilities located outside of California by imposing unnecessary and expensive requirements such as firm transmission will only increase the overall cost to utilities and ratepayers to comply with SB 2 (1x). Furthermore, the use of non-firm transmission or conditional firm transmission could more efficiently utilize the transmission system.

D. Response to Question 7

For purposes of calculating the "fraction of the schedule actually generated by the eligible renewable energy resource", numerous parties noted that a comparison of the NERC E-tag with the metered output of the eligible renewable energy facility would provide the necessary

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[4] *See* Division of Ratepayer Advocates ("DRA") Comments, p. 3.

[5] *See* PG&E Comments, p. 11.

information. In its initial comments, Duke Energy suggested that such a comparison be done over a reasonable time period, over which the lesser of the metered output or the scheduled imports would count for California RPS compliance purposes. A few parties suggested, however, that the comparison be done on an hourly, or even a sub hourly basis (LSA[6], CUE[7]). Doing so, however, would be at a minimum difficult and costly, and is potentially impossible presently, as noted in SDG&E's[8] and PG&E's[9] comments.

Furthermore, hourly or sub-hourly comparisons are not required by SB 2 (1x). The relevant language reads as follows: "The use of another source to provide real-time ancillary services required to maintain an hourly or subhourly import schedule into a California balancing authority shall be permitted, but only the fraction of the schedule actually generated by the eligible renewable energy resource shall count toward this portfolio content category." "Hourly" or "sub hourly" refers only to the import schedule, not to how the fraction of the schedule actually generated by the eligible renewable energy resource should be calculated. That is left to the discretion of the Commission. Duke Energy suggests that the Commission follow the recommendations of Duke Energy,[10] PG&E,[11] NextEra,[12] SDG&E[13] and others and compare the

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[6] *See* Large Scale Solar Association ("LSA") Comments, p. 4.

[7] See Coalition of California Utility Employees ("CUE") Comments, p. 3.

[8] *See* SDG&E Comments, p. 4.

[9] *See* PG&E Comments, p. 11.

[10] *See* Duke Energy Comments, p. 8 (calendar year).

[11] *See* PG&E Comments, p. 11 (monthly).

[12] *See* NextEra Comments, p. 5 (monthly).

import schedule with the metered output of the eligible renewable energy resource on a monthly, quarterly or yearly net basis. Such an approach is reasonable, workable, and complies with the provisions of SB 2 (1x).

IEP also notes, as Duke Energy did in its opening comments, that if the generation providing ancillary services is itself an eligible renewable energy resource, then there should be no reduction of the eligible generation to account for the provision of ancillary services. [14] Similarly, if the ancillary services are provided by storage *charged* with energy from eligible renewable energy resources, there should be no reduction of the eligible generation to account for the provision of ancillary services.

E. Response to Question 10

Although Duke Energy did not respond to this question initially, many parties have noted that the purchase of RECs only from a facility directly interconnected to a California balancing authority area would qualify under Section 399.16(b)(1), not (b)(3). Duke Energy agrees. Section 399.16(b)(1) refers to any facility having a first point of interconnection with a California balancing authority, or with distribution facilities used to serve end users within a California balancing authority. The statute includes no requirement that a transaction qualifying under these provisions involve the transfer of energy as well as RECs. Duke Energy urges the Commission to implement SB 2 (1x) without imposing additional requirements for the portfolio content categories beyond those contemplated by the Legislature.

(. . . continued)

[13] *See* SDG&E Comments, p. 3 (monthly).

[14] *See* IEP Comments, p. 6.

F. Response to Question 12, 13, 14

Section 399.16(b)(2) defines the second portfolio content category as "firmed and shaped eligible renewable energy resource electricity products providing incremental electricity and scheduled into a California balancing authority." As Duke Energy explained in its initial comments, energy is "firmed and shaped" when an amount equal to energy generated by a eligible renewable energy facility is delivered into a California balancing authority as a firm and flat product. The firmed and shaped energy would typically be provided by another source. SB 2 (1x) requires that firmed and shaped products provide "incremental electricity" and be scheduled into a California balancing authority. No further requirements apply.

Yet despite this rather clear list of criteria for qualifying under Section 399.16(b)(2), a number of parties have suggested that additional requirements for firmed and shaped transactions, or inappropriately imbedded additional requirements within the definition of "incremental," including the following: (1) the firmed and shaped energy must come from the same WECC sub-region (or balancing authority area) as the renewable energy resource it is firming and shaping[15]; the product in this category must be purchased by means of an agreement or set of agreements between a renewable generator and a load serving entity for the combined purchase of RECs and electricity at the generator busbar[16]; the purchase agreement must have a term of not less than five years; [17] the purchase agreement must be for a fixed price for at least

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[15] *See* The Utility Reform Network ("TURN") Comments, p. 8.

[16] *Id.*

[17] *See* TURN Comments, p. 8; Sierra Club Comments, p. 5-6; Union of Concerned Scientists ("UCS") Comments, p. 7.

five years[18] or the life of the contract;[19] and firmed and shaped energy must be delivered to California within the same calendar year as the energy generated at the renewable facility that created the RECs.[20]

These newly proposed requirements appear nowhere in SB 2 (1x), and are unnecessary. For example, the requirement that the firming and shaping energy come from the same balancing authority area only limits the options that a eligible renewable energy resource has for finding a firming and shaping party, without providing any benefits to California or its ratepayers. Rather, limiting a facility's options in this manner may increase the costs of obtaining renewable energy by either driving up the cost of firming and shaping services or by preventing relatively inexpensive firmed and shaped resources from being delivered to California. Such costs which may in turn be passed on to California ratepayers.

As Duke Energy noted in its opening comments, firmed and shaped renewable energy provides numerous benefits, including reductions in greenhouse gas emissions by offsetting fossil-fuel fired generation, and allowing for a more efficient use of the existing transmission infrastructure, reducing the need to construct new transmission lines. Duke Energy urges the Commission to carefully consider the suggested additional requirements for firmed and shaped transactions, including evaluating whether those requirements provide any benefits to California or its ratepayers, and whether those requirements are supported in any way by the language of

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[18] *See* IEP Comments, p. 12.

[19] *See* TURN Comments, p. 8; Sierra Club Comments, p. 5-6; UCS Comments, p. 7.

[20] *See* TURN Comments, p. 8; IEP Comments, p. 12.

SB 2 (1x). To the extent these requirements provide no benefits, or are not supported by the language of SB 2 (1x), they should be rejected.

Duke Energy further notes that firming and shaping services may be provided by energy storage facilities that are *charged* with renewable energy, with the stored renewable energy then being used to firm and shape deliveries. The Commission's rules concerning firming and shaping should recognize that intermittent renewable energy firmed and shaped by stored renewable energy should be treated as being in the first portfolio content category. Duke Energy urges the Commission to use a similar approach when accounting for renewable energy, or stored renewable energy, that is used to balance schedules into California. These concepts will also be relevant to R.10-12-007, the Commission's AB 2514 proceeding.

G. Response to Question 21

As Duke Energy noted in its initial comments, historically it has been sufficient for the utility seeking approval of the power purchase agreement to provide a description or diagram of the transaction in order to establish that the delivery requirement has been met. This practice should be continued, with the burden placed on the utility to provide a sufficiently detailed explanation of the transaction to show how the transaction should be categorized. Several parties (IEP, Sempra Generation) have suggested that a utility might also be required to submit any relevant firming and shaping agreement.[21] Requiring additional documentation would be problematic, however, in that the utility may not have access to documents such as the firming and shaping agreement. Past practice has been to provide the utility with a copy of the firming and shaping agreement with the commercial terms redacted. However, there has historically

[21] *See* IEP Comments, p. 17; Sempra Generation Comments, p. 11.

been no requirement that the utility provide such documentation to the Commission, nor is it necessary now. Verification of post-contract deliveries, consistent with current practice, would provide sufficient insurance that power was actually being procured consistent with the claimed categorization.

III. CONCLUSION

Duke Energy thanks the Commission for the opportunity to provide opening and reply comments on the portfolio content categories, and looks forward to working with the Commission in the future as it moves forward with implementation of SB 2 (1x).

DATED: August 19, 2011

/s/ Seth D. Hilton
Seth D. Hilton
STOEL RIVES LLP
555 Montgomery Street, Suite 1288
San Francisco, CA 94111
Telephone: (415) 617-8913
Email: sdhilton@stoel.com

Attorneys for Duke Energy Corporation

VERIFICATION

I am the attorney for Duke Energy Corporation and am authorized to make this verification on Duke Energy's behalf. Duke Energy is unable to verify the foregoing document in person as Duke Energy is located outside of the County of San Francisco, where my office is located. I have read the foregoing **REPLY COMMENTS OF DUKE ENERGY CORPORATION ON IMPLEMENTATION OF NEW PORTFOLIO CONTENT CATEGORIES FOR THE RENEWABLE PORTFOLIO STANDARD PROGRAM** and am informed and believe, and on that ground allege, that the matters stated are true and correct to the best of my knowledge.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this 19th day of August, 2011, at San Francisco, California.

/s/ Seth D. Hilton
Seth D. Hilton
STOEL RIVES LLP
555 Montgomery Street, Suite 1288
San Francisco, CA 94111
Telephone: (415) 617-8913
Email: sdhilton@stoel.com

Attorneys for Duke Energy Corporation