CALIFORNIA
ENERGY
COMMISSION

EMERGENCY CONSERVATION AND SUPPLY RESPONSE 2001

COMMISSION REPORT

As Required by Public Resources Code Section 25705

DECEMBER 2001
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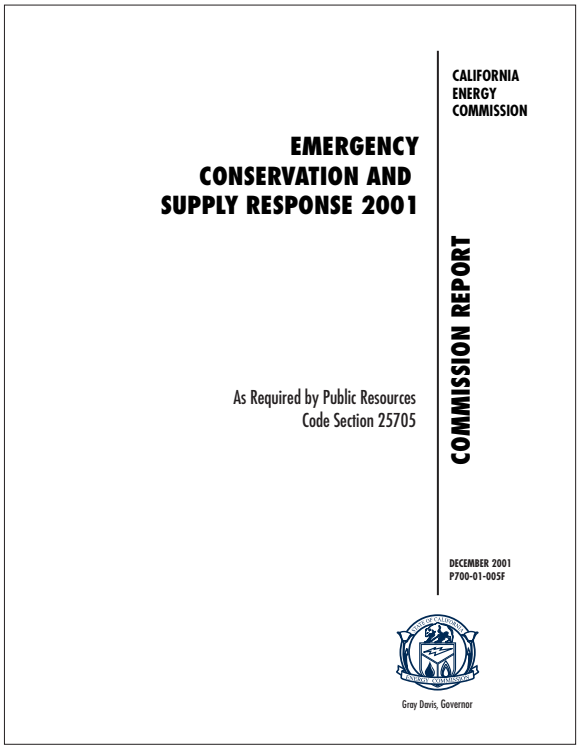
Gray Davis, Governor



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Emergency Conservation and Supply Response 2001

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Emergency Conservation and Supply Response 2001

Introduction

This report responds to the requirements of Public Resources Code Section 25705 that allows the Energy Commission to expedite the permitting of power plants. The report covers the following topics:

- Nature, extent, and estimated duration of the emergency situation,
- Summary of results,
- The challenge for 2002,
- Projected capacity additions for 2003 through 2004,
- Recommendations for further energy conservation, and
- Recommendations for further energy supply measures.

Appendix A describes the Energy Commission's emergency response activities in more detail. These activities include its peaking power plant site inventory work, its efforts to permit new emergency peaking power plants, and its efforts to accelerate the construction of power plants it had previously licensed.

Between March 8 and July 11, 2001, the Energy Commission permitted 11 power plants (six of which were operational as of September 30, 2001) under the Emergency Siting process established by Public Resources Code Section 25705. This section of the law allows the Commission to expedite the permitting of power plants if the Governor or Legislature declares an emergency and reasonable conservation, allocation, and service restriction measures are not available to alleviate the emergency. Following the permitting of such facilities, the law also requires the Commission to issue:

> …a report detailing the full nature, extent, and estimated duration of the emergency situation and making recommendations to the Governor and the Legislature for further energy conservation and energy supply measures to alleviate the emergency situation as alternatives to use of such generating facilities.

Nature, Extent, and Estimated Duration of the Emergency Situation

The summer of 2000 was a test of the restructured electricity market in California. Although the state avoided serious reliability problems, the 32 days of Independent System Operator-declared

emergencies and significantly higher electricity prices (see Figure 1), particularly in San Diego, demonstrated the tight balance between supply and demand and the vulnerability of ratepayers and system reliability.

Although electrical demand declined in the fall and winter months, the situation became worse during these months rather than better. Power plant outage rates increased to three times normal during December 2000 and January 2001, resulting in 40 days of electricity emergencies (see Figures 2 and 3). As shown in Figure 3, the majority of these emergencies were Stage Two, where operating reserves below five percent and interruptible loads are curtailed, and Stage Three emergencies, where operating reserves fall below 1.5 percent and rotating outages begin. On January 17, January 18, and January 21, 2001, rotating outages were required to maintain the stability of the electricity system. As shown in Figures 1 and 4, prices for both electricity and natural gas were significantly higher in December and January than in the same time the two previous years, which impacted the financial viability of the state's investor-owned utilities, the California Independent System Operator and the California Power Exchange.

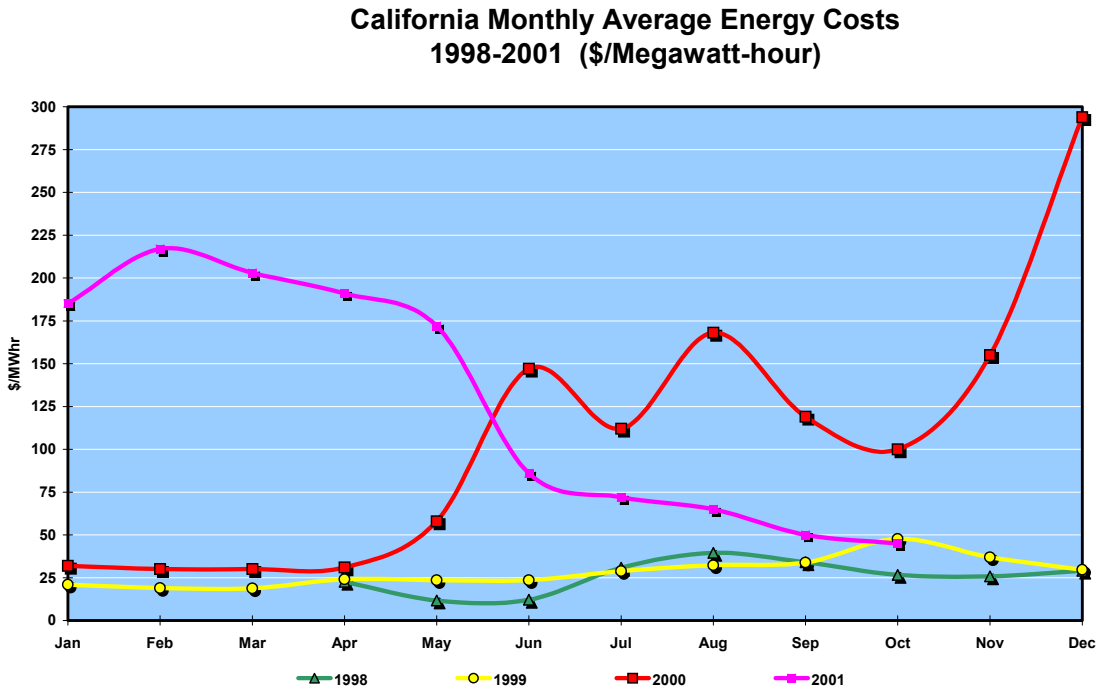
In January and early February 2001, the Energy Commission projected electricity supply and demand for the summer of 2001 under various temperature scenarios. Based on hot summer temperatures having a "1-in-10" chance of occurring, this analysis showed that the state faced a potential shortfall of 5,000 megawatts during the months of June through September (see Table 1).

Governor Gray Davis proclaimed an energy State of Emergency on January 17, 2001 in response to these events and the high probability that the electricity supply shortage would worsen during the upcoming summer, resulting in additional rotating outages throughout California and potentially significantly impacting the state's economy, health and safety and environment.

As follow up measures to the energy State of Emergency, Governor Davis issued a series of Executive Orders on February 8, 2001. These Orders were intended to increase electricity supplies available to the state and, in combination with a parallel effort in energy conservation, avoid electricity shortages during both the summer of 2001 and the summer of 2002. While most provisions in the Orders were directed to be taken in 2001, some of them were also focused on the summer of 2002. In particular, the legislative action extending the four-month permitting process established in Assembly Bill 970 during the previous Legislative session allowed waivers to the process for power plants that were to come on-line by August 2002. All Executive Orders expire on December 31, 2001 because the state's actions were expected to respond to the energy emergency of 2001 and avoid any potential emergency in the next several years.

At this point the Energy Commission believes it is not necessary to extend the emergency Executive Orders regarding the 21-day emergency permitting process or the four-month review process. However, there remain concerns about local area reliability and market design.

Figure 1. Electricity Costs



Sources: 1998-1999 California Power Exchange Market Clearing Price
2000-2001 Independent System Operator Market Analysis Report, Sept. 2001

Figure 2. Outages
Source: California Energy Commission

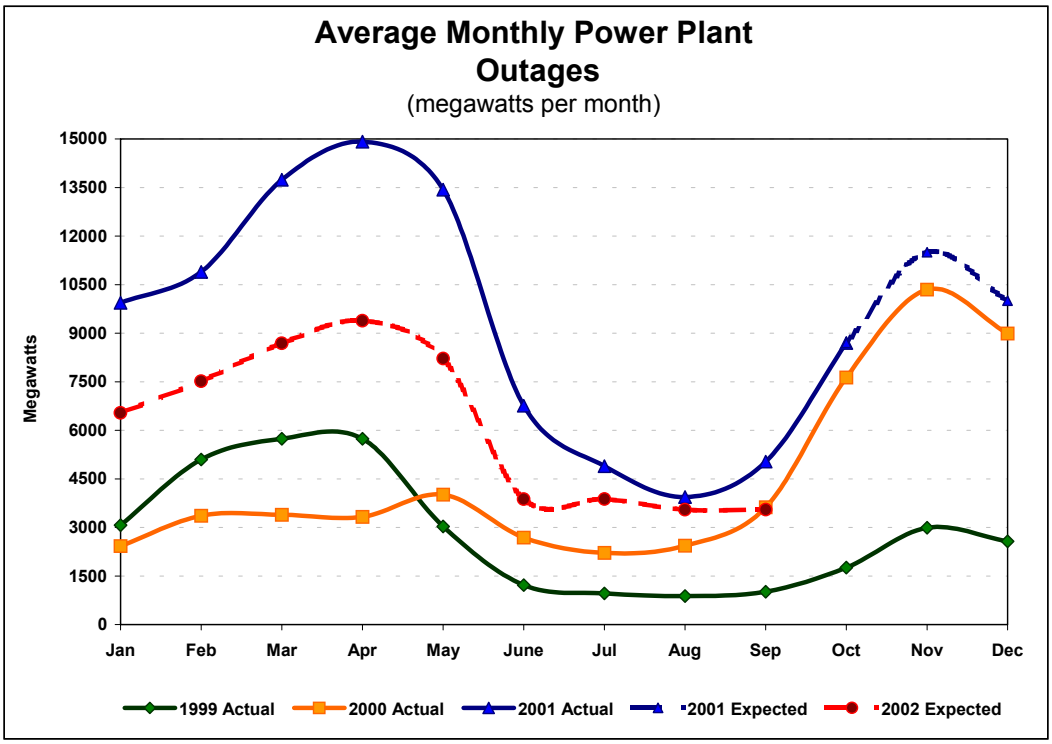
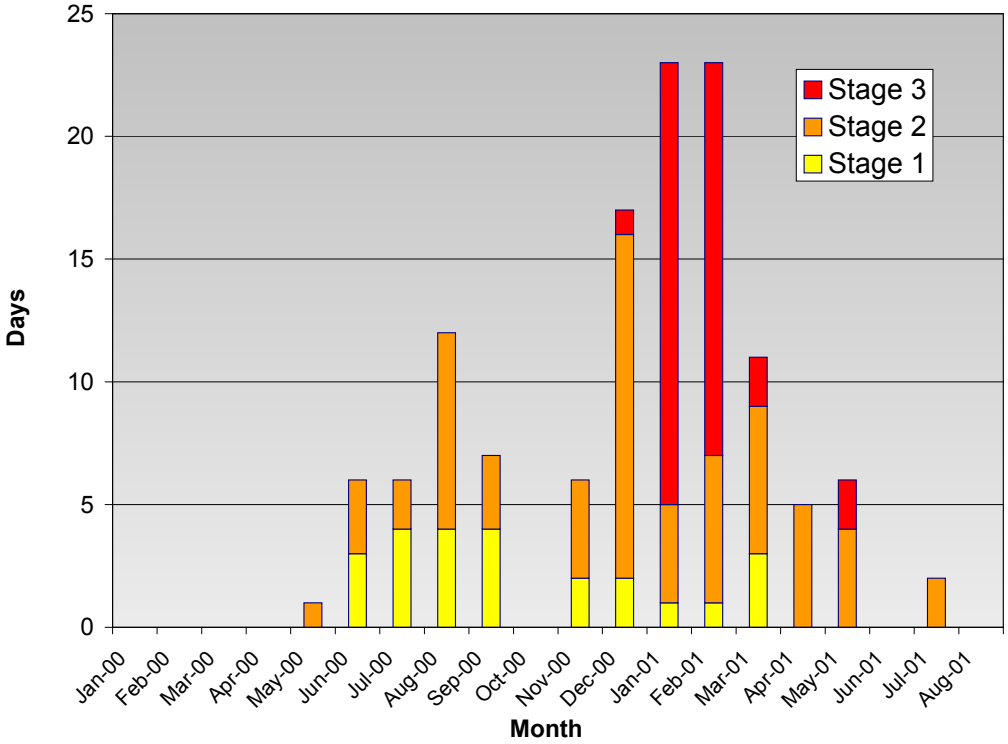


Figure 3. Emergencies
January 2000 to August 2001



Source: California Energy Commission

Figure 4. Natural Gas Prices

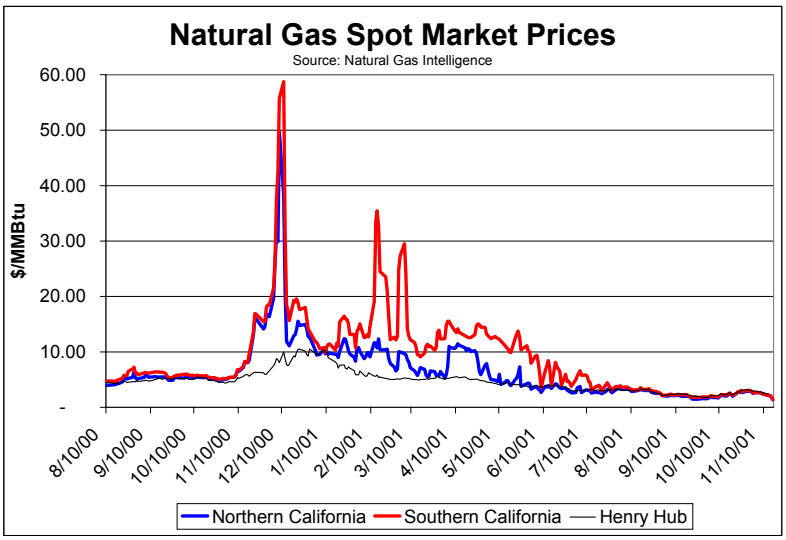


Table 1
2001 - FORECASTED PEAK DEMAND AND RESOURCE BALANCE
(Megawatts)
Temperature Probability of 1-in-10

Peak Demand + 7% Reserve: (Including anticipated growth)	**61,125**
Existing Resources:	
Existing ISO Control Area Resources	45,025
Net Imports ISO Control Area	4,834
LADWP Control Area Resources	8,198
Imperial Irrigation District	875
Far North – Eastern Sierras	277
Total Existing Resources	**59,209**
Expected Outages:	**-3,050***
Resources Available to Meet Load	**56,159**
Resource Surplus or Deficit	**-4,966**

* Historic average summer outages. Outages in January 2001 exceeded 10,000 megawatts.
Source: California Energy Commission and Electricity Oversight Board, February 8, 2001

Summary of Results

The summer of 2001 passed in California with no rotating outages and a trend toward lower electricity and natural gas prices. The peak electrical demand for the summer was 48,597 megawatts, which occurred on August 7, 2001. This peak was 12,528 megawatts less than the peak predicted plus 7 percent reserve in a 1-in-10 summer. While the state experienced about average temperatures this past summer, the success in averting blackouts was largely due to the efforts to reduce demand and increase supply. The efforts of individual Californians to conserve electricity were particularly dramatic. Combined with energy conservation programs, peak demand this summer was reduced by 14 percent, 11 percent and 9 percent in June, July, and August, respectively, after being adjusted for weather and economic growth.

On the energy conservation side, peak reduction in the summer of 2001 reached a record high of 5,570 megawatts on June 21, 2001. At that time, over 300 megawatts were attributed to recently enacted energy efficiency programs. In addition, voluntary conservation efforts by businesses and consumers – such as setting the thermostat at 78 degrees or to "off" and installing energy savings devices, such as compact fluorescent lights – yielded an impressive 5,248 megawatts in

savings. An additional 3,200 megawatts would have been available from voluntary interruptible customers had the situation become critical. These efforts were significant in helping the state avoid rotating outages this past summer. Table 2 shows the impacts of the peak load reduction program on the state's capacity needs.

Table 2
Impact of Peak Load Reduction Program (in Megawatts)
Source: California Energy Commission

ONGOING DEMAND RESPONSE PROGRAMS	Summer 2001 Goal	Actual as of 10/01
CPUC Summer Peak Initiative	67	124
LED Traffic Signals	6	6
Innovative Programs	122	34
Cool Roofs	40	2
State Bldgs. and Public Univ.	50	59
Water/ Wastewater	45	49
Municipal Utilities	35	54
Agriculture	22	33
Energy Conservation Assistance Account (ECAA)	20	2
Real Time Meters	500	39
Residential AC incentives and Appliance Rebates	61	62
Low-income Weatherization and Appliances	8	12
Residential and Commercial Lighting Incentives	44	39
Oil and Gas Pumping Efficiency	16	3
Renewable Loan Guarantee	10	0
State Energy Projects	30	0
Mobile Efficiency Brigade	10	40
Public Awareness, 20/20, Rates, Other Voluntary DSM	2,000	2,548
SUB TOTAL	**3,086**	**3,106**
DEMAND RESPONSE/ INTERRUPTIBLE PROGRAMS	**Summer 2001 Goal**	**Called Upon in 10/01**
ISO/CPUC Demand Reduction Programs	35	0
Government Load Reductions	658	0
Demand Responsive Building Systems	185	0
ISO & CPUC Interruptible Programs	2,280	0
SUB TOTAL	**3,158**	**0**
Optional Binding Mandatory Curtailment	0	0
ALL PROGRAM TOTAL	**6,244**	**3,106**

On the supply side, more than 2,537 megawatts (derated for summer operation[1]) of new generation were brought on-line during the summer of 2001. Several additional power plants have been permitted and are under construction. The total new generation brought on line in the state will be 3,140 megawatts (derated for summer operation) by the end of the year, 3,480 megawatts (derated for summer operation) if new out-of-state contracts and voltage reduction programs are included.

Using its 21-day emergency permitting process, the Energy Commission approved 11 new power plants for 925 megawatts (869 megawatts derated for summer operation). Seven projects totaling 498 megawatts (489 megawatts derated for summer operation) are in operation while two projects totaling 185 megawatts (165 megawatts derated for summer operation) are still in construction and will be operational by the end of the year. Although approved, two projects have been discontinued.

The energy challenge was expected to result in an increase in air pollution emissions from electricity generation produced by the combustion of natural gas and oil. It was feared that extensive use of older units with limited air emission controls, and the frequent use of high polluting diesel backup generators, would increase air emissions well above the levels experienced in recent years, which had seen a steady decrease in the air emissions associated with electricity generation.

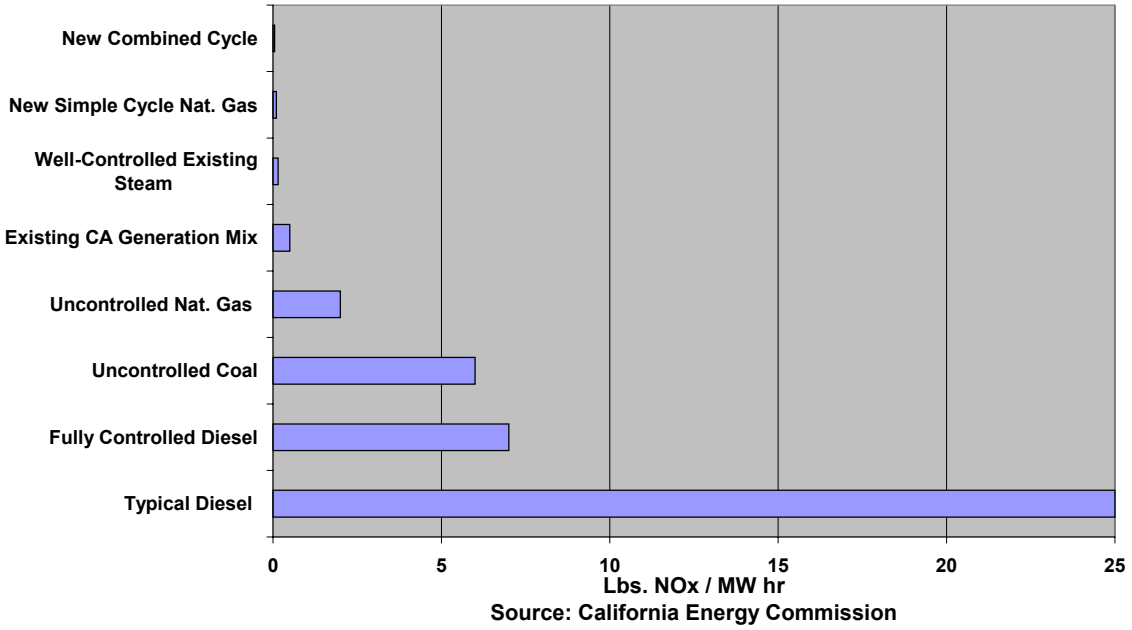
This increase in air emissions, however, never occurred. The California Air Resources Board estimates emissions of oxides of nitrogen, NOx – the most significant pollutant emitted from California power plants, and a precursor to ozone formation, from power generating facilities from June through August 2001 were 24 percent less than emissions during the same period in 2000.

Several reasons account for the emissions decrease from the summer of 2000 and the summer of 2001. First, pollution control retrofits on 17 power plants were completed that represent nearly 5,000 megawatts of generating capacity. Pollution control equipment installed typically reduces NOx emissions by 80 to 90 percent. Second, energy conservation efforts greatly reduced the overall demand and meant that poorly controlled units did not need to operate frequently. Third, the startup of 11 new power plants with state-of-the-art emission controls by the end of the summer of 2001 further reduced reliance on older facilities that have operated infrequently due to their high heat rates (low efficiencies). Finally, the avoidance of blackouts and power curtailments meant there was little need to use diesel back-up generators and the very high emissions from these units were avoided.

Figure 5 shows a comparison in pounds per megawatt-hour (lbs/MWhr) of NOx emissions for California's existing generation mix and new combined-cycle and simple-cycle generators.

[1] Nominal capacities are typically quoted based on ambient conditions of 15 degrees Celsius (59 degrees Fahrenheit) at sea level. The generating capacity of gas turbines decreases as ambient temperature increases.

Figure 5. NOx Emissions By Project Type



The Challenge for 2002

The overall energy situation for 2002 looks better than it did before the summer of 2001. While some debate continues regarding how much of the voluntary conservation efforts will continue into next year, an estimated 1,699 megawatts of peak demand reduction are likely to continue because of changes in energy efficient equipment and materials rather than just behavior patterns. A more detailed projection of the impact of these programs on the statewide coincident peak demand and supply balance for 2002 is shown in Table 3 below. This table is based on the Commission staff demand forecast for 2002 for a one-in-ten weather condition. The peak demand plus 7 percent operating reserve in August 2002 is estimated to be 57,691 megawatts. This estimate can be compared to the 48,597-megawatt peak that occurred on August 7, 2001 (which was not a one-in-ten weather day and reflects the excellent conservation efforts of Californians).

In addition to the generation projects coming on-line by the end of 2001, additional new simple-cycle power plants and combined-cycle power plants that are capable of generating 3,749 megawatts, are currently under construction and expected to be in operation by the summer of 2002.

Executive Order D-26-01 and Senate Bill 28x continued the four-month permitting process for power plants that can be in operation by December 2002. Seven projects are currently being reviewed in this process. While these projects have the potential of adding an additional 822 megawatts during 2002, there is no certainty that all of the projects will be built.

Table 3
AUGUST 2002 - FORECASTED PEAK DEMAND – SUPPLY BALANCE (Megawatts)
1-in-10 Temperatures

California Energy Commission 2002 Baseline Forecast[1]	**54,248**
Operating Reserve	**3,443**
California Statewide Peak Demand + Operating Reserve	**57,691**
Existing ISO Control Area Resources Thermal	19,222
ISO Control Area Nuclear	4,342
ISO Control Area Hydro	11,372
ISO Muni Non-Hydro Resources	1,448
Net Imports ISO Control Area	5,068
Dependable QF Capacity	6,301
LADWP Control Area Resources	8,198
Imperial Irrigation District + Other Non ISO Munis	1,152
2001 Additions On Line (as of 9/30/2001)	2,537
Existing Resources and Dependable Imports	59,640
Hydro Derate	-1,500
Estimated Nuclear Off-Line	-
Economic Outages	-
SCR Retrofit	-
Estimated Outages	-3,550
Estimated Forced & Scheduled Outages	-5,050
Existing Resources Available to Meet Load	**54,590**
Resource Surplus/Deficit	-3,101
Generation Additions (Summer Dependable MW) 75% Probability	
2001 Additions Expected to Come On Line By 12/31/01	603
2002 Additions	3,749
Total Generation Additions@75% Probability	**4,352**
Resource Surplus/Deficit	**1,251**
Demand Reduction from Demand Response Programs	
Ongoing Programs	4
Interruptible/Emergency Programs	1,337
Existing Voluntary/Emergency Programs	358
Demand Responsive Program Total	**1,699**
Resource Surplus/Deficit	**2,950**

1. Baseline forecast represents the first day of August 2002.

Sources: California Energy Commission 2002 Monthly Electricity Forecast, November, 2001; and California Energy Commission ***California Energy Watch***, November 30, 2001.

As Table 3 shows, the economic slowdown, generation additions, and the implemented conservation programs will improve the electricity demand and supply balance in 2002. This assumes the Commission's current electricity demand projection, which is lower than the projection from last year because of changes in the state's economy and assumption regarding voluntary demand. It also reflects those new power plants that have a 75 percent probability of meeting their projected completion dates. These projections of new supply may be conservative. However, as with any projection, these figures could change over the next several months, and the Energy Commission will continue to monitor all activities that impact the state's electricity system.

As Figure 6 indicates, electricity system reliability continues to be a concern within specific areas of the state. Northern California, particularly the San Francisco Bay, Fresno, Sacramento, and Humboldt are the areas of greatest concern. They could either benefit from additional central-station generation, distributed generation, transmission system improvements or targeted energy conservation and load management programs.

Although the outlook for 2002 is better than last year, California must continue to take prudent actions to reduce electricity demand and increase supply in California. Both Governor Davis and the Legislature have directed that California continue to increase supply and reduce demand in 2002 to reduce the potential for future emergencies and increase our energy security. Continued efforts in generation and conservation are needed for a number of reasons:

- Many of the flaws in the market structure have not been corrected.[2]
- Weather patterns could result in summer temperatures in California and the entire western United States that exceed "1-in-10" conditions.
- Some parts of the state, particularly in the north, do not have sufficient generation to meet desired reliability criteria.
- Over 30 percent of California's existing power plants are over 40 years old.[2]
- Outages this winter or next summer could be higher than normal due.[2]
- The financial issues that have plagued the utilities, the Independent System Operator, Power Exchange, and now the state may not be easily or quickly resolved.
- Energy security concerns have increased since the September 11, 2001 terrorist attacks.
- The level of reserves above an operating reserve necessary to ensure a well functioning market is not well understood.
- Federal price caps will remain in place only until October 2002.

[2] Re: Energy Commission Staff Draft ***2002-2012 Electricity Outlook Report***

Figure 6
MW Generation Deficiencies in RMR Areas

(Under critical contingencies such as generator or line outages which result in severe violations of thermal ratings, unacceptably low voltage and/or reactive margins.)

Local Areas	2002	
Humboldt	88	The recommended solution is faster clearing times on the 60KV lines, not additional generation. PG&E is working on a project to fix this.
Battle Creek	10	
North Bay		
Eagle Rock	30	
Vaca Dixon	16	
Greater Bay Area		Potential for transmission system fix at the Tesla Substation could reduce RMR needs; equipment expected to be installed during 2002.
San Jose	350	This is the 115KV sub-area between Newark and Metcalf.
Sierra		
Summit	50	Transmission fixes would help this area more than generation additions. PG&E has an approved project for 2003 that would eliminate the most stringent contingency.
Colgate	10	
Fresno		
Wilson 115 KV sub-area	70	
Wishon 70 KV sub-area	10	

Source: CA ISO, September 10, 2001.

*PATH 15
Existing Path 15 constraints combined with low hydro conditions and unplanned generation outages in northern California could lead to regional supply/demand imbalances during the fall/winter 2001. Plans to upgrade Path 15 are not scheduled until 2004.

**PATH 45
By November 2001 SDG&E will increase the import/export capability of Path 45 to Mexico from 408 MW to 800 MW.

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CARTOGRAPHY UNIT
OCTOBER 2001

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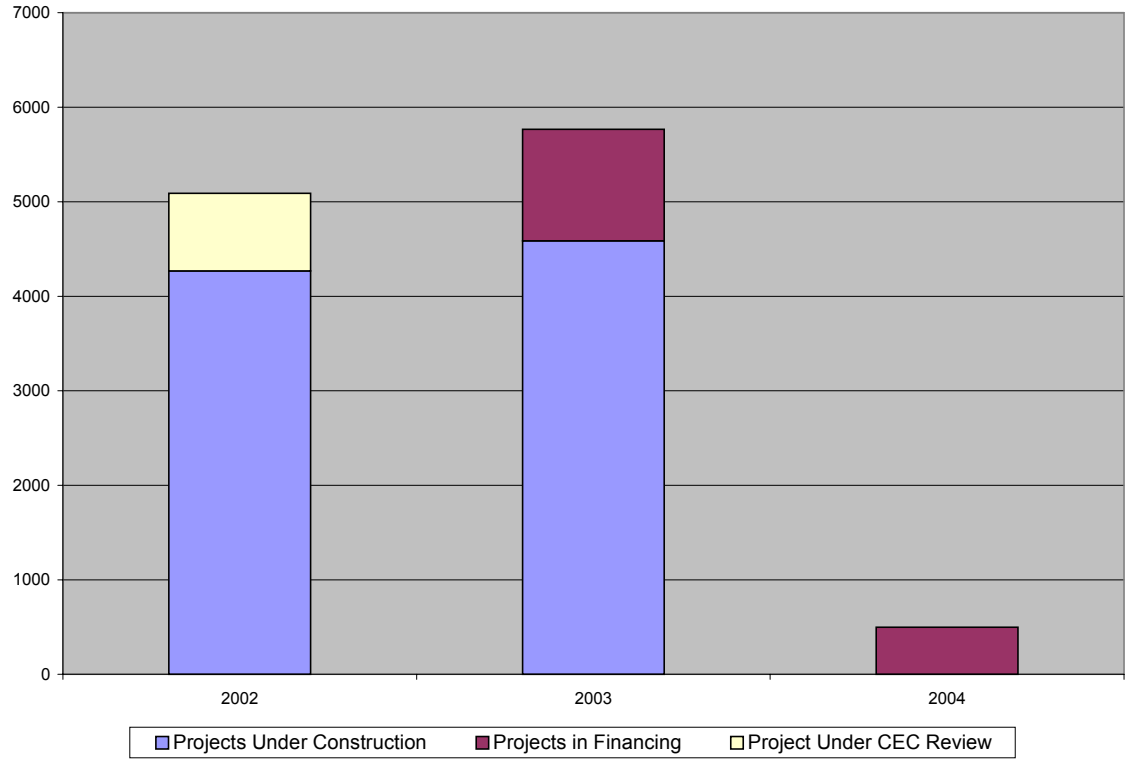
Projected Capacity Additions 2003-2004

Almost 6,300 megawatts of additional capacity is projected to be available during 2003 and 2004 (see Figure 7)[3]. During 2003, an additional seven projects totaling 4,586 megawatts of capacity have received Energy Commission permits, are under construction, and are scheduled to be on-line. Also, three projects, totaling 1,180 megawatts, have received Energy Commission permits, are in the financing phase of development and scheduled to be on-line in 2003. The total projected on-line capacity for 2003, based on projects having received Energy Commission permits, is 5,766 megawatts. For 2004, one 500-megawatt project has received its Energy Commission permit, is in the financing phase and is scheduled to be on-line.

In addition to these projects, over 11,000 megawatts of capacity additions are currently undergoing review in the Energy Commission certification process and an additional 2,936 megawatts are identified with filing dates to begin Commission review during the next four months. These additional 13,936 megawatts are not included in Figure 7.

Figure 7. Expected Capacity Additions from Energy Commission Approved Projects, 2002 - 2004

Source: California Energy Commission



[3] The 2003-2004 projections shown in Figure 7 consider only those projects that have received their permits from the Energy Commission and are either in construction or securing financing.

Recommendations for Further Energy Conservation

While California enjoyed great success this year in reducing its electricity consumption, further reductions are possible that will help reduce the chance of future electricity shortages. Future conservation efforts should concentrate on:

- reinforcing the energy efficiency gains achieved by Californians this summer, and
- improving the capability of demand response programs currently offered in the State.

Specific recommendations regarding energy efficiency and demand responsive programs are as follows:

1. Continue funding the public awareness campaign to ensure Californians are both aware and motivated to pursue additional energy efficiency investments. This effort can transform the energy savings achieved by temporary changes in usage habits into permanent reductions in energy usage.

2. Continue funding of programs administered by the Energy Commission and Public Utilities Commission. While the Public Utilities Commission's programs that are based on Public Goods Charge funding are assured for the immediate future, the Peak Load Reduction efficiency and demand responsive programs, established by AB970 and SB5X, are not. To build on the gains of this past summer, funding must continue for programs such as the following:
   - Innovative Program, with incentives for a variety of demand-reducing and efficiency-enhancing projects,
   - Demand Responsive Systems Program, assisting building operators to shift their electricity loads as guided by real-time prices or load curtailment programs,
   - Cool Savings Program, providing incentives for heat reflecting building materials to reduce air conditioning loads,
   - Public water system, wastewater system, and building efficiency improvement programs, for less costly operation of publicly owned and operated facilities, and
   - Agriculture Efficiency and Demand Reduction Program, assisting farming and agricultural industries with energy cost reductions for rural, economically impacted areas.

3. Ensure that the Public Utilities Commission interruptible program rulemaking results in a system that does the following:
   - Preserves existing load curtailment capability funded by the State and the Independent System Operator,
   - Authorizes utility cost recovery sufficient to ensure total demand responsive capability for the summer of 2002 (see the Energy Commission Staff Draft ***2002-2012 Electricity Outlook Report***), and
   - Modifies program designs to ensure effective participation by commercial and industrial customers in which the state has invested $35 million for real-time metering systems.

4. Ensure that energy efficiency standards remain the most cost-effective option for California to manage its electricity and natural gas demands.
   - Maximize the impacts of various Title 24 Building Energy Efficiency Standards by strengthening the standards in each triennial code update, and through programs that help builders exceed the adopted standards.
   - Expand Public Goods Charge program support to update the Title 24 standards and assist builders to exceed the standards.

5. Improve the state's ability to do the following:
   - Expand future cost-effective efficiency by allocating resources to identify and pursue cost-effective energy efficiency improvements.
   - Predict participation in various energy efficiency, conservation, and load curtailment programs.
   - Evaluate options for improving the efficiency of existing buildings, as called for in AB 549.

Recommendations for Further Energy Supply Measures

The Energy Commission has looked at a variety of scenarios for next year and recommends that the state continue to encourage measures for additional generating capacity. Those projects under construction need to continue to be monitored to facilitate their operation before or during the summer of 2002. In addition, several of the projects in the four-month and six-month permitting processes with the Energy Commission have contracts with the Department of Water Resources and will play a key role in firming up the "net short." Others will not only help create a more competitive market but will serve local reliability needs and replace older, more inefficient and polluting facilities.

To facilitate the orderly development of new projects, the Energy Commission recommends the following:

1. The Energy Commission should continue to permit new power plants for 2002 through the four-month permitting process established by Senate Bill 28x, and consistent with public health, safety, and environmental quality protection.

2. The Energy Commission should continue to work with project developers to accelerate the construction change approval process of approved power plants provided those actions are consistent with public health, safety, and environmental quality protection.

3. The emergency siting process should not be continued at this time.

One assumption of electricity restructuring was that the role of government, particularly in planning and monitoring, would be reduced. The events of this past year have shown that it is critical for government to continue both of these roles. Given these events, the Energy Commission will commit to the following:

4. Continue to perform its integrated electricity and natural gas demand and supply planning and assessment work on a more regular basis; this work be targeted to the Governor's Office, Legislature and all State agencies.

5. Provide the Governor, Legislature and other state agencies periodic updates of the statewide demand and supply balance to reflect projects coming on-line, and implement conservation programs and identify any specific local supply or demand issues of which it is aware.

6. Continue to work with the Department of Water Resources, California Public Utilities Commission, California Power Authority, Electricity Oversight Board, and the California Independent System Operator to resolve differences in energy supply and demand projections and exchange of all critical energy information.

7. Assist local agencies, as resources permit, in creating, updating, and implementing their Energy Plans.

Appendix A: Evaluation of Energy Commission Emergency Response Activities

On February 8 and March 7, 2001, Governor Davis signed Executive Orders D-26-01 and D-28-01, respectively, ordering the Energy Commission to undertake emergency tasks as expeditiously as possible and to coordinate with other state and local agencies to accelerate the availability of new generation sources to the state. These tasks included studying the availability of potential sites for peaking power plants in the state and expediting the licensing process for projects that could meet on-line date requirements for 2001. These Orders included the expeditious participation of other agencies in the Energy Commission licensing process, consistent with the objectives of protection of public health and safety and the environment. In addition, Executive Order D-25-01 ordered the Energy Commission to expedite review and approval of post-certification amendments for power plants it previously licensed, and take other actions to accelerate the on-line date of such projects. All three of these Orders expire on December 31, 2001.

The following is an evaluation of the Energy Commission's emergency generation activities in response to these Orders. These included an inventory of peaking power plant sites, implementation of the emergency siting process, and efforts to accelerate construction through the compliance monitoring program. While the overall success of these efforts in responding to California's energy challenge was due to the contribution of many individuals including those in the Governor's Office, Legislature, other agencies, project developers, and private citizens, the Energy Commissioners want to particularly recognize the staff of the Energy Commission whose planning, hard work, and dedication allowed these results to be realized and their consultants that became an integral element of the team.

Peaking Power Plant Site Inventory

Executive Order D-26-01 directed the Energy Commission to:

> conduct a study of potential peaking power plant sites in the state and prepare a report to the Governor by February 21, 2001, identifying those areas of the state that would benefit from the installation of peaking power plants to augment supplies and ensure reliability through the summer of 2003.

In response to this Order, the Energy Commission staff conducted a study of peaking power plants with cooperation and assistance from the Department of General Services, Resources Agency, California Independent System Operator (ISO), the electricity, oil, and gas industries, military base commanders, and local agencies. The study focused on identifying sites for peaking power plants with a generating capacity between 50 and 100 megawatts that could be on line between July 31, 2001 and December 31, 2003. The goal was to identify 1,000 megawatts of peaking power plant sites for projects that could be on-line during the summer of 2001 and

another 1,000 megawatts of peaking power plant sites for projects that could be on-line by the summer of 2002.

The Energy Commission conducted a two-level screening evaluation of over 450 sites. The first level identified sites located in or near areas that would benefit from additional peaking facilities during the summer of 2001. Those areas (see Figure A-1) were the following:

- the San Francisco Bay Area,
- the southern Sacramento and northern San Joaquin Valley area,
- the San Diego area, and
- (to a lesser degree) the Los Angeles area.

These areas were identified by Energy Commission staff working with the staff of the Independent System Operator. The first level screening narrowed the inventory to 212 potential sites.

The second level of screening focused on site characteristics vital to the ability to develop a peaking power plant at a site by the summer of 2001 and fatal flaws that would prevent development of the site. These site characteristics included the following:

- sufficient land (1-2 acres),
- adequate transmission capacity,
- adequate natural gas supply, and
- availability of emissions offsets.

Since peaking power plants do not use a significant amount of water, water supply or water quality issues were not considered.

Fatal flaws considered in this second level of screening were as follows:

- significant land zoning conflicts,
- proximity to sensitive air pollution receptors such as hospitals, and
- presence of endangered species.

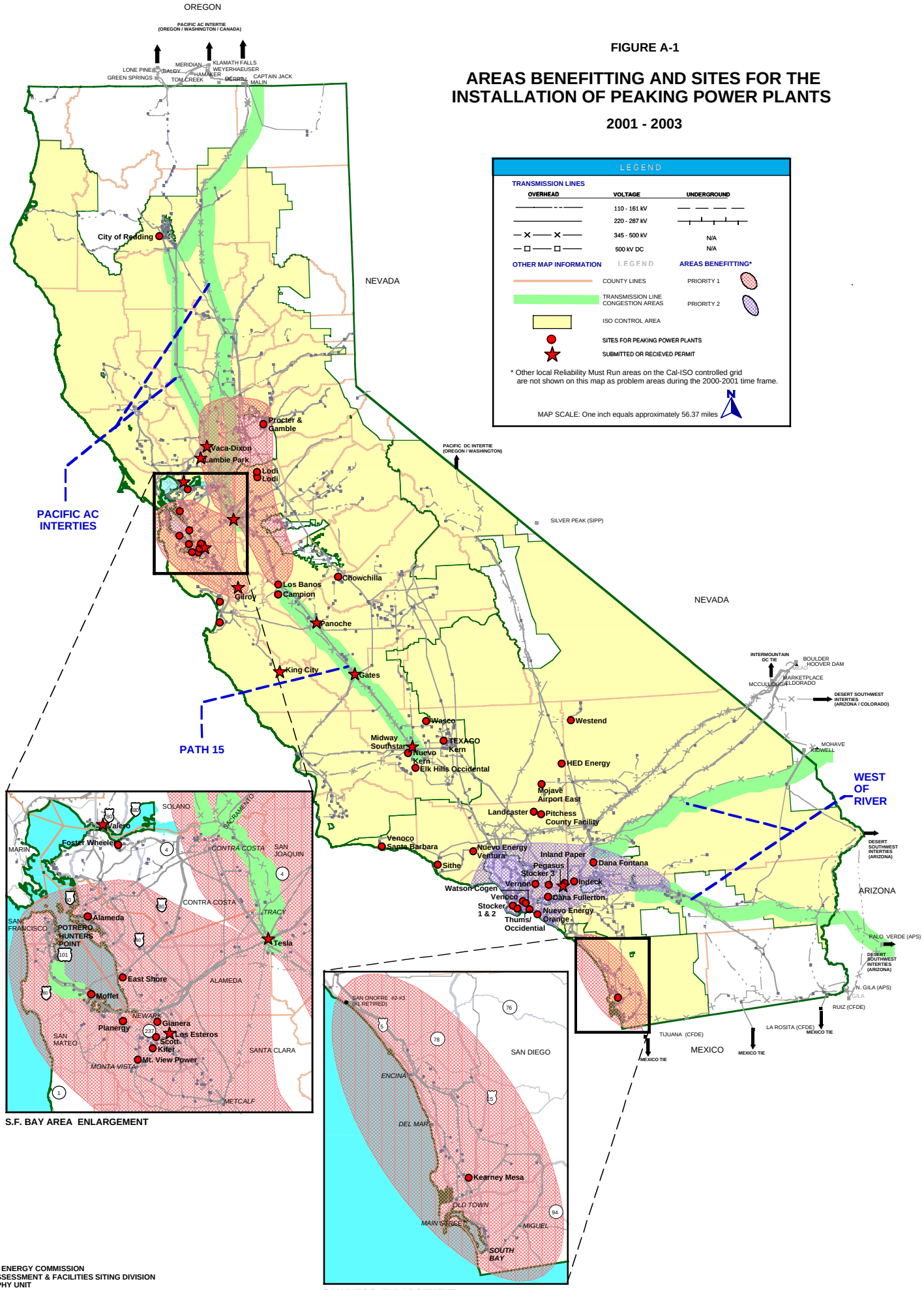
Application of this second level of screening narrowed the original 212 sites to 52 sites. The Energy Commission staff conducted site visits and more detailed studies of the 52 sites which passed the second level screening to ensure a 95 percent probability that the identified sites could be permitted using the Commission's emergency siting process. The Commission staff also evaluated the availability of combustion turbines that could meet emission limits at peaking sites and provided interested project developers with information regarding the available sites and turbines.

As of February 21, 2001, the study had identified 34 sites as meeting the site screening criteria. These sites represented a site inventory capacity of 1,700 to 3,400 megawatts, assuming 50 to 100 megawatts of capacity at each site. This capacity was enough to meet both goals of the activity. The staff also confirmed that combustion turbines were available which could meet the

FIGURE A-1

AREAS BENEFITTING AND SITES FOR THE INSTALLATION OF PEAKING POWER PLANTS

2001 - 2003



LEGEND

TRANSMISSION LINES

OVERHEAD	VOLTAGE	UNDERGROUND
	110 - 161 kV	
	220 - 287 kV	
	345 - 500 kV	N/A
	500 kV DC	N/A

OTHER MAP INFORMATION	LEGEND	AREAS BENEFITTING*
COUNTY LINES		PRIORITY 1
TRANSMISSION LINE CONGESTION AREAS		PRIORITY 2
ISO CONTROL AREA		
	SITES FOR PEAKING POWER PLANTS	
	SUBMITTED OR RECIEVED PERMIT	

* Other local Reliability Must Run areas on the Cal-ISO controlled grid are not shown on this map as problem areas during the 2000-2001 time frame.

MAP SCALE: One inch equals approximately 56.37 miles

N

CALIFORNIA ENERGY COMMISSION
SYSTEMS ASSESSMENT & FACILITIES SITING DIVISION
CARTOGRAPHY UNIT

UPDATED: SEPTEMBER 2001

File: TL_Peak Elect_Reliability_Fig3a

emissions limits and the capacity goal for the summer of 2001 and that natural gas pipeline capacity was available to serve the peak needs at these 34 sites. The staff continued the site inventory effort through May 2001, at which time 52 sites had been identified, representing a site inventory capacity of 2,500 to 5,000+ megawatts.

As of September 30, 2001, developers had filed applications with the Energy Commission for permits for 11 of the sites, representing 1,435 megawatts of peaking capacity. Four had received their emergency permits representing 463 megawatts, and seven were under review in one of the Commission's other permit processes, representing 972 megawatts. See Figure A-2 and Table A-1 for a summary of these results.

Figure A-2 Peaking Power Plant Site Inventory Results as of September 30, 2001

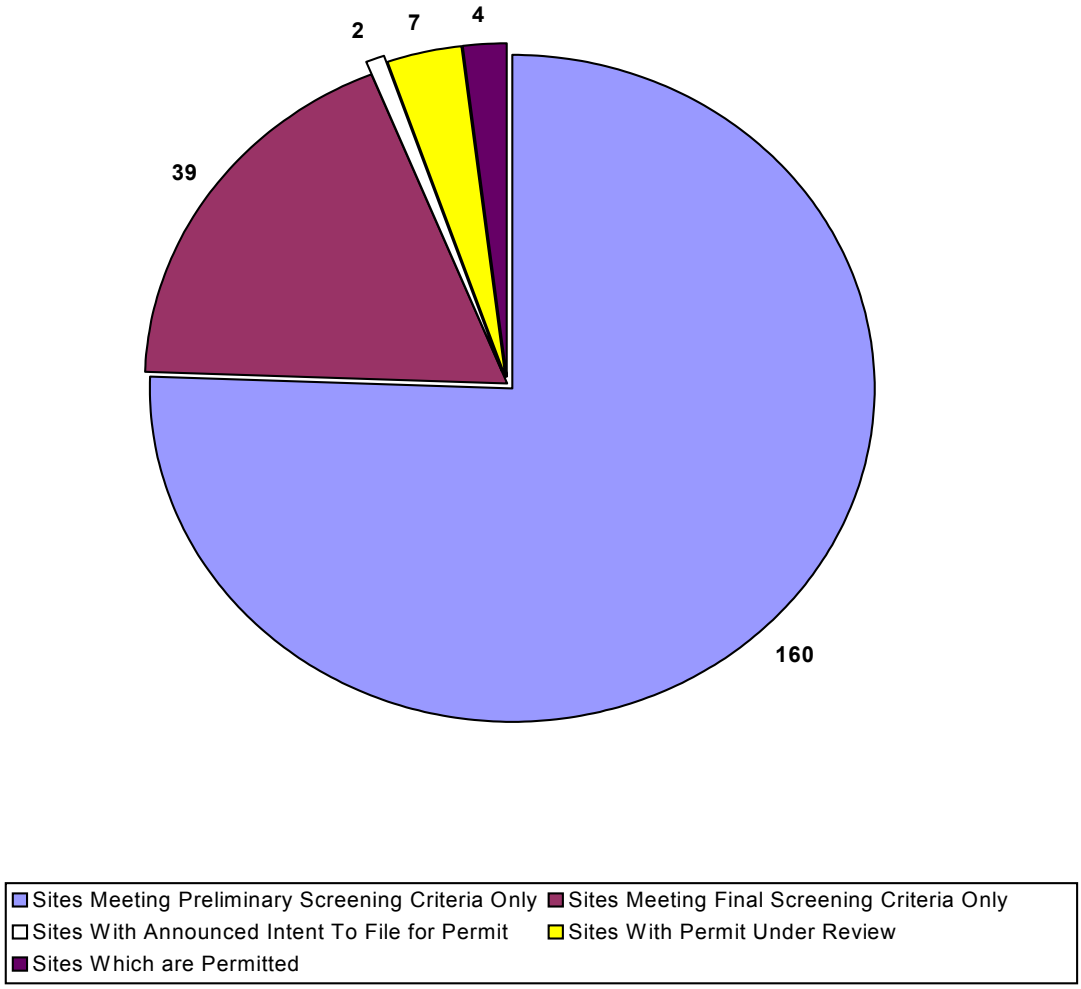


Table A-1
SITE INVENTORY RESULTS AS OF SEPTEMBER 30, 2001

Site Characteristic	Number	Capacity (megawatts)
Sites Meeting Preliminary Screening Criteria:*	212	
Sites Meeting Final Screening Criteria:	52	
Sites Which Applied for Permit:	13	1,435+
Received Emergency Permit:	4	463
Permit Under Energy Commission Review:	7	972
Sites With Announced Intent to File for Future Permit:	2	1,205 **

* Staff screened over 450 sites.

** Includes an 1,100 megawatts baseload power plant at the Tesla Substation

Reasons for Degrees of Success

There were several reasons for the success of this activity, starting with the clear recognition of priorities as defined by Governor Davis' declared emergency and directives to the Energy Commission and other agencies. This direction provided for excellent cooperation and coordination among agencies and industry groups. Although experiencing an extremely heavy workload, the Energy Commission had access to an existing consulting contract that assisted with completing the site visits quickly. The site inventory results were posted weekly on the Commission's website and made available to interested developers. Also a bulletin board was established on the Energy Commission's website, and industry used it to post their needs and interests, and e-mail allowed expedited communication with participants on site information.

Even with the success in identifying sites for peaking projects, project development was limited. How many sites could actually be developed and meet the deadline depended on the number of developers with project fast-track capability. There were many developers interested in constructing projects, but only a small portion of those were actually capable of developing a project "from scratch" in the limited time available. The original time limits were tight and excluded many project sites from being developed; subsequent extensions of the deadline were still restrictive. Even those developers with fast-track capability and energy project experience struggled with the uncertainty associated with negotiating a power purchase agreement with the Department of Water Resources and the uncertainty with the incentives offered. The availability of major equipment for the projects was a question at the outset for some developers but did not materialize as a real problem.

Recommendations If Repeated

If repeated, the Commission would recommend, to the degree possible, recognizing and defining a developer's needs for lead time to develop a project, and including those needs in creating the emergency process time lines.

The Energy Commission staff provided developers with comprehensive and reliable information regarding site characteristics, process and project incentives, the permitting process, and the availability of equipment. This type of communication is important if done again. The state should avoid redefining incentives during the emergency process in a way that creates uncertainty for developers.

The state needs to communicate clearly what it wants and what it is willing to do to assist in achieving the preferred outcome.

New Emergency Peaking Projects

In response to Governor Davis' Executive Orders D-26-01, issued February 8, 2001, and D-28-01, issued March 7, 2001, the Energy Commission and other government agencies in California acted to expedite the permitting of new emergency peaking projects throughout the state. Executive Order D-26-01 directed the Energy Commission to expedite the processing of Applications for Certification for peaking or renewable power plants that could be on-line by July 31, 2001, pursuant to the Commission's emergency permitting authority under Public Resources Code section 25705. This Order also directed all agencies involved in licensing these projects to participate in an expeditious manner consistent with the objectives of environmental protection and the protection of the public health and safety. Executive Order D-28-01 extended the on-line deadline for this process to September 30, 2001. The goal of this activity was to bring 1,000 megawatts of new peaking capacity on line by summer 2001.

In response, the Energy Commission created an emergency permit process for new simple-cycle power plants that could be on-line by September 30, 2001. This process, in which the Energy Commission was directed to take action on permit applications within 21 days of the application being found complete, required the close coordination and cooperation among all involved federal, state, and local agencies. Projects considered under this process were also considered emergency projects exempt from the California Environmental Quality Act (CEQA).

Local air district and Air Resources Board staff were responsive to the emergency permit process. The air districts or the Air Resources Board provided their standard independent review of projects' conformance with state and federal Clean Air Act requirements, typically within 10 to 14 days, allowing the permitting to be completed within the 21-day process objective. Project applicants were encouraged by the Energy Commission staff to contact the district or Air Resources Board as soon as possible prior to filing an application, to assist in meeting the 21-day process objective. This allowed the 30-day public and U.S. Environmental Protection Agency review to be completed in parallel with the 21-day process. A process for applicants to provide a self-evaluation of their project and report expected emissions was also available but was not implemented for any of the projects because air district and Air Resources Board staff were able to respond to the process needs.

In addition, Executive Order D-24-01, issued February 8, 2001, directed the Air Resources Board to establish an emissions reduction credit bank to make credits available to power plant

peaking sources that need emissions offsets in order to add new or expanded peaking capacity for the summer peak season in 2001. The lack of emission reduction credits had been identified as one potential roadblock to the timely development of new peaking power plants for the summer of 2001.

The Public Utilities Commission took actions to expedite regulated utility interconnection of new power plants, particularly peakers, to the transmission system. It also helped expedite telecommunications hook-ups so that new generators could be connected to the Independent System Operator telemetry system.

The result of this effort was that five new projects totaling 522 megawatts (465 megawatts derated for summer operation) (see Table A-2) were licensed under the Energy Commission's emergency permit process with a requirement to be on-line by September 30, 2001 (One of the Pegasus project's four 45 megawatt turbines was to be on-line by March 31, 2002.)

Of these projects, GWF Hanford (95 megawatts nominal; 85 megawatts derated for summer operation) came on-line as of September 30, 2001. Calpine Gilroy Phase I (135 megawatts nominal; 120 megawatts derated for summer operation) did not meet the September 30, 2001 on-line date, but it is expected to be on-line by mid-December. The Calpine King City project (50 megawatts nominal; 45 megawatts derated for summer operation) is currently expected to be on-line before the end of December 2001. The Pegasus project (180 megawatts nominal; 160 megawatts derated for summer operation) is currently on hold until it can successfully negotiate with the California Power Authority or another entity to buy either the project itself or power from the project. The RAMCO Chula Vista 2 project owners chose not to pursue their project (62 megawatts nominal; 55 megawatts derated for summer operation) after they were unable to reach mutually-agreeable terms for a power purchase agreement with the Department of Water Resources. Thus, a total of 280 megawatts (250 megawatts derated for summer operation) is expected to be on-line by the end of December 2001.

Six additional projects initiated under the Independent System Operator Summer Reliability Generation process were permitted under this Energy Commission emergency permit process. Five of these were on-line by the September 30, 2001 deadline, while the sixth project, CalPeak Border, came on-line on October 24, 2001.

Four project developers filed applications under the emergency permit process and subsequently withdrew from the process. One, Baldwin Hills, faced significant local opposition because of long-term plans to turn the oil and gas production area where the project was proposed into a major inner-city public park. The applicant withdrew this project after a proposed decision was published suggesting that the permit be denied because the project would be unable to meet the September 30, 2001 on-line deadline because of the timing of air permits. A second, Electricity Provider, Inc.'s Lancaster project, withdrew because of transmission interconnection difficulties. The other two projects were withdrawn before the applications were complete because they were unable to provide the information needed to complete the application in time to meet the September 30, 2001, on-line deadline.

Table A-2
SUMMARY OF ENERGY COMMISSION EMERGENCY PERMIT PROCESS RESULTS

	Derated Capacity (megawatts)	Capacity online by 9/30/01	ISO/SRG*	Location	Application file	Application complete	Decision Date	On-line Date*	Comments
Wildflower Larkspur	90	90	Yes	San Diego Co.	3/8/01	3/16/01	4/4/01	7/16/01	
Wildflower Indigo	135	135	Yes	Riverside Co.	3/8/01	3/16/01	4/4/01	9/10/01	Two units on line on 7/26/01. Third unit on line on 9/10/01.
Ramco Chula Vista 2	55	0	No	San Diego Co.	3/15/01	5/21/01	6/13/01	cancelled	Project cancelled due to lack of power purchase contract
Alliance Drews	40	40	Yes	San Bernardino	3/21/01	4/6/01	4/25/01	8/15/01	
Alliance Century	40	40	Yes	San Bernardino	3/21/01	4/6/01	4/25/01	9/15/01	
GWF Hanford	85	85	No	Kings Co.	4/9/01	4/12/01	5/10/01	9/1/01	
Calpine Gilroy Phase I	120	0	No	Santa Clara Co.	5/1/01	5/6/01	5/21/01	12/14/01	Expected to be on-line by mid-December 2001.
CalPeak Escondido	49.5	49.5	Yes	San Diego Co.	5/8/01	5/17/01	6/6/01	9/30/01	
CalPeak Border	49.5	0	Yes	San Diego Co.	6/14/01	6/18/01	7/11/01	10/24/01	
Pegasus Energy	160	0	No	San Bernardino Co.	4/27/01	5/11/01	6/6/01	6/02	Project on hold pending possible contract with California Power Authority
Calpine King City	45	0	No	Monterey Co.	4/5/01	4/11/01	5/10/01	12/28/01	Expected to be on-line by the end of December 2001. Major amendment to move the site delayed the start of construction to 6/25/01.
La Jolla Baldwin Hills	53	0	No	Los Angeles Co.	5/15/01	5/25/01	Withdrawn 6/21/01		Withdrawn due to permitting problems and public opposition
EPI Lancaster I	240	0	No	Los Angeles Co.	5/24/01	6/4/01	Withdrawn 7/24/01		Withdrawn due to problems in transmission system interconnection
Evergreen Concord	50	0	No	Contra Costa Co.	6/1/01	Withdrawn 8/1/01			Withdrawn due to inability to provide adequate application in time to meet 9/30 online deadline
CENCO Electric Co.	50	0	No	Los Angeles Co.	6/25/01	Withdrawn 7/26/01			Withdrawn due to inability to provide adequate application in time to meet 9/30 online deadline
Total on line by 9/30/01									
ISO SRG		**354.5**							
Non-ISO SRG		**85**							

* Independent System Operator Summer Reliability Generation project

Overall, the average permitting time for projects that completed the emergency siting process was 21.8 days (see Figure A-3). The time required for construction of the six projects completed by September 30, 2001 ranged from 103 to 159 days. Construction time for the three remaining projects, with on-line dates between October 1 and December 31, 2001, is expected to average about 181 days. Of the 15 simple-cycle projects that were seriously considered for development in 2001, ten projects (67 percent) were permitted and started construction. Five projects (33 percent) either withdrew from the permitting process or were permitted but not constructed. None of these had a long-term power purchase agreement with the Department of Water Resources.

Reasons for Degrees of Success

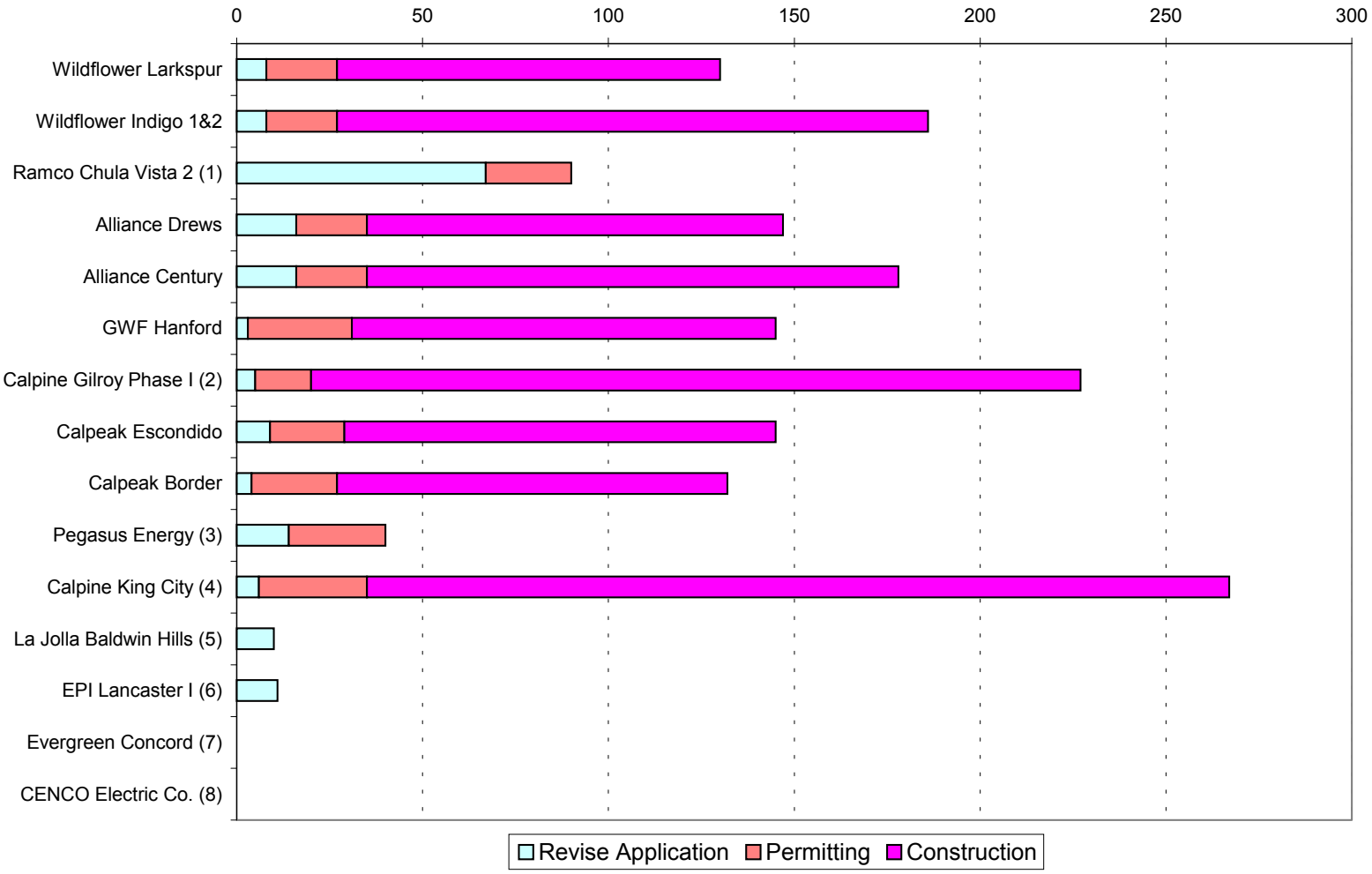
Success in bringing new projects on-line through the Energy Commission's emergency siting process can be attributed to a number of factors. The declaration of an emergency by the Governor and Executive Orders D-26-01 and D-28-01 were prerequisites for the Energy Commission to use its emergency licensing powers. In terms of the process itself, as a result of events during the previous summer, the Energy Commission had spent time in 2000 developing a conceptual framework for the emergency siting process. This coupled with the extensive experience within the Energy Commission and working relationships with other agencies, allowed for the development of a process that could be executed rapidly with appropriate consideration of public health, safety and environmental issues and close coordination with other regulatory agencies. Process features included a permit application based on a streamlined checklist form that was easy for applicants to complete, focused on the critical information, and allowed the project developers to self-screen their projects to some extent.

A fatal-flaw analysis approach also focused permit review attention on key factors that might make projects unsuitable for emergency approval or that could prevent them from coming on-line in time to help alleviate the emergency. The Energy Commission used its expertise to review power plant proposals and to identify the information needed for this fatal-flaw analysis, and provided developers with a simple checklist of information requirements for emergency permit applications. This fatal-flaw approach allowed both developers and the Commission to concentrate resources on the key aspects of projects, which was essential given the short timelines for project planning and review.

Also critical to the effort was the creation of the state emission reduction credit bank for new peaking power plants by Executive Order D-24-01. These emissions reduction credits were made available through the Air Resources Board to peaking projects that needed emissions offsets to add or expand capacity. Projects using the emission reduction credit bank were required to meet the September 30, 2001 deadline to be on-line. The emissions reduction credits were available for nitrogen oxides (NOx) and particulate matter less than 10 microns (PM_{10}). The credits were issued for a three-year period and will expire November 1, 2003. Prior to expiration, the users of the credits will be required to secure emissions reductions for the remaining life of the project if they desire to continue operating. For project developers that agreed to sell their power under contract to the Department of Water Resources, the emissions reduction credits were made available where necessary, at a 50 percent reduction in cost. As of September 30, 2001, a statewide total of seven projects had completed transactions to use the emissions credit bank and

six other projects had applications in process. The general opinion of the Air Resources Board staff is that the bank served to expedite the permitting of these projects.

Figure A-3. Days to Project Completion



Notes:
(1) RAMCO cancelled this project due to lack of power purchase contract.
(2) Project is expected to be on-line by December 14, 2001.
(3) The Pegasus project is on hold pending a possible contract with the California Power Authority.
(4) Calpine received an extension of the deadline to be online from September 30 to December 28, 2001, due to site control problems.
(5) The Baldwin Hills application was withdrawn due to permitting difficulties.
(6) The Lancaster I application was withdrawn due to transmission interconnection difficulties.
(7) Evergreen was unable to complete the application for its Concord project.
(8) CENCO was unable to complete its application.

The extensive use of the Internet also contributed to the success of the emergency permitting process. E-mail and websites were used to make information on the process available to developers and to facilitate exchange of information with government agencies and the public during the review of applications. Information on the emergency permit process was also made available at workshops held in Northern and Southern California soon after the process was announced.

Finally, the extraordinary cooperation among federal, state, and local agencies, the ability of the Energy Commission and other agencies to dedicate resources to the expedited review process, and the dedication of state agency and air district employees and contractors were important in the success of this effort. The Governor's Generation Team provided an excellent mechanism for ensuring coordination and communication among all of the interested agencies in the Energy Commission's process.

Because there were insufficient staff resources at the Energy Commission to respond to the workload associated with the emergency siting process at the same time other generation tasks were being performed, the Energy Commission's efforts greatly benefited from having a peak workload contract in place and having the Executive Order waive certain state contract requirements. Without all of these factors, we would not have achieved the same level of success.

The emergency siting process was designed to include public participation to the extent possible under such a short timeline. During the review of the initial projects considered in this process, few members of the public appeared at hearings, and opinions were generally evenly divided between concern about the projects and their potential impacts and concern about the need for new electrical generation to avoid rotating outages. By early summer, as the public's initial sense of crisis had begun to abate, environmental groups and members of the public became increasingly vocal in opposition to particular emergency projects, and opposition to the emergency process had begun to appear. Overall, public acceptance of the legitimacy of the emergency process appeared to be closely tied to public perception of the existence of an emergency to be addressed.

Some of the reasons for failure of other proposed projects (both those that indicated they would file as well as those that did file) to meet the September 30, 2001 deadline included:

- the inability to reach mutually-agreeable power purchase terms with the Department of Water Resources,
- equipment availability problems (e.g., turbines and emission controls systems),
- lack of adequate time to fully plan a new power plant project from scratch, and
- lack of site control.

For most projects, it is difficult to identify which of these factors had the greatest impact because they tended to blend together. For example, the lack of a power purchase agreement complicated financing, which made it difficult to line up equipment and gain site control. Uncertainty about equipment or site availability made it difficult to proceed with other aspects of project planning or establish an agreeable price with the Department of Water Resources. The projects that filed

for emergency permits and then withdrew did not provide an official reason for their actions, and while it is possible to make intelligent inferences about the nature of their problems, it is not clear how the different factors affected their decisions. It is even more difficult to make this determination with developers that planned to file applications but never did.

In reality, development of a power plant, even a small simple-cycle unit, is a complicated undertaking. It requires careful planning and coordination with multiple entities. Developers who had not begun planning a specific peaking power plant project before the Executive Orders were issued in February had only eight months in which to find equipment and an appropriate site, arrange financing, develop engineering designs for the power plant and related facilities, prepare an application for expedited review, and then build the project.

The timing of project applications and their relative degrees of success provides useful insight. Six projects permitted through the emergency process were on-line by the September 30 deadline. All six projects had been under development in some form during the fall of 2000, several months before Governor Davis' declared state of emergency and the Executive Orders. One, the GWF Hanford project, was reviewed under the Energy Commission's long-standing Small Power Plant Exemption (SPPE) process. GWF's original application for a project at this site was filed in May 2000, and the SPPE was approved on April 11, 2001. GWF then pulled its SPPE project in favor of the project proposed under the emergency permit process due to insufficient transmission capacity to serve both projects.

The other five projects to meet the September 30, 2001 on-line deadline were among the six projects that were initiated in the fall of 2000 under the Independent System Operator Summer Reliability Generation (ISO SRG) program. Four of the six projects filed applications under the emergency permit process by the end of March, roughly two months after the Governor's initial Executive Order creating the process. Only one non-ISO SRG project, RAMCO Chula Vista 2, filed by the end of March. (This project was an addition to a 44-megawatt ISO SRG project that went through local permitting.) Four new (non-ISO SRG) projects were filed in the emergency process by May 1, 2001. All of these also received permits, though difficulties relating to site control and environmental issues arose during permitting or construction for two of these projects. Of the four non-ISO SRG projects filed after May 1, 2001, two were unable to provide all of the information needed in the application, the third withdrew before staff completed its assessment, and the fourth withdrew shortly before a permit decision was made.

This pattern suggests that developers who started to plan projects after Governor Davis issued the initial Executive Orders had great difficulty meeting the timelines. Two or more months were required to prepare and submit applications, even though the information requirements for the emergency permit process were reduced from the normal permit application requirements. Developers who had difficulty in obtaining financing or equipment, establishing appropriate routes for transmission lines or other linear facilities, or obtaining site control required additional time to finalize applications. Even with expedited construction schedules, these peaking power plants typically take at least three months to construct and bring online. Developers who were still attempting to complete their applications in June 2001 had great difficulty demonstrating that they would be able to bring the projects on-line by the September 30, 2001 deadline.

Less than half of the new permitted capacity required to be on-line by September 30, 2001, under this effort was on-line by that date. Delays and possible project cancellations have resulted from problems with equipment availability, site control, and financing. The extreme changes in the electricity market in California, in terms of the overall market structure and the organizations involved in purchasing electricity to meet demand in the state and in terms of the wholesale prices, also made it extremely difficult for potential project developers to plan projects.

Recommendations if Repeated

The emergency siting process can be successful if:

- the nature of the emergency is understood and accepted by the public,
- the process is kept simple and closely coordinated,
- there are sufficient agency resources available,
- there is adequate time for development of projects, and
- only appropriate projects are approved.

Public perception and acceptance of the fact that a real emergency exists is very important to the success of the emergency siting process. If the process is reinstated, it should be tailored as narrowly as possible to ensure that it is used only by projects that address real emergency needs for power generation to prevent rotating outages or real threats to the public's health and safety or the state's economy.

The public's perception that valid projects are being proposed and permitted is also important. The application criteria must be defined in such a way that only those projects located or designed to truly respond to the emergency and have limited environmental and public health and safety impacts are permitted. If it appears the process is being used as a mechanism to sneak "bad" projects onto the system without valid public scrutiny, then the credibility of the process is at risk.

Accelerate Construction of Approved Energy Commission Projects

Prior to the emergency, the Energy Commission had approved two large combined- cycle projects (Sutter at 540 megawatts nominal [504 megawatts derated for summer operation] and Los Medanos at 555 megawatts nominal [532 megawatts derated for summer operation]); a large simple-cycle project (Sunrise at 320 megawatts nominal [285 megawatts derated for summer operation]); and one small combined-cycle project (Procter & Gamble at 44 megawatts). All of these projects were intended to be on-line either prior to or during the summer of 2001. Under Executive Order D-25-01, the Energy Commission worked with the developers to accelerate construction of these power plants so that their electricity could be available by the beginning of summer. The immediate objective was to bring 1,262 megawatts of Energy Commission-certified power plants on-line by July 1, 2001. The Order applied to any power plant permitted by the Energy Commission and facilitated the increase in generating capacity of existing power

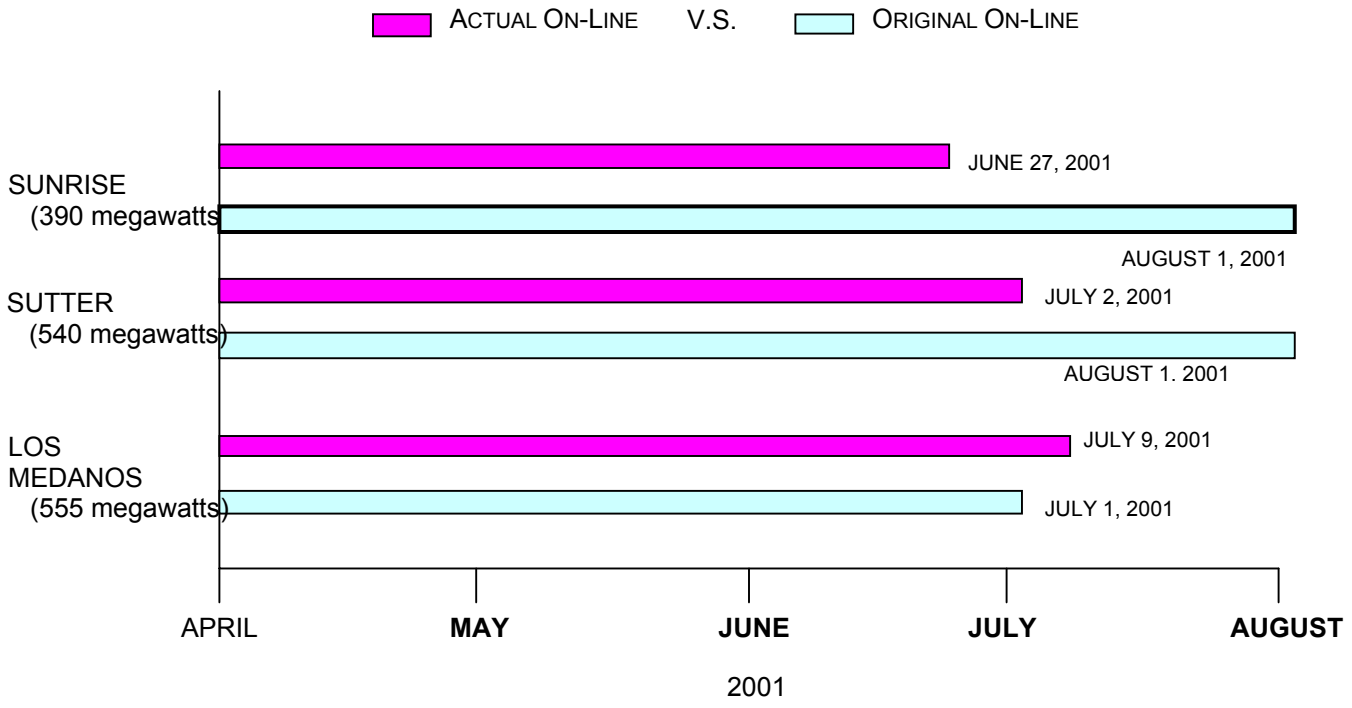
plants, the construction of simple- cycle power plants coming on-line in 2001 and 2002, and the construction of combined- cycle power plants coming on-line in 2002 and 2003.

The activity included the following:

- tracking each project's compliance with all conditions of certification,
- coordinating with agencies concerning resolution of construction issues,
- selecting Chief Building Officials for engineering plan check and construction inspection,
- resolving Chief Building Official-related disputes concerning interpretation of building codes,
- assisting project owners to comply with all aspects of their certificate, and
- processing project amendments.

As of July 9, 2001, all four of the previously approved projects for 2001, representing 1,459 megawatts nominal (1,365 megawatts derated for summer operation) were on-line. Two of the projects came on-line a month or more earlier than planned (see Figure A-4). One project came on-line later than planned because of a series of mechanical problems. The delay caused by these problems would have been significantly greater, however, without the efforts to accelerate construction.

Figure A-4
ACCELERATED CONSTRUCTION of APPROVED PROJECTS



In addition, several of the simple-cycle power plants approved this summer under the emergency siting process, and other combined-cycle projects expected to be on-line in 2002 and 2003, benefited from the Executive Order, allowing them to become operational earlier than would otherwise have been possible.

Reasons for Degrees of Success

The efforts to accelerate the start of these new power plants was dependent upon Executive Order D-25-01. This Order authorized the Energy Commission to suspend the legal requirements that normally control the review of post-certification amendments to the extent that they would prevent, hinder, or delay the prompt mitigation of the effects of the emergency. Consequently, the Energy Commission, using its experience and expertise, was able to significantly expedite the amendment process and make it possible to maintain construction schedules while reducing workload on the part of the project owners and the Energy Commission. The normal amendment process requires full Energy Commission approval, including publication of a staff analysis, public and agency review and comment periods, multiple public notices, and to the extent necessary, public workshops and/or hearings. The Energy Commission's amendment process is triggered for any wording change to one or more conditions of certification, even for insignificant changes.

The expedited amendment process was applied to the processing of 49 amendments associated with projects under construction or in operation. The expedited amendment process substantially streamlined the processing of 45 amendments for projects currently under construction with on-line dates in 2001, 2002, and 2003, and for four rerate (operational) projects. Nine more amendments are in process as of November 28, 2001, and more are expected over the coming months. The 49 amendments processed by the Energy Commission during this period ranged from the relatively simple, to more complicated modifications, such as conversions from simple-cycle to combined-cycle, significant site re-configurations, air quality emission adjustments, and night construction authorizations.

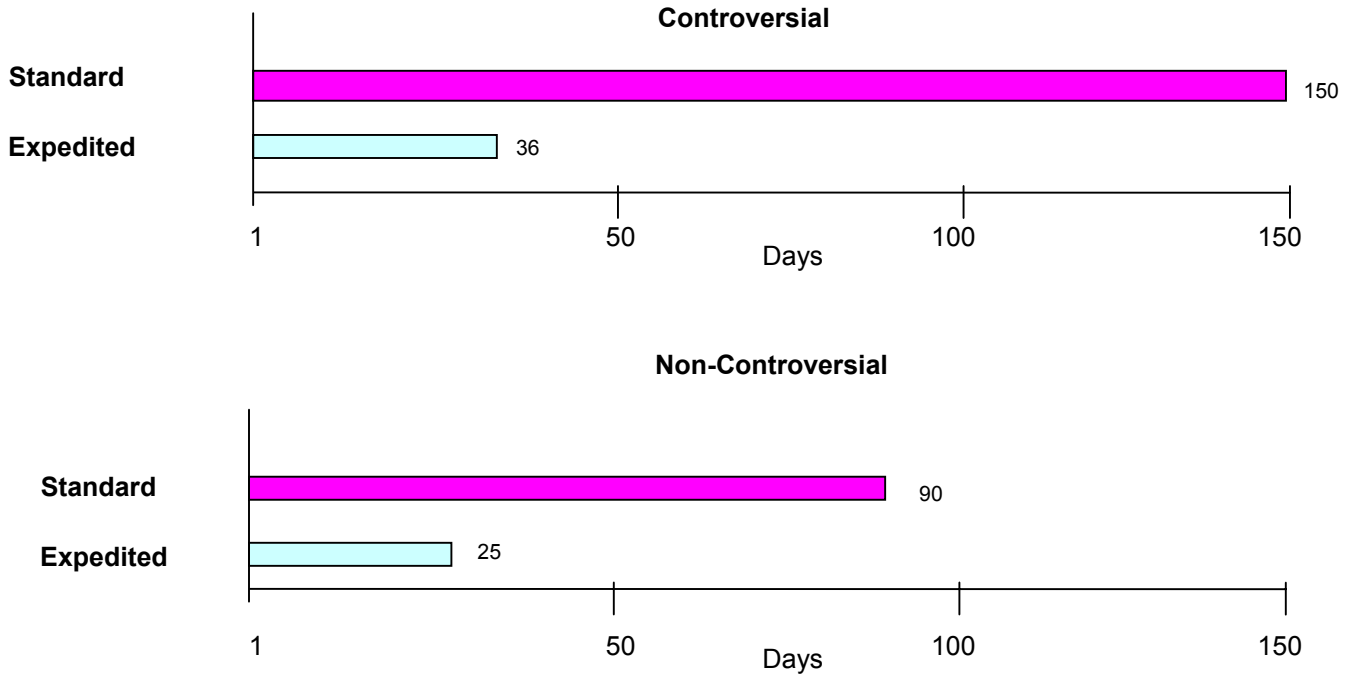
The Energy Commission uses two types of expedited amendment processes depending on whether or not there is potential for environmental impacts and/or public opposition. For amendments that had no potential for adverse environmental impacts and were not controversial, the Energy Commission staff was able to complete the process in an average of 25 days (see Figure A-5). This process included steps to evaluate the request, approve the modification if appropriate, issue an approval letter to the project owner, post the approval letter on the Energy Commission's website, and file a CEQA Notice of Exemption with the State Clearinghouse. The Energy Commission processed 47 amendments in this manner. Without Executive Order D-25-01, these amendments would have averaged three months, required at least twice the staff resources, and could have delayed construction activities. This much more efficient review remains consistent with CEQA, and is in line with how other agencies address project modifications that have no potential for environmental impacts.

For amendments that had potential impacts, or were controversial, the normal amendment process requiring full Energy Commission approval and full public notice and review of staff's

analysis was applied. However, the normal 30-45 day public review period for staff's analysis was reduced to 10-21 days, as was the time staff used to complete its analysis. The Energy Commission processed two amendments in this manner, including one for the Sunrise project. The average processing time for the two amendments with potential impacts was about five weeks. Without Executive Order D-25-01, these amendments would have averaged about five months.

Two other factors contributing to the success of this effort were the ability to bring on a contractor to serve as a power plant compliance project manager and to provide technical support, and the construction bonus incentive. Executive Order D-27-01 provided incentive payments for projects that could beat their anticipated on-line date. The Sutter and Sunrise power plants are eligible to receive over one million dollars each for coming on-line early.

Figure A-5
AVERAGE TIME TO APPROVE AMENDMENTS



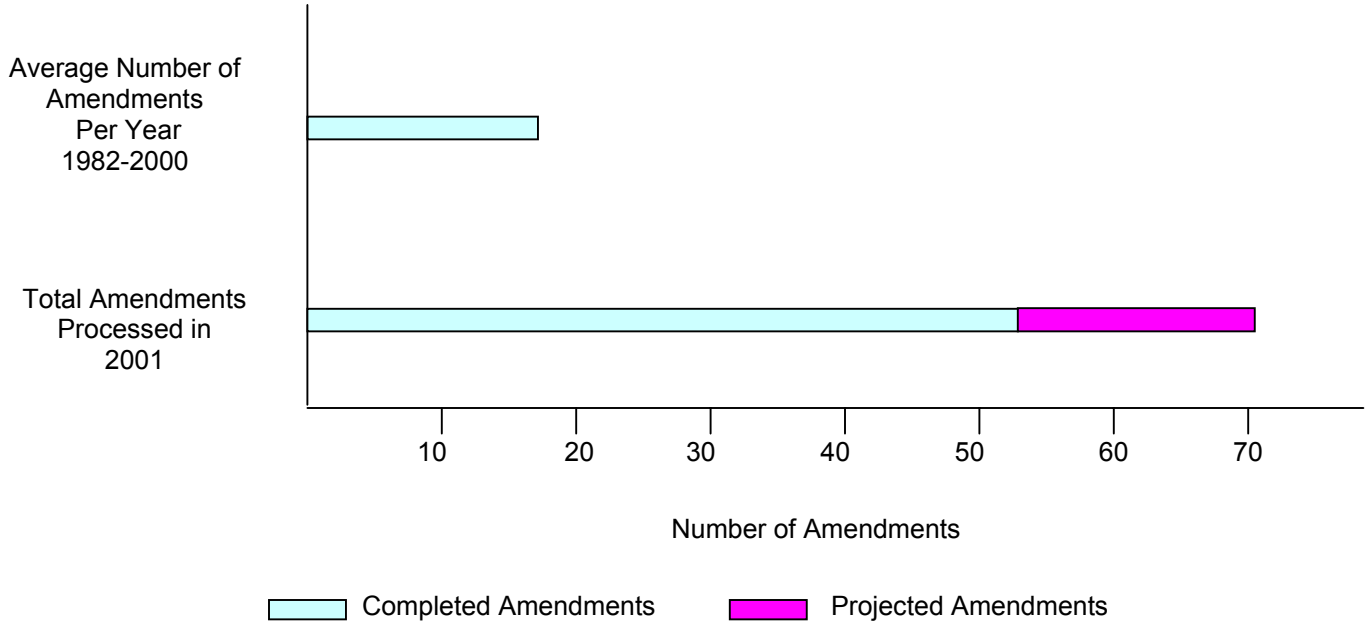
Recommendations if Repeated

Changes in projects during construction and early operation are inevitable. In the event of an emergency, it is imperative that changes that are necessary in projects and that do not represent significant adverse public health, safety, or environmental impacts be reviewed and approved as rapidly as possible to allow construction to stay on schedule. At a minimum, an expedited amendment process such as that provided by Executive Order D-25-01 should be used in future emergency situations.

The expedited amendment process should also be used to effectively address the substantial increase of projects expected to be certified over the next several years. The number of power plants to be certified by the Energy Commission is unprecedented, and anticipated amendments will dramatically increase workload for power plant compliance program staff. The Energy Commission processed about 321 amendments from 1982 through 2000, averaging about 18 per year (see Figure A-6). In contrast, for 2001, the Energy Commission has already processed 54 amendments (43 of which were emergency amendments) and is projected to process about 70 at the current rate. As more and more power plants get certified, the number of amendments will increase even more. Without relief from the normal post-certification amendment process as articulated above, project modifications will be delayed and significant state resources will be expended in order to keep up with normal project changes after certification.

For these reasons, the Energy Commission also should consider changes to the Siting Regulations or the Warren-Alquist Act to continue the concepts articulated in Executive Order D-25-01.

Figure A-6
INCREASE IN PROJECT AMENDMENTS



Summary of Recommendations for Emergency Permitting

Below is a summary of the Energy Commission recommendations that address how to deal successfully with future emergencies using site inventory, emergency permitting, and construction acceleration activities.

1. Implement the emergency response as soon as possible, using realistic time constraints and recognizing what a developer needs and what agencies need to achieve a desired outcome.

2. Provide developers with comprehensive and reliable communications regarding siting information, process and project incentives, permitting process requirements, and the availability of equipment.

3. Avoid redefining incentives during the process and clearly communicate what the state wants to achieve and is willing to do to achieve it.

4. Tailor the emergency process to ensure that it is used only by projects that address the defined emergency needs.

5. Define the application criteria in such a way that only those projects that are located or designed to respond to the emergency and have limited environmental and public health and safety impacts are permitted.

6. Clearly communicate the nature of the emergency publicly so the public understands and accepts the emergency response.

7. Ensure there are sufficient agency resources available for a response.

8. Use an expedited amendment process such as that provided by Executive Order D-25-01.