



Zephyr Power Transmission Project

WIA Presentation

John Dunn, Project Director

April 27th, 2010



Zephyr: Agenda



1. Project description & routing
2. Wyoming economic benefits
3. Open Season update
4. California market discussion

Zephyr: Project description & routing



Connecting Wyoming wind resources to California and the desert SW



- 3,000 MW 500 kV DC interstate merchant transmission project (~900 miles)
- Receipt converter station near Rock Springs WY with AC (~150 miles) to Medicine Bow WY
- “Bullet” line that allows customers to avoid paying pancaked utility rates and minimizes transmission losses
- Intermediary converter station (750 MW) at Borah, Idaho to connect to Pac NW and Idaho
- One 3,000 MW converter station south of Las Vegas, Nevada
- Estimated capital cost \$3B
- Commercial operation in 2015

Zephyr: Benefits to Wyoming for the first 20 years



- Wyoming increasingly a green energy provider
- Substantial employment opportunities in developing technologies
- Multiplier effects from this employment
- A growing revenue base from property tax, sales tax and wind tax

In millions of dollars

	One Time Benefits from Capital Investment	Annual Operating Benefits (after year 3)	Total After 20 Operating years
3,000 MW Transmission	\$340	\$40	\$1,140
3,000 MW Wind Generation	\$1,440	\$265	\$6,700
Collector System	\$300	\$20	\$700
Total System	\$2,080	\$325	\$8,540

Zephyr: Open Season Update



- **Feb. 19, 2009 FERC ruling authorizing negotiated rate authority**
 - **Zephyr conducted a non-discriminatory, transparent open season**
 - **Commenced Oct. 13, 2009**
 - **Bids due Dec. 16, 2009**
 - **Closed March 10, 2010**
 - **Parties submitted executed precedent agreements in response to open season**
-
- **Received bids in excess of 3,000 MW capacity**
 - **Initial allocation of 3,000 MW to credit-worthy wind developers**
 - **Decision to proceed to the regulatory phase is subject to due diligence**

Zephyr: Impact of CPUC TREC Ruling



- The CPUC March 10th, 2010 issued a ruling regarding RPS compliance for California utilities which has very significant implications for out-of-state renewable generation
 - The CPUC wants to ensure that “renewable energy reaches California and provides meaningful benefits to residents”. The ruling was intended to better ensure that objective.
- The order’s primary thrust was to limit the use of REC (Renewable Energy Credit) only transactions (or “TRECs”) for California IOUs compliance in meeting RPS.
- The order limits TRECs to meeting 25% of the 33% RPS goal, with the balance needing to be met through “bundled” (energy plus REC) transactions
- The order’s focus is short-term (expires at the end of 2011) but its implications are (perhaps unintentionally) long-term

Zephyr: Impact of CPUC TREC Ruling



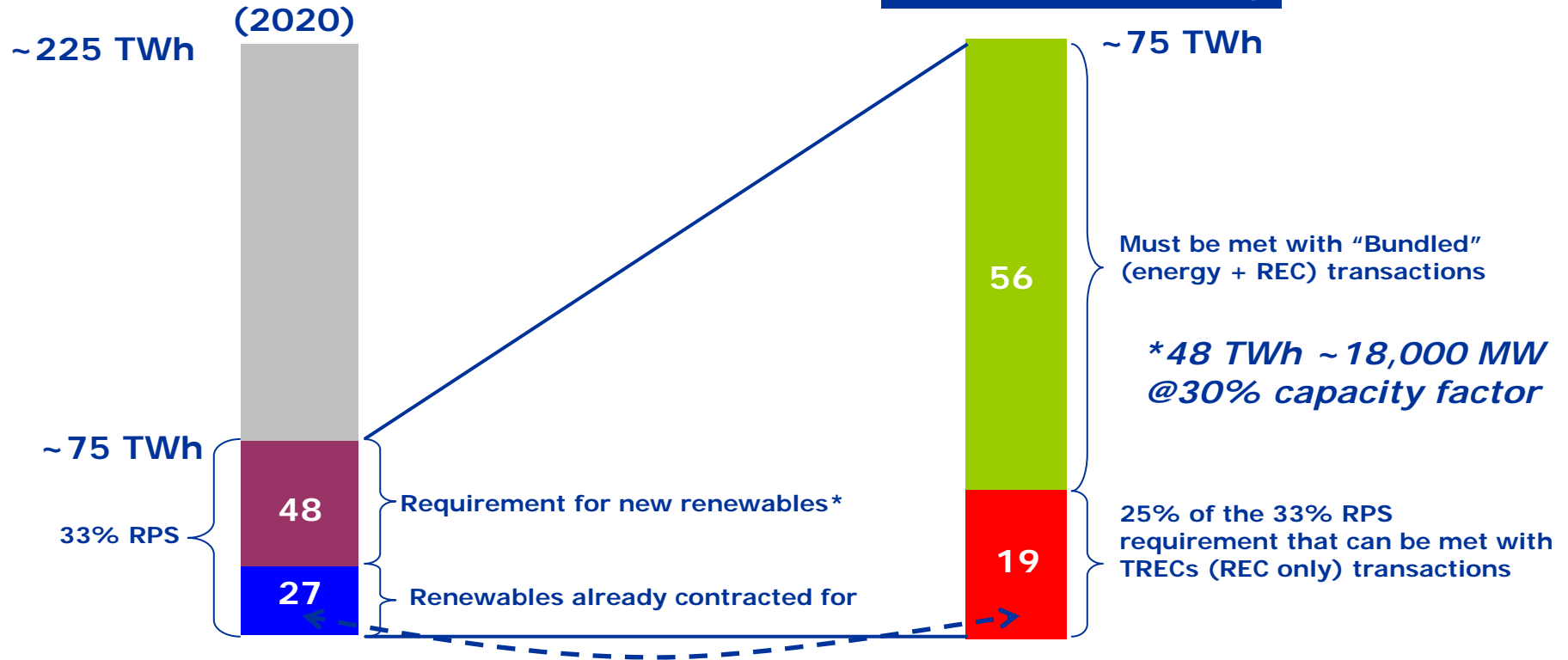
- Firm transmission rights into California is not sufficient to deem out-of-state renewables “bundled” as it (apparently) does not meet the CPUC’s criteria:
 - the RPS-eligible generator’s first point of interconnection with the Western Electricity Coordinating Council (WECC) interconnected transmission system is with a California balancing authority (CBAA)
 - OR
 - the RPS-eligible energy from the transaction is dynamically transferred to a California balancing authority.
- While a requirement for physical delivery of renewable energy would appear to be a good thing for out-of state renewables (and in particular for high quality Wyoming wind) the order effectively treats out-of-state renewables as TRECs ... that are therefore subject to the cap.
- The CPUC ruling may also raise Commerce Clause issues

Zephyr: Illustration of impact of CPUC ruling



California IOU Retail Market

(Note: does not include Muni's)



California Investor Owned Utilities see little head-room to contract for new out-of-state renewables under CPUC Decision 10-03-021. However, there is a view that many of the PPAs awarded to in-state generators will not materialize, and that there is little opportunity for new large scale wind generation in California

Zephyr: Impact of CPUC TREC Ruling



- Evolution Markets (the leading OTC broker of RECs) recently analyzed¹ the CPUC's list of RPS projects under PPAs (Power Purchase Agreements) with California IOUs:
 - *Over 40% of all approved deals contributing to RPS goals are with out-of-state generators (5,200 GWh)*
 - *Only 10% of all delayed deals are with out-of-state facilities. Nearly 90% of all delayed projects are in-state (2,100 GWh)*
 - *75% of the deals currently pending CPUC approval are with California generators (13,900 GWh)*
 - *Of the contracts withdrawn or rejected by the CPUC, nearly 90% were with in-state facilities (2,000 GWh)*

¹ Pre-Workshop Comments of Evolution Markets with Regard to *Implementing Renewable Energy Credit Trading for 20% RPS Compliance Workshop*

Zephyr: Impact of CPUC TREC Ruling



- According the California IOUs²:
 - *In light of the State's ambitious goal to reach 20% renewables, and the immense challenges to meeting the State's 33% renewable energy goal, LSEs need more flexibility and renewable options, not additional restrictions.*
 - *Access to out-of-state renewable resources increases the supply of eligible renewable resources for California's electricity customers, helping to encourage the development of the most cost-effective renewable resources throughout the WECC*
 - *Out-of state resources also provide substantial benefits to California customers in terms of shorter development times, reductions in GHG emissions, and in many cases, lower prices than in-state resources*
 - *Expanding the market for eligible renewable resources allows renewable generation to be built in the best locations for the renewable resources and access to transmission*

² Joint Petition of SCE, PG&E, SDG&E to the CPUC for modification of Decision 10-03-021

Zephyr: CPUC REC Ruling



- **CPUC Decision 06-02-012 is a confusing order that has had an immediate chilling effect on the perceived market for out-of-state renewables**
- **The Governor supports out-of-state renewables being eligible for RPS compliance and has used his executive veto to blunt labor efforts to restrict out-of-state renewables**
- **SCE, SDG&E and PG&E have filed a joint petition to the CPUC seeking to modify or stay the order:**
 - **Modify the definition of TREC and bundled REC**
 - **Eliminate the TREC usage limit**
 - **If limit is not removed, the cap should apply to all California LSEs**
 - **Remove the sunset clause (end of 2011)**
 - **Clarify grandfathering of existing contracts**
 - **Clarification on what generation qualifies (e.g. out-of-state)**
- **CPUC to consider either modifying or staying the order with a decision expected by May 20, 2010**

Zephyr: What this means for Zephyr?



- California represents the biggest single market for Wyoming wind and Zephyr's renewable generation customers
- Zephyr's HVDC configuration provides a long-term firm, verifiable point-to-point transmission path for 3,000 MW of wind generation in Wyoming to a California Balancing Area Authority in the Eldorado Valley
- Zephyr provides a clear line of sight for California consumers to the best wind resources in the west and to the significant contribution they can provide in cost-effectively achieving California's renewable goals
- Zephyr has received executed Precedent Agreements from credit-worthy wind developers for full subscription of the Zephyr project
- We need regulatory certainty and stability such that California utilities can consider long-term Power Purchase Agreements for out-of-state renewables
- We encourage the Commission to promptly clarify Decision 10-03-21 such that the development of out-of-state renewables with firm and verifiable transmission into California are clearly RPS compliant and not subject to any percentage limitation in a California utility's RPS portfolio