

Ferguson: Energy Matters

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Coming Soon: Energy Action Plan Decisions

California has adopted far-reaching policies to decrease reliance on fossil fuels and increase the use of renewable energy resources. But big questions remain.

Which of the state's green energy resources should be developed? Solar power in our deserts? Geothermal power in Imperial Valley? Wind power? Electricity from cow manure?

How much will it cost us ratepayers, and how will the costs be distributed? Which utilities will purchase the electricity and how much? How many miles of new transmission lines will be required and where should they go?

The mind boggles at the decisions required by the green energy revolution.

Fortunately, I am pleased to report that in the last two weeks the CEC and CPUC have come to agreement on a planning framework to begin to address these questions. California is embarking on a proactive renewable energy planning process that will be coordinated jointly by the two commissions. Under a contract with the CEC approved last Wednesday, the Center for Energy Efficiency and Renewable Technologies (CEERT) will facilitate this process.

The goal of the planning effort is to provide the commissions with the information needed to answer the above questions and make difficult and controversial decisions. As the renewable energy resource areas to be developed are chosen, the planning process will also identify the changes in the state's transmission system that will be required to have this power on line by 2020.

To make the task even more difficult, initial decisions must be made quickly – within the next 12 months or so. Significant changes to the electric transmission system have long lead times. Planning, permitting, and construction require many years to complete. By 2010, California must have chosen the electric energy resources on which it will rely in 2020.

If these decisions have not all been made by the end of this decade, there will not be enough time to build the energy projects, construct power lines to connect them to the grid, and beef up the grid to handle the new power flows by 2020.

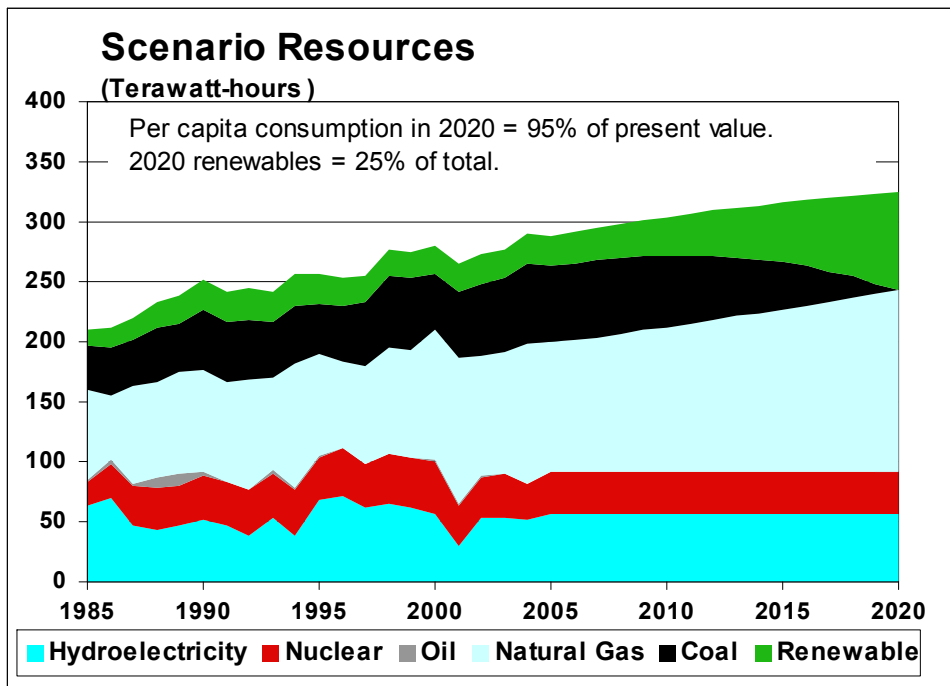
The two commissions understand the importance and urgency of the task and have agreed to coordinate the planning effort. The process is now being organized, and stakeholder meetings are slated to begin in June.

The magnitude of the task ahead is breathtaking. I expect that the capital investment required over the next decade to make these changes will exceed \$50 billion. All of the state's utilities and consumers will be affected. The environmental impacts will not be trivial even though the benefits of limiting global warming are huge. Litigation may be an inevitable part of the process.

As Dave Berry would say, I am not making this up.

A simple interactive spreadsheet is now available at www.ceert.org that allows users to make their own assumptions about how electricity consumption will change by 2020 and what fraction of our power will be generated from renewable resources. Assuming that the use of coal-fired power will be phased out by 2020, the spreadsheet shows what the resource mix could look like based on users' input. Under all realistic scenarios that meet the state's goals, the changes in electric energy resources are daunting. A sample chart is shown below.

California is now undertaking the job to turning politicians' energy promises into reality. If we all work together productively, we can accomplish this task. The new spirit of cooperation between the two commissions is a huge step in the right direction.



—Dr. Rich Ferguson, Research Director, CEERT, rich@ceert.org.

