

Commissioner Simon's Keynote Speech

Our Clean Tech, Economic, and Human Imperatives
Western Power Trading Forum • Yountville • June 18, 2009

Introduction

- Good evening. It is an honor and a pleasure to be here. I want to thank Gary Ackerman for the invitation to speak to you all. I'd also like to recognize Senator Rod Wright, who is among the many energy industry experts in attendance this evening. I'd like to express my support for Senator Wright's SB 696, which would restore the South Coast Air Quality Management District's (SCAQMD) ability to issue permits for construction of essential public service facilities and projects, including generation plant. We cannot afford to delay projects that can attract ARRA stimulus funding, help us to reduce greenhouse gas (GHG) emissions, and provide jobs in a down economy.
- In a sense, Senator Wright's bill is a microcosm of some of the more interesting and imperative policy issues currently facing the State, including those which are most prone to give regulators heartburn. These are the issues I want to discuss with you tonight. Implementing complex programs that aim to increase resource diversity and decrease our greenhouse gas emissions will be a delicate balancing act and a formidable challenge.
- As the "Nation-State", California leads by example by promoting investment in innovative clean energy programs that stimulate green jobs growth. Governor Schwarzenegger has significantly advanced our energy policy efforts by taking an environmental movement that has traditionally catered to a fringe demographic of "treehuggers" and transforming it into an all-inclusive clean tech economic boom. California has once again reinvented itself as a visionary and technological leader by promoting creative solutions in energy and environmental stewardship.
- This week, the White House released a report entitled "Global Climate Change in the United States." Consistent with prior studies furnished by the National Oceanic and Atmospheric Administration and the Intergovernmental Panel on Climate Change, the findings of this report give us an even greater sense of urgency. Our mitigation actions will need to be swift and effective. Thus, if it wasn't clear before, the effects of global warming from criteria pollutants is no

longer up for debate. The sea levels are rising, drought conditions will worsen, and it will take our best efforts to reverse this trend.

- As policy-makers we grapple not only with the economics of the clean tech energy transformation, but the critical environmental and human life imperatives that drive this movement. Whether you subscribe to cap-and-trade or carbon taxes as a method of reducing greenhouse gas emissions, a full menu of renewables within our long term procurement strategies is a principal part of our arsenal in combating Climate Change.
- What began as a mere commitment in Kyoto over a decade ago at the outset of this battle is now a solemn and binding global treaty of industrialized nations to find a harmonious solution. And so we look to renewable energy as one of the essential options before us to create fundamental and sustainable change in the way we operate our economies.

The CPUC 33% RPS Implementation Analysis Report

- As I'm sure you're all aware, last week the Commission's Energy Division issued a report with the preliminary results of analysis of the costs and timelines of alternative resource cases for achieving a 33% Renewable Portfolio Standard. This was quite an undertaking, and represents an admirable step forward in assessing the infrastructure investment requirements associated with this ambitious RPS mandate.
- The CPUC's Energy Division has worked with the "E3 Consulting Group"¹ to draw from new and existing data sources to give us a snapshot of the expected costs, risks, and implementation timelines under alternative renewable resource cases. This was a challenging study that attempts to corral many moving parts and assumptions, not to mention cost data that is continuously evolving.
- As expected, the results of this 33% RPS Study illustrate quite vividly that the job ahead of us is not for the faint of heart. We have a lot of work to do to get this right, and we cannot afford to promote certain policy objectives at the expense of others in the process of cleaning up our energy supply. There are numerous risks that could derail our progress, not the least of which is the magnitude of the total infrastructure investment required, which this Study's "33% RPS Reference Case" estimates at approximately \$115 billion between now and 2020. Moreover, this report forecasts that approximately 75 Terawatt hours (TWh) of renewable electricity and 7

¹ E3: Energy and Environmental Economics Consulting Group

additional major transmission lines with a projected price tag of \$12 billion will be needed to accommodate this lofty goal.

- These are staggering numbers in any context, but they are particularly weighty when one considers the financial commitment we are asking of our State's ratepayers, who will underwrite this policy in a time of acute fiscal upheaval. Thus, we must ramp up our discipline as policymakers by continuing to facilitate competitive solicitations for contracts with independent power producers.

33% RPS Modeling Scenarios Evaluated

- The sensitivity analyses in the report test various policy assumptions, which marks the beginning of a robust comparison of the difficult tradeoffs we will face as policy-makers. Energy Division and E3 Consulting developed a sophisticated comparative analysis to examine four major hypothetical resource scenarios, which include:
 - A 33% RPS Reference Case
 - A High Wind Case
 - A High Out-of-State Delivered Case – for new long-line transmission, and
 - A High Distributed Generation Case.
- We know the basic tradeoffs here in each hypothetical buildout. There is clearly a wide spectrum of renewable resource costs and requisite transmission needs that depend on renewable resource zone characteristics. However, this is not a complete picture of the costs to market participants and ratepayers, as we await more granular detail from the CAISO on transmission needs under a 33% RPS scenario.

My Perspective on Key Report Findings

- The magnitude of a 33% RPS is unprecedented, and we really need to take a step back and appreciate the complexity and costliness of this massive coordination effort. We've learned that electricity costs will increase significantly by 2020 over current costs regardless of whether California mandates a 33% RPS or not. However, there are many variables to consider here. The resources we choose to deploy, the extent to which market transformation and scale economies are realized, and the transmission buildout required are among the critical factors that make it difficult to pinpoint costs with precision.

- We are also awaiting implementation of major administrative process reforms, which are underway at the CAISO and the CPUC. These include improvements to CAISO procedures for interconnecting generation facilities, streamlining transmission and generation permitting, completion of our Renewable Energy Transmission Initiative (RETI), and the CAISO transmission planning process for renewable resources. [The first of three phases for RETI was completed in December 2008, and involved identifying Competitive Renewable Energy Zones (CREZs) in California.]

On Solar PV

- Today we voted out Commissioner Bohn's Alternate Proposed Decision on the Edison Solar Photovoltaic Program (SPVP). After listening to Oral Arguments on this program and evaluating the need for increased independent generation through competitive solicitations, I recommended that we increase the size of the program to 500 MW. I felt this was a fair balance that would satisfy independent solar PV producers as well as Edison's appetite for Utility Owned Generation (UOG), while promoting competitive procurement. If there is ever to be a more competition and market transformation in the Distributed Generation space, the implementation of today's decision should ultimately help to provide us with an answer.
- We know that large cost reductions in solar PV could make it cost-competitive with central station renewable generation while also potentially reducing transmission needs in some areas. Although I am supportive of Distributed Solar PV, we should take a wait and see approach with other forms of Distributed Generation and better evaluate cost competitiveness going forward.

Renewable Energy Credits and A Regional Approach

- California is still in the process of evaluating Renewable Energy Credits, and the 33% Study therefore does not factor any prospective RECs market into its analysis. However, I have often said publicly that I am a proponent of both the WECC and the RECs – meaning that I support a regional approach to policymaking that steers clear of undue protectionism. The high priority policy concerns we seek to remedy – climate change, energy security, reliability, and smartgrid development – require us to go beyond our individual jurisdictions and adopt a unified vision. Thus, as we upgrade our energy assets and build out the Western grid, we must continue to embrace collaboration and planning to reach our objectives. And so we await further direction from REC market legislation.

Interactions between RPS, EE, and Other Programs

- We need to ensure that if and when a 33% RPS mandate is implemented, we do not haphazardly integrate this goal with our other essential policies. Without attention to the interactions between Energy Efficiency and renewable procurement, a 33% RPS could result in a surplus or energy or capacity and excess consumer costs. We look to our Resource Adequacy and RPS programs to ensure cost-effectiveness, but we're embarking on a major energy infrastructure transformation with a multiplicity of procurement planning assumptions, models, and data sets in motion. More careful attention to integrated resource planning at the CPUC and the CEC will be critical to our success on this front.

Climate Change, RPS, and Workforce Investment

- We have a unique opportunity to simultaneously address the imminent global threat of climate change and to put people back to work in green jobs while doing so. I have been a vocal advocate of the green collar economy and cultivating jobs for the communities that need them the most. I sit on the California Green Collar Jobs Council, which is an inter-agency effort to leverage ARRA stimulus funds for critical infrastructure projects and programs as a means of maximizing green collar jobs.
- Our RPS and Energy Efficiency programs are projected to be major green collar job drivers, according to several studies. Reaching a 33% RPS target is estimated to bring \$60 billion to the California economy and approximately 400,000 new green jobs in California, according to a report by the Center for Energy Efficiency and Renewable Technology (as reported in the California Energy Markets, August 22, 2008).
- The accuracy of economic stimulus projections is a work in progress, but the point here is very clear: the proliferation of renewables in California will necessitate an expanding crop of manufacturing, operations, and maintenance jobs. Projects like the Sunrise Powerlink, Tehachapi Renewable Transmission line, and their associated renewable generation projects can be major job drivers in particularly depressed regions of the state.
- I have also supported the efforts to create sustainable green campuses and educational curricula at California's Community Colleges, Trade Tech Schools, the California State University and University of California systems. These programs have great potential to cultivate fully functional clean tech communities while training a future workforce for green jobs and careers. The last tech boom in California provided incredible opportunities for the middle-

to upper- income strata, yet in its wake left a “digital divide” that persists today. We must not fail to take advantage of new opportunities to move forward and build a stronger and more inclusive workforce.

Natural Gas As A Bridge Fuel to the New Green Economy

- As you know, one of my key areas of focus at the CPUC is natural gas. Natural Gas falls squarely within the CA Senate Bill 1368 Emissions Performance Standard (EPS), producing under the benchmark of 1100 pounds of CO2 per MWh. As we look to replace aging and inefficient fossil-fired generation plant with more efficient and less carbon-intense Integrated Gasification Combined Cycle (IGCC) and Combined Heat and Power facilities, one thing is clear: Natural Gas is not only a bridge fuel to the new green economy for many western states, and it will remain an essential part of the climate change solution.
- One of my office's accomplishments is the approval of PG&E natural gas transportation arrangements which would allow the Ruby Pipeline to go forward with PG&E as an anchor shipper. This \$3.5 billion pipeline project will bring new Rocky mountain supplies to Malin, Oregon and serve CA and the Pacific Northwest. In addition, the Ruby Pipeline project was an excellent deal for ratepayers at \$0.68 per dekatherm, and diversifies us away from declining Canadian natural gas supplies. I should also note that this pipeline will be carbon neutral. (PG&E required the pipeline to be Carbon Neutral -- El Paso is planting trees as an offset project. The Governor attended a tree planting event for this project recently.)
- Also there are two natural gas storage applications pending at the CPUC requesting new natural gas storage infrastructure in California. Expanding storage infrastructure to the extent feasible will continue to allow us to hedge against price spikes. Going forward, we will be looking to better understand the role of natural gas as a diverse resource in the green economy and in meeting the demands of fast-moving, more efficient power plants that support our renewables and grid reliability.

Concluding Remarks

In closing, we have significant long term procurement planning coordination efforts before us, and I support competitive outcomes as a way to inject cost-effectiveness and discipline into our policy-making process. I look forward to working with all of you to make these difficult objectives a reality.