



Senate Energy, Utilities and Communications Committee

Informational Hearing: Overview & Status of the RPS

**Publicly Owned Utilities Panel:
Southern California Public Power Authority
Renewable Energy Projects Update**

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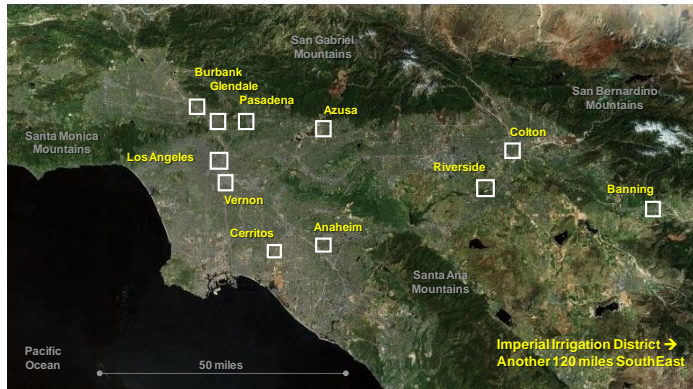
February 1, 2011



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The Southern California Public Power Authority (SCPPA) was created in 1980 by the Publicly Owned Utilities (POUs) in Southern California to provide financing for their participation in electric generating facilities and high voltage transmission lines. Today the twelve SCPPA members include the cities of:



Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles, Pasadena, Riverside, Vernon, and the Imperial Irrigation District.

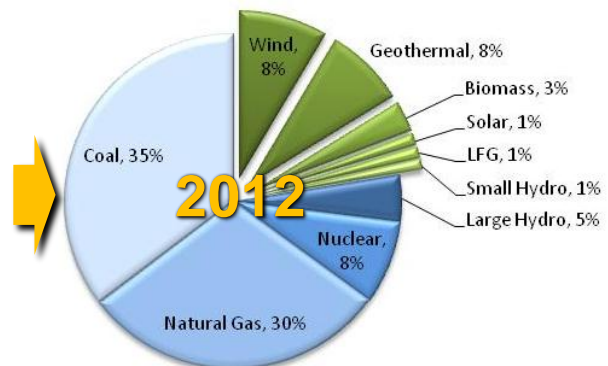
Figure 1: Satellite image showing the relative position of SCPPA members within the areas of Southern California commonly known as the Los Angeles Basin, Orange County and Inland Empire regions. Combined, SCPPA members serve approximately 35% of the total population within these areas of over 2 million residential and business customers, representing a population of approximately 4.6 million people within a service territory of 7,000 square miles.

DECISION MAKING BY THE CUSTOMERS: LOCAL CITIZENS

POUs, whether they are city-owned municipal electric utilities or irrigation districts providing retail electric service, share a unique characteristic: the governing boards of the public power systems are locally elected and conduct their meetings open to the public. Local citizens participate in the decision making process. Policy decisions are consistent with the desires and needs of the local community.

The significance of this community based decision process is illustrated by the fact that many SCPPA members have voluntarily adopted aggressive renewable energy goals, some in excess of the proposed law(s). Working with SCPPA, the members started early, acquiring over \$1.5 Billion in renewable energy projects through joint collaboration efforts, and are already delivering green power to their customers.

- | | | |
|---------------|----------------|--|
| | <u>Target:</u> | |
| • Anaheim | 20% | The combined result of these goals is an energy mix in excess of 20% |
| • Azusa | 33% | |
| • Banning | 33% | |
| • Burbank | 33% | |
| • Cerritos | 20% | |
| • Colton | 20% | |
| • Glendale | 20% | |
| • Imperial | 33% | |
| • Los Angeles | 35% | |
| • Pasadena | 40% | |
| • Riverside | 33% | |
| • Vernon | 20% | |

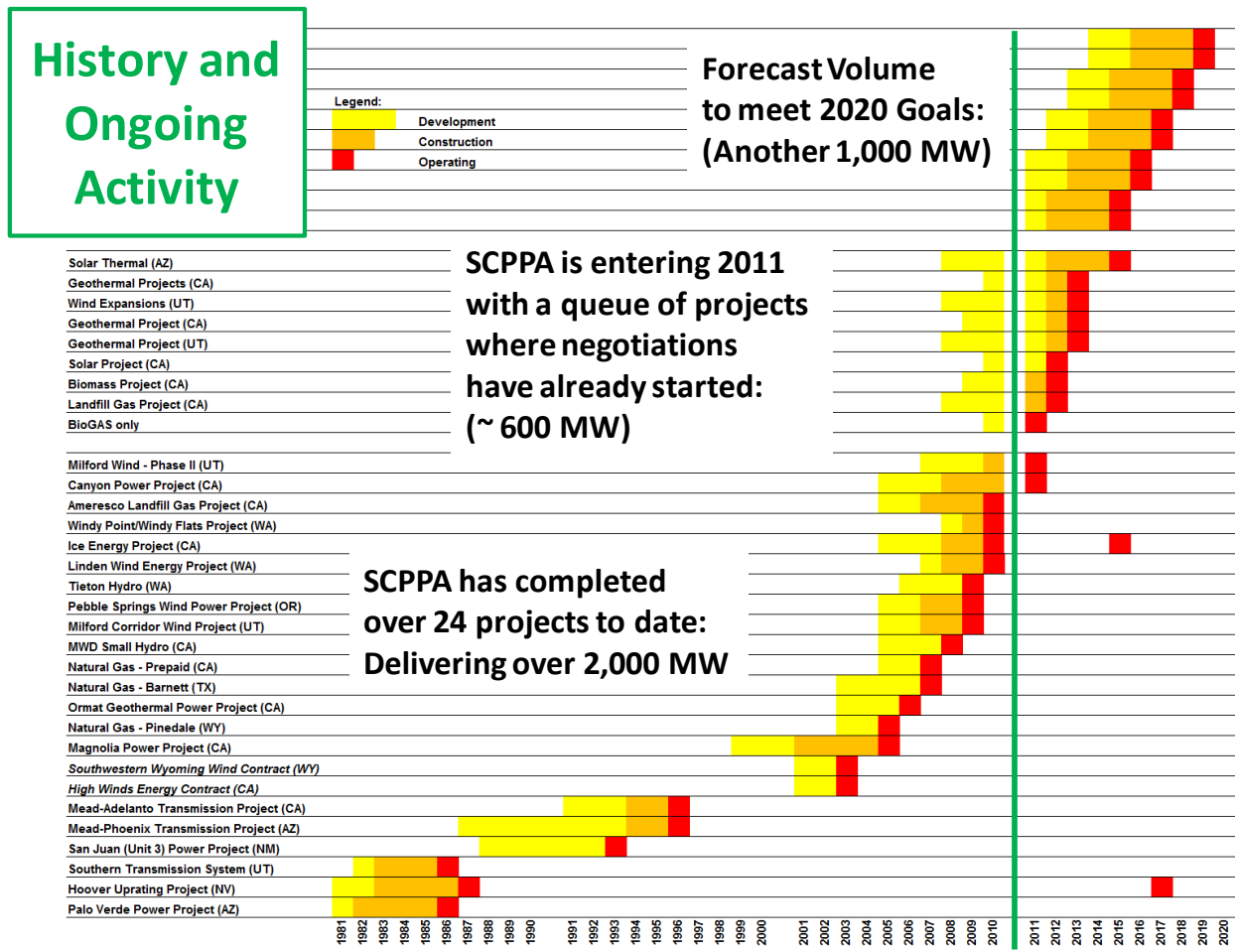




POUs ALREADY STARTED AND FORECAST EVEN MORE RENEWABLE PROJECTS

Since the beginning, SCPPA has facilitated our members' development of cost effective conventional generation projects such as the Palo Verde Nuclear Generating Station, Intermountain (coal) Power Project and the Magnolia natural gas Power Project. To support the continuous delivery of energy from these projects and reduce the risk of fluctuating market prices, a consortium of our utilities also constructed high voltage transmission lines and purchased in-ground natural gas reserves to assure reliable and cost effective power to the local communities. One of our ongoing objectives is to leverage these historic investments to assure our customers are not left with stranded costs.

Beginning in 2005, nearly the entire focus of SCPPA members turned toward developing renewable energy projects. Over 400 Renewable project proposals have been reviewed over the course of the last five years. SCPPA has completed and is already taking renewable energy deliveries from over a dozen of these, has entered negotiations on an additional 600 MW of capacity and forecasts a continuing volume of new projects to meet our members' 2020 renewable energy goals. The graphic below illustrates this impressive volume and ongoing commitment to meet the intermediate 20% goals and more:



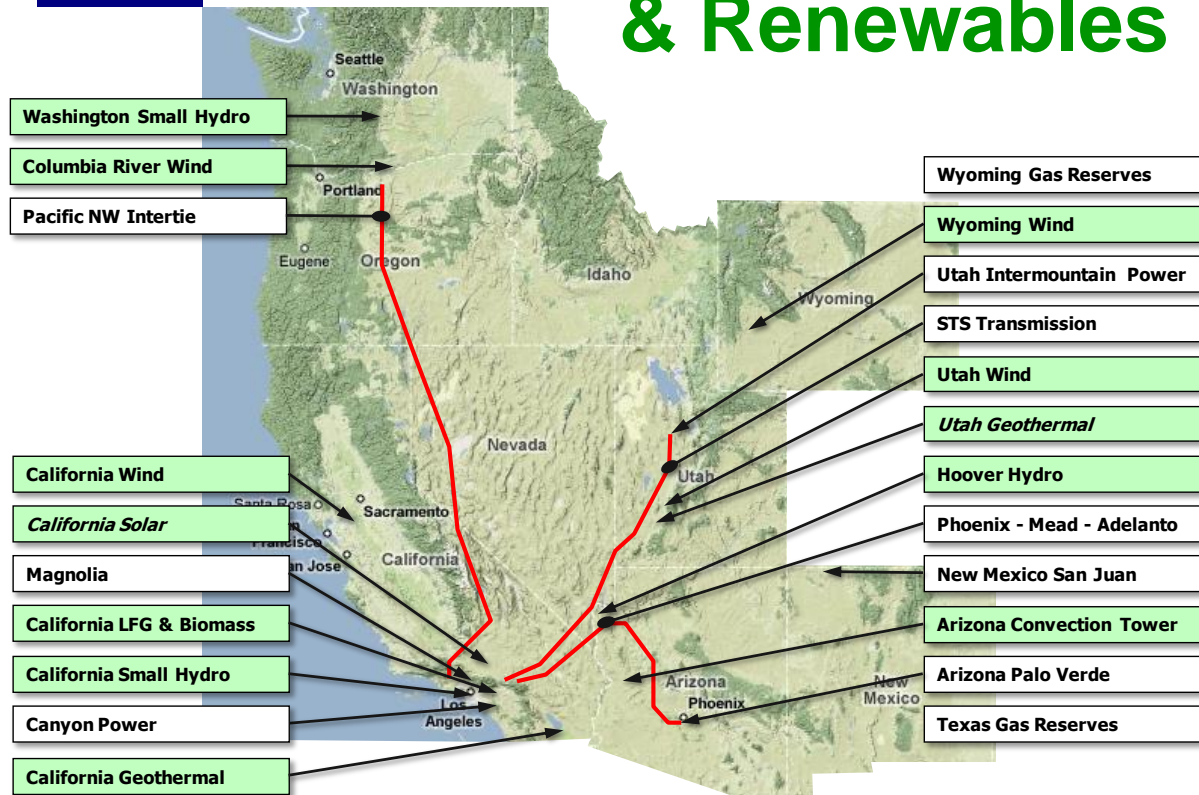


LEVERAGING OUR EXISTING ASSETS

SCPPA and its members have invested in a broad portfolio of projects across several states to assure diversity and cost-effective electrical supply to our communities. These include conventional generation sources, significant transmission capacity, and numerous renewable energy projects. We continue to seek additional projects and optimize the use of existing assets while reducing our green-house gas emissions. The importance of out-of-state resources can be seen on the map of SCPPA project locations below:



Western States Projects & Renewables

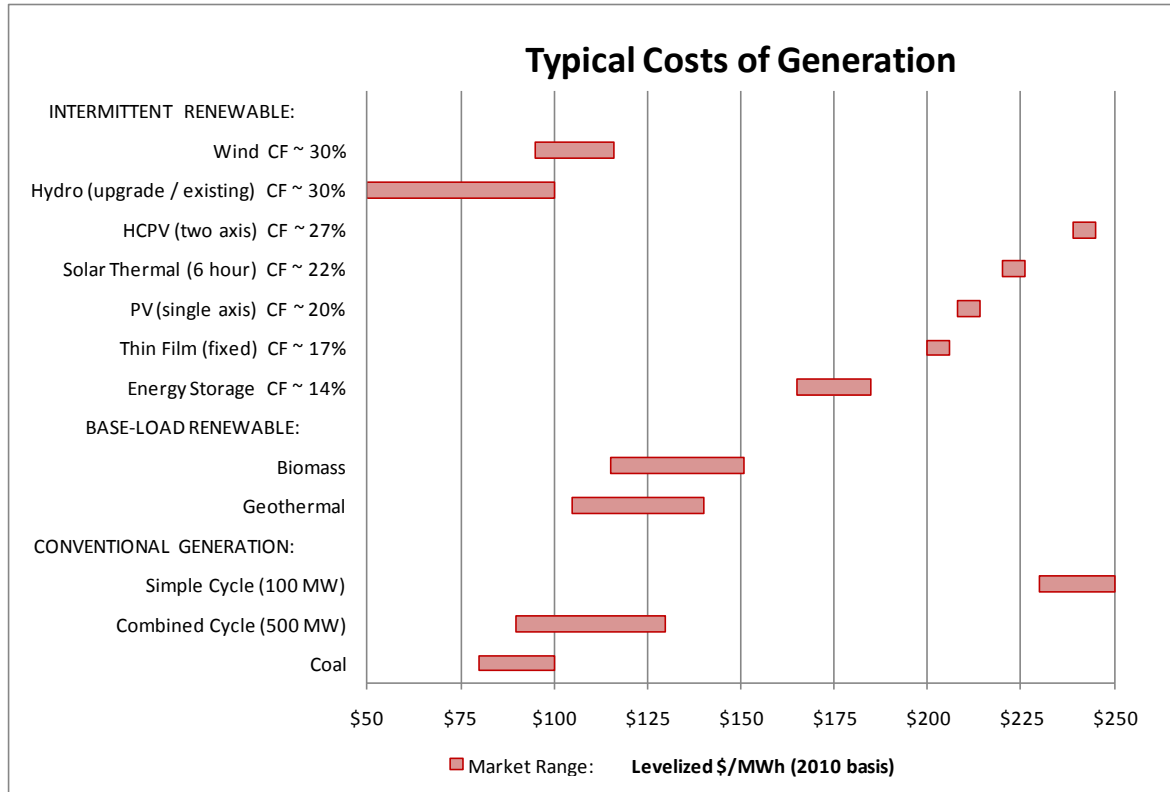


LEGEND:

- White** Existing Conventional Generation and Transmission Assets
- Green** Renewable Projects Delivering Energy Today
- Italics*** Renewable Projects in Development
- Red-** Interstate Transmission Line Infrastructure



THE PREMIUM COST OF RENEWABLE ENERGY



Sources:

2010 Black&Veatch Renewable Energy Transmission Initiative (RETI) 2A Update,
 2009 CEC Comparative Generation Cost Report,
 SCPPA RFP Responses and Negotiated Contracts.

Capacity Factor (CF): The percentage of total time in a year the facility is delivering energy.
Base-Load: Any generation technology which delivers nearly continuously - 24 hours a day.
Prices represent the cost of energy at the location of the project, without the inclusion of transmission or other system integration costs.

The table above illustrates the premium costs of adding renewable energy to our resource mix. These additional costs directly impact customer rates. An additional complication is many Renewable Energy technologies are intermittent in nature:

- The wind does not blow continuously or consistently, sometimes only at night when the excess energy is not needed.
- Solar energy can be entirely lost with the passage of a cloud.

To maintain consistent and reliable service to our customers, the utilities must also assure local generating capacity is available and adequate to support the system when renewables vary their delivery. The result is additional costs to properly integrate renewable energy sources. In some cases the combined effect of achieving all greenhouse gas initiatives could raise rates significantly.

IN-STATE AND OUT-OF-STATE CONSIDERATIONS

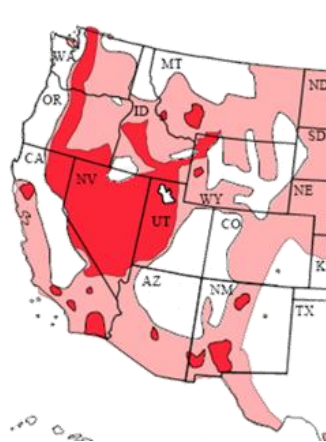
Taking advantage of the geographic diversity of our natural resources allows SCPPA access to superior project locations. We have invested in a broad portfolio of renewable energy technologies across several states to assure this diversity and cost-effective electrical supply to our communities. These include leveraging a significant transmission capacity which extends throughout the territory of the Western Energy Coordinating Council (WECC).

Our members continue to receive and evaluate projects located both in-state and out-of-state. However, the best renewable resources may not naturally occur in California – most of the technologies have very specific regions for optimum conditions:

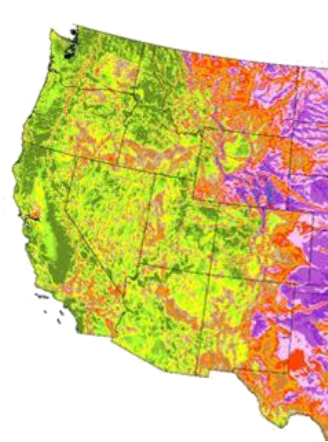
Solar Potential:



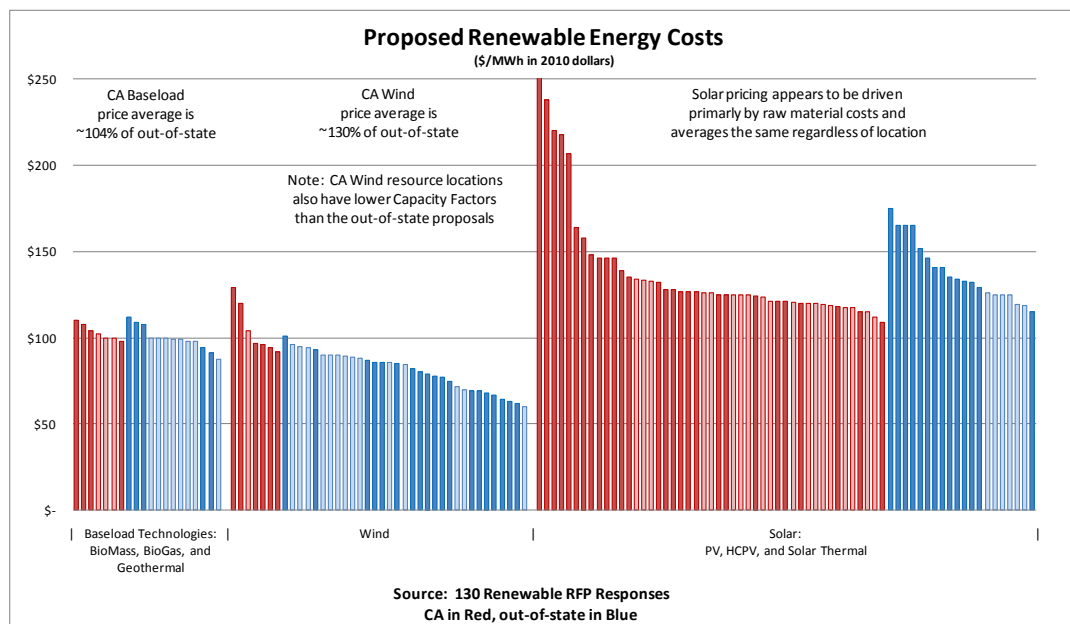
Geothermal Potential:



Wind Potential:



The resulting effect can be seen where California project proposals have had generally higher costs than their out-of-state equivalents:





FOCUS ON LOCAL SOLUTIONS

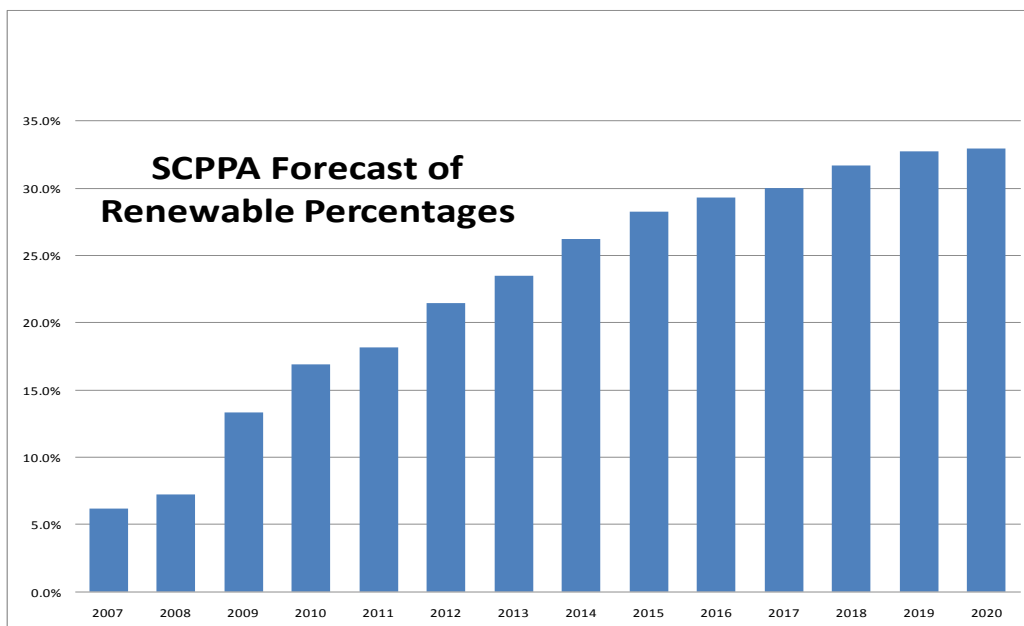
Energy Efficiency and demand reduction programs are vital parts of the POU resource strategy, and critical to balancing the portfolio's generation and load match. SCPPA members support the policies established under California Senate Bill 1037 (Kehoe), and are committed to cost-effective and feasible energy efficiency programs to meet growing demand. Since 1998, SCPPA members have spent over \$400 million on energy efficiency and demand reduction management programs. SCPPA member utilities have also documented their 10-year energy efficiency targets which, in aggregate, amount to an average reduction of 1% per year.

Also, energy saved during peak hours is in many cases more valuable than new generation resources. SCPPA members are investing in Smart Grid projects to enable the use of Energy Storage, Thermal Energy Storage (TES), Demand Reduction (DR) and Permanent Load Shift (PLS) programs. Combining these with demand-side Distributed Generation (DG) solutions like roof-top solar, improves the efficiency of the entire electrical system.

FLEXIBILITY IN COMPLIANCE MEASUREMENT

SCPPA members have previously set aggressive plans for adding renewable energy to their resource mix. Our primary focus is on acquiring "bundled" energy - both the energy and the associated Renewable Energy Credits (RECs). However, the nature of new development, particularly when leveraging new technologies, has many delays. SCPPA agrees with the flexibility offered for compliance measurement, including:

- Include existing projects or development efforts when setting standards
- Recognize years are required to develop a project from negotiations to energy delivery
- Allow 3-year rolling averages to accommodate natural project variances and delays
- Allow the generous use of RECs to fill interim variances
- Set reasonable and economic goals for renewable energy compliance





DETAILS AND NEXT STEPS

The California Energy Commission (CEC) has begun the 2011 Integrated Energy Policy Report (IEPR), as well as the 2011 Strategic Transmission Investment Plan (Strategic Plan) required by Public Resources Code (PRC) Section 25324. This exhaustive effort includes updates to many of the underlying details for the SCPPA member's entire energy mix and ongoing plans for Renewable Energy. SCPPA will be pleased to supply the staff of the Senate Energy, Utilities and Communications Committee, additional updates and details as they become fully vetted through the schedule of submittals, and in some cases when approved for public distribution by the Boards of the Utilities. Present milestones for submittals of incremental data to the CEC are as follows:

- February 9, 2011
Final Historical Demand Forecast Forms 1.1a, 1.1b, 1.2, 1.3, and 1.4
- March 1, 2011
Final Historical Demand Forecast Forms 1.7a, 1.7b, 1.7c, and 2.2
- March 16, 2011
Courtesy DRAFTS of Supply Forms 1-5
- March 18, 2011
Final Electric Transmission Related Data Narrative
- April 15, 2011
Final All Demand Forecast Forms 1-7 and 8.2
- April 29, 2011
Final Supply Forms 1-5 for Integrated Energy Policy Report (IEPR)
- June 3, 2011
Final Remaining Demand Forecast Forms 8.1a and 8.1b