Implementation of HB 4126 – Voluntary Renewable Energy Tariffs (VRETs)
OPUC Workshop 3 – August 12, 2014
AGENDA

PUBLIC WORKSHOP – UM 1690
HB 4126 – Voluntary Renewable Energy Tariffs
August 12, 2014; 1:00PM – 4:00PM

Oregon Public Utility Commission
3930 Fairview Industrial Drive SE, Salem, OR 97302

FOR AUDIO PARTICIPANTS PLEASE DIAL:
888-431-3632; Access Code: 9449714; followed by the # sign.

AGENDA

1:00-1:10	1. Welcome, Reminders, and Introductions
1:10-1:30	2. Pared Down VRET Table – Short Staff Presentation
1:30-2:30	3. Round Robin – feedback on pared down VRET Table
2:30-3:30	4. Revisions to Draft Issue List
3:30-4:00	5. Next Steps

From:	SADHIR Ruchi
To:	PF-PUCHearings
Subject:	FW: Draft materials for UM 1690 workshop on Tuesday 08/12 at 1pm
Date:	Monday, August 11, 2014 8:23:06 AM
Attachments:	Revised Draft Issues List - Workshop 3 - 20140812.docx Um 1690 Workshop 3 agenda .docx VRET%20Table%20-%20Pared%20Down%20version%2008-07-2014_3.xlsx

Good morning! Could you please post this email and the attachments to the UM 1690 eDocket? Thanks--Ruchi

From: SADHIR Ruchi
Sent: Thursday, August 07, 2014 7:36 PM
To: dockets@oregoncub.org; dockets@renewablenw.org; greg@richardsonadams.com; erik.andersson@pacificorp.com; michael.armstrong@portlandoregon.gov; caschenbrenner@idahopower.com; ken.baker@wal-mart.com; gbass@noblesolutions.com; jeff@oregoncub.org; annb@fb.com; BROCKMAN Kacia; dbrown@obsidianfinance.com; stephen.chriss@wal-mart.com; mjd@dvclaw.com; megan@renewablenw.org; devan@adobe.com; gdufau@solarcity.com; aduncan@b-e-f.org; alisa.dunlap@pacificorp.com; cmfink@blueplanetlaw.com; ann@annfisherlaw.com; sarah.garrison@hillsboro-oregon.gov; richard.george@pgn.com; wendy@nwenergy.org; electric@yamservices.com; ann@climatesolutions.org; khiggins@energystrat.com; andria.jacob@portlandoregon.gov; evyanjarvis@oxleyandassociatesinc.com; rkahn@nippc.org; suzanne.liou@atkinsglobal.com; kevin.lynch@iberdrolaren.com; mary.lynch@constellation.com; catriona@oregoncub.org; noel.mingo@pdx.edu; kourtney.nelson@iberdrolaren.com; nolandj@charter.net; sara.parsons@iberdrolaren.com; 'Elizabeth Paul'; PEACOCK Julie; dpenwell@aocweb.org; banjo@ibew659.org; christian.f.rees.mil@mail.mil; thad.roth@energytrust.org; mruckwardt@schn.com; SADHIR Ruchi; kenneth.safe.mil@mail.mil; dick.sheehy@ch2m.com; brian.skeahan@yahoo.com; jimstanway@fb.com; joelle.steward@pacificorp.com; ltawney@wri.org; itaylor@obsidianrenewables.com; david.tooze@portlandoregon.gov; ben.walters@portlandoregon.gov; jdw@dvclaw.com; WEIRICH Michael; pge.opuc.filings@pgn.com; kelseyw@gallatinpa.com; myoungblood@idahopower.com
Cc: ANDRUS Brittany; EISDORFER Jason
Subject: Draft materials for UM 1690 workshop on Tuesday 08/12 at 1pm

All: In advance of our UM 1690 Workshop on Tuesday August 12 at 1PM, please see attached for:

- **Workshop Agenda**
- **Revised Draft VRET Table** -
    - Staff spent a good deal of time internally thinking through how to move forward in this study phase. We have taken a first stab at paring down and simplifying the VRET table in accordance with comments.
    - After reviewing comments on the basic structure of a VRET, we used three main guidelines to par down and simplify the VRET Table. We endeavored to keep Models for further study that:
        1. are new / not currently available,
        2. not duplicative of another row, and
        3. likely to occur.
    - Note that Models that are not "kept" are still part of the study -- Staff will include discussion of those Models in the study. We are only trying to par down the number of Models that will be tested against the statutory considerations through a series of questions (see Revised Issues List below).

- **Revised Draft Issues List** -
    - The central aim of phase 1 is to determine the range of possible VRET models and test those models against five statutory considerations through our study.
    - Now that we have a sense of which VRET models to test, we are bringing this draft list of questions back for your review - we are not yet asking you to answer these questions.
    - Our goal is to ensure that this is the right set of questions before asking you all to spend time and effort in answering these questions through a comment and reply-comment period.
    - Your comments and reply-comments about this issues list will provide the bulk of information that informs Staff's study about VRETs.

We are looking forward to your feedback on our efforts during the workshop on Tuesday. Please let me know if you have questions. Thanks--Ruchi

Implementation of HB 4126 – Voluntary Renewable Energy Tariffs (VRETs)
OPUC Workshop – August 12, 2014
Revised Draft Issues for Discussion

QUESTIONS RELEVANT TO ALL VRET MODELS

I. How should a Voluntary Renewable Energy Tariff (VRET) be defined and designed?

- What are the essential features and design options of such a tariff? Would offering more than one type of tariff design help to satisfy diverse customer demands and program goals?
- How would a VRET product be distinguished from products that might already be available or able to be offered through affiliates or direct access?
- Should VRETs be considered for all non-residential customers or only a subset of non-residential customers?
- Should a product under a VRET be delivered through an open transmission service in the form of a firm point to point contract, path, or similar mechanism?
- Should there be a goal for new renewable energy capacity or customer load served with incremental new renewable resources under a VRET?
- Should a VRET product provider be entitled to aggregate multiple renewable resources as one VRET product?
- Should there be a cap on the amount of load that can be served under a VRET, and, if so, why? How should the cap be determined?

II. Whether Further Development of Significant Renewable Energy Resources is Promoted? *(HB 4126 Section 3(3)(a))*

- What constitutes "further development of significant renewable energy resources"?
- Should "further development of significant renewable energy resources" mean buying the direct output from a *new* renewable resource power plant? How do you define *new*? From an *existing* renewable resource power plant? From a *recently constructed* renewable resource power plant (e.g. constructed since the start of the decade)?
- Should "further development of significant renewable energy resources" include buying the direct output and/or bundled RECs from an existing renewable resource power plant? If so, should there be a limit on how old the plant is?
- Should there be geographic limits on the source of eligible renewable energy (e.g. Oregon or the Northwest) to be considered "further development of significant renewable energy resources"?
- How do interactions between the RPS and a VRET influence whether the VRET promotes "further development of significant renewable energy resources?"

III. What may be the Effect on Development of a Competitive Retail Market? *(HB 4126 Section 3(3)(b))*

- Is the competitive retail market harmed if a regulated utility, affiliate of a utility, or customer is able to offer a VRET product and terms of a VRET product to a non-residential customer that a third party competitive supplier cannot provide?

IV. What may be the Direct or Indirect Impacts on Non-Participating Customers *(HB 4126 Section 3(3)(c))*

- How should the Commission ensure that the prices paid for products under a VRET reflect the full cost of providing that service and any requisite back-up/supplementary service without any subsidization from non-participating customers or competitive suppliers?

- How should the fixed costs of the rate-based system be allocated if VRET participants are "leaving" the rate-based system? Does it matter if the load to be served by the VRET product is a new or expanded load, not previously served by the utility?
- How should the Commission ensure that non-participating utility customers are protected from cost shifts? Should products under a VRET include transition charges to mitigate potential impacts from cost shifting to non-participating customers? If so, should those transition charges be identical to the charges under the Direct Access programs?
- What VRET design criteria can help limit impacts to non-participating customers? Which designs best limit cost and risk shifting?

V. Whether VRETs should rely on a Competitive Procurement Process? *(HB 4126 Section 3(3)(d))*

- Should the Commission limit resource eligibility to renewable energy developed and supplied through a competitive procurement process? If yes, why? If no, how should the Commission evaluate renewable energy supplied through a competitive process?
- Should the PUC's existing processes for competitive bidding be adapted or used?
- How can a VRET program structure ensure that customers have access to the most competitively priced resources in the market and provide a level playing field for all market participants? What structure gives customers best access to the specific resources that they are interested in procuring?

VI. Other considerations *(HB 4126 Section 3(3)(e))*

- What would be the impact to RPS resource cost recovery and compliance requirements if a significant amount of VRET load leaves the rate-based system, which includes unrecovered investments in renewable and non-renewable resources? *(HB 4126 Section 3(6))*
- How will utilities and energy generator avoid over-generation issues if there are new renewable resources added to the system? How will those resources be integrated?
- What customer protections may be appropriate for a VRET program (e.g. Green-E certification? Commission or advisory group oversight?)? For which customer classes?
- How will resources developed for and whose environmental attributes are claimed by customers be represented in power mix disclosures to avoid double-claims?
- What other factors, if any, should the Commission consider in determining whether and how utilities should offer VRETs to non-residential customers? Are there other issues that may be pertinent to the study of VRETs in Oregon?

MODEL 1(B) – THIRD PARTY OWNED RENEWABLE RESOURCE. REGULATED UTILITY IS THE MIDDLEMAN BETWEEN A 3RD PARTY AND CUSTOMER(S) THAT ARE CONTRACTING FOR RENEWABLE ENERGY. REGULATED UTILITY TAKES OWNERSHIP OF POWER THROUGH ONE CONTRACT AND SELLS IT TO CUSTOMER(S). CUSTOMER AND 3RD PARTY NEGOTIATE FOR RENEWABLE ENERGY SERVICE. FIRST CONTRACT IS BETWEEN 3RD PARTY AND THE REGULATED UTILITY TO PURCHASE ELECTRICITY. TARIFF IS SET FOR SAME PRICE AND DURATION AS FIRST CONTRACT.

II. Whether Further Development of Significant Renewable Energy Resources is Promoted? *(HB 4126 Section 3(3)(a))*

- Will this model likely best promote "further development of significant renewable energy resources"?

III. What may be the Effect on Development of a Competitive Retail Market? *(HB 4126 Section 3(3)(b))*

- Should Electricity Service Suppliers (ESS) and Independent Power Producers (IPP) provide renewable energy through a utility as part of a VRET?
- How would the inclusion of ESSes and IPPs as suppliers of renewable energy through a utility under a VRET affect the competitive retail market?
- What should the role of the utility be in developing and offering a product or transacting between customers and an ESS or IPP under VRET?

VI. Other considerations *(HB 4126 Section 3(3)(e))*

- Are there other factors the Commission should consider that may be pertinent to this VRET model?

MODEL 1(C/D) – THIRD PARTY OWNED RENEWABLE RESOURCE. REGULATED UTILITY MATCHES AGGREGATE VRET LOAD WITH AGGREGATE VRET RE GENERATORS TO MITIGATE ISSUES OF TIMING AND RISK. REGULATED UTILITY COULD AGGREGATE CUSTOMERS INTO "VRET LOAD," PUT THAT AGGREGATED LOAD OUT FOR BID, AND CONTRACT WITH THIRD PARTIES TO SERVE THAT LOAD. AND/OR REGULATED UTILITY COULD AGGREGATE THIRD PARTY RE GENERATORS AND PURCHASE OUTPUT THROUGH FIXED PRICE, LONG TERM CONTRACTS; THE REGULATED UTILITY OFFERS THAT OUTPUT TO THE CUSTOMERS THROUGH A "SUBSCRIPTION" PROCESS.

II. Whether Further Development of Significant Renewable Energy Resources is Promoted? *(HB 4126 Section 3(3)(a))*

- Will this model likely best promote "further development of significant renewable energy resources"?

III. What may be the Effect on Development of a Competitive Retail Market? *(HB 4126 Section 3(3)(b))*

- Should Electricity Service Suppliers (ESS) and Independent Power Producers (IPP) provide renewable energy through a utility as part of a VRET?
- How would the inclusion of ESSes and IPPs as suppliers of renewable energy through a utility under a VRET affect the competitive retail market?
- What should the role of the utility be in developing and offering a product or transacting between customers and an ESS or IPP under VRET?

VI. Other considerations *(HB 4126 Section 3(3)(e))*

- Are there other factors the Commission should consider that may be pertinent to this VRET model?

MODEL 1(X) – THIRD PARTY OWNS RENEWABLE RESOURCE. REGULATED UTILITY TAKES DELIVERY OF ENERGY FROM RENEWABLE ENERGY PROJECT(S), CREDITS CUSTOMER BILL FOR PROJECT OUTPUT (AT CREDIT AMOUNT TBD), AND SERVES BALANCE OF CUSTOMER'S ENERGY/CAPACITY NEED (IF ANY) AT COST OF SERVICE RATES. UTILITY REMAINS PRIMARY POINT OF CONTACT FOR BILLING AND (BY CUSTOMER CHOICE) LOAD MANAGEMENT AND ANCILLARY SERVICES. CUSTOMER AND THIRD PARTY NEGOTIATE BILATERAL CONTRACT FOR ENERGY OUTPUT AND RECS FROM NEW RENEWABLE ENERGY PROJECT(S). CONTRACT TERMINATES IF CUSTOMER DEFAULTS.

II. Whether Further Development of Significant Renewable Energy Resources is Promoted? *(HB 4126 Section 3(3)(a))*

- Will this model likely best promote "further development of significant renewable energy resources"?

III. What may be the Effect on Development of a Competitive Retail Market? *(HB 4126 Section 3(3)(b))*

- Should Electricity Service Suppliers (ESS) and Independent Power Producers (IPP) provide renewable energy through a utility as part of a VRET?
- How would the inclusion of ESSes and IPPs as suppliers of renewable energy through a utility under a VRET affect the competitive retail market?
- What should the role of the utility be in developing and offering a product or transacting between customers and an ESS or IPP under VRET?

VI. Other considerations *(HB 4126 Section 3(3)(e))*

- Are there other factors the Commission should consider that may be pertinent to this VRET model?

MODEL 2 – REGULATED UTILITY OWNS AND OPERATES THE RENEWABLE RESOURCE(S) AND DELIVERS POWER TO CUSTOMER. REGULATED UTILITY AND CUSTOMER(S) NEGOTIATE LONG-TERM CONTRACT(S) FOR NON-SYSTEM RENEWABLE ENERGY.

II. Whether Further Development of Significant Renewable Energy Resources is Promoted? *(HB 4126 Section 3(3)(a))*

- Will this model likely best promote "further development of significant renewable energy resources"?

III. What may be the Effect on Development of a Competitive Retail Market? *(HB 4126 Section 3(3)(b))*

- If a competitive supplier is able to provide the same or similar product under a VRET, should a utility be able to provide such a product? If so, why and under what conditions should a utility be able to provide that product under a VRET?
- If there is a negative effect on the ability of competitive suppliers to operate in Oregon, should the ability to offer products under a VRET be limited to affiliates of Oregon utilities? If not, how should the Commission ensure that competitive suppliers are protected and continue to operate in Oregon?

IV. What may be the Direct or Indirect Impacts on Non-Participating Customers *(HB 4126 Section 3(3)(c))*

- How should the Commission ensure that the cost of providing VRET service and any requisite back-up/supplementary service is separate from the utility's rate-based system resources?

V. Whether VRETs should rely on a Competitive Procurement Process? *(HB 4126 Section 3(3)(d))*

- Is there any room for a competitive procurement process in this model? How should the Commission ensure that a utility-owned resource fairly competes in a competitive procurement process?

VI. Other considerations *(HB 4126 Section 3(3)(e))*

- Are there other factors the Commission should consider that may be pertinent to this VRET model?
- If a utility is only allowed to offer a VRET product through an affiliate, what rules should govern interaction/communication between the utility and the affiliate?

MODEL 2(C/D) – REGULATED UTILITY OWNS AND OPERATES THE RENEWABLE RESOURCE(S), WHICH COULD BE ELIGIBLE TO COMPLETE IN AN RFP FOR SUPPLYING AGGREGATED VRET LOAD (AS DESCRIBED IN MODEL 1(C/D).

II. Whether Further Development of Significant Renewable Energy Resources is Promoted? *(HB 4126 Section 3(3)(a))*

- Will this model likely best promote "further development of significant renewable energy resources"?

III. What may be the Effect on Development of a Competitive Retail Market? *(HB 4126 Section 3(3)(b))*

- If a competitive supplier is able to provide the same or similar product under a VRET, should a utility be able to provide such a product? If so, why and under what conditions should a utility be able to provide that product under a VRET?
- If there is a negative effect on the ability of competitive suppliers to operate in Oregon, should the ability to offer products under a VRET be limited to affiliates of Oregon utilities? If not, how should the Commission ensure that competitive suppliers are protected and continue to operate in Oregon?

V. Whether VRETs should rely on a Competitive Procurement Process? *(HB 4126 Section 3(3)(d))*

- How should the Commission ensure that a utility-owned resource fairly competes in a competitive procurement process?

VI. Other considerations *(HB 4126 Section 3(3)(e))*

- Are there other factors the Commission should consider that may be pertinent to this VRET model?

MODEL 4 – CUSTOMER OWNED RENEWABLE RESOURCE. REGULATED UTILITY ROLE DEPENDS ON THE CUSTOMER'S SPECIFIC LOAD AND RESOURCE. COULD INVOLVE DISTRIBUTION AND BACK/SUPPLEMENTAL SERVICES ("FIRMING/SHAPING"). IF CUSTOMER SELF-GENERATES RENEWABLE ENERGY ON SITE, THEN LIKELY REQUIRES OTHER REGULATED UTILITY SERVICES.

II. Whether Further Development of Significant Renewable Energy Resources is Promoted? *(HB 4126 Section 3(3)(a))*

- Will this model likely best promote "further development of significant renewable energy resources"?

III. What may be the Effect on Development of a Competitive Retail Market? *(HB 4126 Section 3(3)(b))*

- If a customer owned renewable resource is off-site, should it be treated as a third party where the Commission requires Electric Service Supplier certification?
- How would the inclusion of customer-owner off-site renewable resources supplied through a utility under a VRET affect the competitive retail market? What should the role of the utility be in developing and offering a product or transacting like this under a VRET?

V. Whether VRETs should rely on a Competitive Procurement Process? *(HB 4126 Section 3(3)(d))*

- Is there any room for a competitive procurement process in this model? How should the Commission ensure that a customer-owned resource fairly competes in a competitive procurement process?

VI. Other considerations *(HB 4126 Section 3(3)(e))*

- If a customer owned resource is on-site, should it be part of a VRET or continue to be part of the Net Metering program? Does its inclusion in the Net Metering program depend on if any excess energy generation is anticipated? If a customer owned resource is on-site, but operated and managed by the regulated utility, should it be distinguished from the Net Metering program?

- Are there other factors the Commission should consider that may be pertinent to this VRET model?

MODEL 4(X) – CUSTOMER OWNS RENEWABLE RESOURCE. REGULATED UTILITY TAKES DELIVERY OF ENERGY FROM RENEWABLE ENERGY PROJECT(S), CREDITS CUSTOMER BILL FOR PROJECT OUTPUT (AT CREDIT AMOUNT TBD), AND SERVES BALANCE OF CUSTOMER'S ENERGY/CAPACITY NEED (IF ANY) AT COST OF SERVICE RATES. UTILITY REMAINS PRIMARY POINT OF CONTACT FOR BILLING AND (BY CUSTOMER CHOICE) LOAD MANAGEMENT AND ANCILLARY SERVICES. CUSTOMER NEGOTIATES FOR ENERGY OUTPUT AND RECS FROM NEW RENEWABLE ENERGY PROJECT(S). CONTRACT TERMINATES IF CUSTOMER DEFAULTS.

II. Whether Further Development of Significant Renewable Energy Resources is Promoted? *(HB 4126 Section 3(3)(a))*

- Will this model likely best promote "further development of significant renewable energy resources"?

III. What may be the Effect on Development of a Competitive Retail Market? *(HB 4126 Section 3(3)(b))*

- If a customer owned renewable resource is off-site, should it be treated as a third party where the Commission requires Electric Service Supplier certification?
- How would the inclusion of customer-owner off-site renewable resources supplied through a utility under a VRET affect the competitive retail market? What should the role of the utility be in developing and offering a product or transacting like this under a VRET?

V. Whether VRETs should rely on a Competitive Procurement Process? *(HB 4126 Section 3(3)(d))*

- Is there any room for a competitive procurement process in this model? How should the Commission ensure that a customer-owned resource fairly competes in a competitive procurement process?

VI. Other considerations *(HB 4126 Section 3(3)(e))*

- Are there other factors the Commission should consider that may be pertinent to this VRET model?

MODEL 7 "HYBRID" – Customer or utility owns renewable resource, meeting majority of customer's demand. Utility offers RECs or another renewable resource product to get customer to desired 100% renewable energy. Regulated utility could be owner and is likely operator of renewable resource, and also provides customer services and offers other products to meet customer's renewable energy goals (which may mitigates risk to customer). Or customer is owner of renewable resource, but purchases from customer services and other products from the regulated utility that meet the customer's renewable energy goals. Or third party is the developer or seller of renewable resource output, and could be the potential seller of RECs or other renewable product to meet customer's renewable energy goals.

II. Whether Further Development of Significant Renewable Energy Resources is Promoted? *(HB 4126 Section 3(3)(a))*

- Will this model likely best promote "further development of significant renewable energy resources"?

III. What may be the Effect on Development of a Competitive Retail Market? *(HB 4126 Section 3(3)(b))*

- If a competitive supplier is able to provide the same or similar product under a VRET, should a utility be able to provide such a product? If so, why and under what conditions should a utility be able to provide that product under a VRET?
- If there is a negative effect on the ability of competitive suppliers to operate in Oregon, should the ability to offer products under a VRET be limited to affiliates of Oregon utilities? If not, how should the Commission ensure that competitive suppliers are protected and continue to operate in Oregon?
- If a customer owned renewable resource is off-site, should it be treated as a third party where the Commission requires Electric Service Supplier certification?
- How would the inclusion of customer-owner off-site renewable resources supplied through a utility under a VRET affect the competitive retail market? What should the role of the utility be in developing and offering a product or transacting like this under a VRET?

V. Whether VRETs should rely on a Competitive Procurement Process? *(HB 4126 Section 3(3)(d))*

- Is there any room for a competitive procurement process in this model? How should the Commission ensure that a customer-owned or utility-owned resource fairly competes in a competitive procurement process?

VI. Other considerations *(HB 4126 Section 3(3)(e))*

- Are there other factors the Commission should consider that may be pertinent to this VRET model?

Study of Potential Model VRETs

8/7/2014

Basic Structure				Statutory Considerations					Potential Conditions
Resource Owner	**Utility Role**	**Relationships**	**Notes/Comments**	**Further Dev of Significant RE**	**Effect on Dev of Competitive Retail Markets**	**Impacts on Non-Participating Customers**	**Competitive Procurement Process**	**Other Considerations**	**to mitigate issues or cons in the statutory considerations (e.g. VRET cap, transition adjustment charges)**
(1.) Third Party (IPP, ESS)	(1.a.) Regulated utility "passes-through" the renewable energy without taking ownership.	3rd party and customer negotiate contract for renewable energy service. Regulated utility and customer have relationship that may be similar to direct access structure.	Basic structure already available under existing laws and regulations.	*Already available under existing laws and regulation.*					
	(1.b.) Third party owned renewable resource. Regulated Utility is the middleman between a 3rd party and customer(s) that are contracting for renewable energy.	Regulated utility takes ownership of power through one contract and sells it to customer(s). Customer and 3rd party negotiate for renewable energy service. First contract is between 3rd party and the regulated utility to purchase electricity. Tariff is set for same price and duration as first contract.	This is the model generally described in the Rocky Mountain Power filing in Utah (Docket 14-035-T02), but staff removed the "second contract" language because it may not be legal in Oregon. Instead, staff replaced "second contract" with tariff.						
	(1.c/d) Third party owned renewable resource. Regulated utility matches aggregate VRET load with aggregate VRET RE generators to mitigate issues of timing and risk.	Regulated utility could aggregate customers into "VRET load," put that aggregated load out for bid, and contract with third parties to serve that load. And/or regulated utility could aggregate third party RE generators and purchase output through fixed price, long term contracts; the regulated utility offers that output to the customers through a "subscription" process.	Combined 1(c) and 1(d) to create this row 1(c/d). Issues of timing and risk depending on when and how aggregation occurs.						
	(1.x.) Third party owns renewable resource. Regulated Utility takes delivery of energy from renewable energy project(s), credits customer bill for project output (at credit amount TBD - the utility's wholesale avoided cost rather than retail rates), and serves balance of customer's energy/capacity need (if any) at cost of service rates. Utility remains primary point of contact for billing and (by customer choice) load management and ancillary services.	Customer and third party negotiate bilateral contract for energy output and RECs from new renewable energy project(s). Contract terminates if customer defaults.	Staff included this Model at RNW's suggestion. ~Row 1.x is different from 1.a/Direct Access in the following ways: renewable energy only, allows partial load, customer may simplify aggregation for large customers with multiple meters by having utility as single point if contact. ~This is similar to 1.b. but avoids contract price and terms being visible to regulated utility which may also be seeking to serve VRET market. ~The rate credit methodology needs further development; looking to other states would be beneficial. ~Risks are lower because customer, not utility, enters long-term contract.						
	Regulated utility owns and operates the renewable resource(s) and delivers power to customer.	Regulated utility and customer(s) negotiate long-term contract(s) for non-system renewable energy.	General concerns in comments about ability of regulated utility to prevent cost-shifting and effects on competitive market - which will be explored through consideration of the statutory factors.						

Study of Potential Model VRETs

8/7/2014

Basic Structure				Statutory Considerations					Potential Conditions
Resource Owner	**Utility Role**	**Relationships**	**Notes/Comments**	**Further Dev of Significant RE**	**Effect on Dev of Competitive Retail Markets**	**Impacts on Non-Participating Customers**	**Competitive Procurement Process**	**Other Considerations**	**to mitigate issues or cons in the statutory considerations (e.g. VRET cap, transition adjustment charges)**
(2.) Regulated Utility	(2.c/d) Regulated utility owns and operates the renewable resource(s), which could be eligible to complete in an RFP for supplying aggregated VRET load (as described in Model 1(c/d).	Same as relationships in the aggregation-related models in 1.c. or 1.d. Regulated utility could aggregate customers into "VRET load," put that aggregated load out for bid, and contract to serve that load. And/or regulated utility could aggregate third party RE generators and purchase output through fixed price, long term contracts; the regulated utility offers that output to the customers through a "subscription" process.	General concerns in comments about ability of regulated utility to prevent cost-shifting and effects on competitive market - which will be explored through consideration of the statutory factors.						
(3.) Utility Affiliate	(3.a.) Regulated utility "passes-through" the renewable energy without taking ownership.	Utility affiliate and customer negotiate contract for renewable energy service. Regulated utility and customer have relationship that may be similar to direct access structure.	Basic structure already available under existing laws and regulations. Utilities generally commented that they are unlikely to offer a product as an affiliate.	*Already available under existing laws and regulation. Unlikely to occur.*					
	(3.b.) Regulated utility is the middleman between a utility affiliate and customer(s) that are contracting for renewable energy. Regulated utility takes ownership of power through one contract and sells it to the customer(s) through a second contract(s).	Customer and utility affiliate negotiate for renewable energy service. First contract between utility affiliate and the regulated utility to purchases electricity for resale. Second contract(s) between customer(s) and regulated utility for the same price and duration as first contract. The first contract terminates if customer(s) defaults on second contract(s).	Basic structure already available under existing laws and regulations. Utilities generally commented that they are unlikely to offer a product as an affiliate.	*Already available under existing laws and regulation. Unlikely to occur.*					
(4.) Customer Owned	Customer owned renewable resource. Regulated Utility role depends on the customer's specific load and resource. Could involve distribution and back/supplemental services ("firming/shaping"). If customer self-generates renewable energy on site, but likely requires other regulated utility services.	If customer self-generates renewable energy on site, then likely requires other regulated utility services.	General concerns in comments about interaction with net metering and whether customer-owned resources should be treated like third-party ESSes.						
	(4.x) Customer owns renewable resource. Regulated Utility takes delivery of energy from renewable energy project(s), credits customer bill for project output (at credit amount TBD), and serves balance of customer's energy/capacity need (if any) at cost of service rates.	Utility remains primary point of contact for billing and (by customer choice) load management and ancillary services. Customer negotiates for energy output and RECs from new renewable energy project(s). Contract terminates if customer defaults.	General concerns in comments about interaction with net metering and whether customer-owned resources should be treated like third-party ESSes.						

Study of Potential Model VRETs

8/7/2014

Basic Structure				Statutory Considerations					Potential Conditions
Resource Owner	**Utility Role**	**Relationships**	**Notes/Comments**	**Further Dev of Significant RE**	**Effect on Dev of Competitive Retail Markets**	**Impacts on Non-Participating Customers**	**Competitive Procurement Process**	**Other Considerations**	**to mitigate issues or cons in the statutory considerations (e.g. VRET cap, transition adjustment charges)**
(5.) Market-Based (REC Product)	(5.a.) Regulated utility continues to provide energy and services as it does with a cost-of-service customer today.	Customer buys renewable attributes only (unbundled RECs) from the market (marketer website, regulated utility program, etc.). The entity from which the customer buys unbundled RECs retires them on behalf of the customer.	Basic structure already available under existing laws and regulations.	*Already available under existing laws and regulation.*					
	(5.b.) Regulated utility buys bundled RECs from the market and re-sells them to the customer(s).	Customer buys energy together with renewable attributes (bundled RECs) from regulated utility Regulated utility retires bundled RECs on behalf of the customer.	Bundled RECs are Power + Renewable Energy Attributes, which may be used as part of other models that offer power and renewable energy attributes as a product.	*Power + Renewable Energy Attributes as a Bundled REC may be used as part of other models.*					
(6.) 3rd Party (transmission VRET)	Open access, transmission only service by regulated utility	3rd Party and customer contract for energy with a specific threshold of renewable content.	Very similar to Row 1(a), so collaped with Row 1(a). But Also basic structure is already available under existing laws and regulations.	*Very similar to Row 1(a). Collapsed with Row 1(a) Also already available under existing laws and regulation.*					
(7.) Hybrid	Customer or utility owns renewable resource, meeting majority of customer's demand. Utility offers RECs or another renewable resource product to get customer to desired 100% renewable energy.	Regulated utility could be owner and is likely operator of renewable resource, and also provides customer services and offers other products to meet customer's renewable energy goals (which may mitigates risk to customer). Or customer is owner of renewable resource, but purchases from customer services and other products from the regulated utility that meet the customer's renewable energy goals. Or third party is the developer or seller of renewable resource output, and could be the potential seller of RECs or other renewable product to meet customer's renewable energy goals.	Staff included this Model at PGE's suggestion. This model allows for the utility flexibility in adhering to HB 4126's goals, while meeting each customer's particular needs.						