

# **Infrastructure Research: Snapshot of the Nation, Focus on the West**



**Federal Energy Regulatory Commission  
Office of Markets, Tariffs and Rates  
Policy Innovation and Communication  
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## Executive Summary

### *Researched Snapshot of North American Regions, Focus on the West*

#### Background

This document provides a quick look at over 50 documents and Web sites related to energy infrastructure in North America. It is organized into the following nine categories:

electric	gas and electric	oil and gas
price-responsive demand	hydro	coal/rail
gas	oil	energy

Most documents are from the last few months. The information is excerpted directly from the documents as much as possible to provide an accurate report of what the information source wrote. The most important aspects of each information are highlighted for ease of review.

The reason behind this research was to identify what answers organizations and individuals may have to the types of questions the Federal Energy Regulatory Commission will be asking at its upcoming regional infrastructure conferences.

Namely,

- , What system improvements are needed to provide adequate fuel diversity, prevent the exercise of market power and ensure adequate reliability?
- , How will this be paid for?
- , And, how can government help achieve what needs to be done?

The scope of the information is North American. To focus on the November 2, 2001 Seattle conference, this Executive Summary includes some of the most insightful graphics of all the reports. The goal is to capture the western infrastructure story as seen from the author's/organization's perspective and to complement the assessment our Division of Market Development has completed of this area.

## Findings

The research found the greatest amount of current information on energy infrastructure was on electricity. The most important findings in electricity resulting from this research are:

- , the Federal Trade Commission has found competition, once the transition is complete, will provide electricity customers with additional benefits
- , regional approaches are critical for an effective transition and subsequent operations
- , price-responsive demand is important and needs to be more widespread.

Numerous reports and presentations on electricity describe and glean lessons from the effects of the California restructuring experience on Western markets. Two of the most graphic-rich information sources (The Western Governors' Association *Conceptual Plans for Electricity Transmission in the West* and James L. Sweeney's *California Electricity: From Opportunity, Through Risk, Challenge & Crisis Towards Blight*) help tell the western infrastructure story with the proverbial *pictures* instead of *the thousands of words* that have been written on the matter. Here is a listing of figures, what they show and their location.

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With regard to price-responsive demand, the most significant finding is that more than a dozen utility companies in 17 states offer pilot programs with time-of-day pricing for electricity. In the West, Puget Sound Energy has gotten the electric industry's highest award from EEI for its innovative services for helping customers manage their electric use. This *Excerpts and Highlights* includes information on the price-responsive demand program of some of the other utilities in the Midwest, the Northeast, and the South. According to one report found, if instituted nationally, time-of-day programs could save \$10 billion to \$15 billion annually while eliminating the need for 200 additional power plants over the next decade.

The research found eliminating duplicative reviews of proposal to probably be the most effective way for facilitating the timely and efficient permitting of pipelines.

In *Convergence: Natural Gas and Electricity in Washington*, the Washington State Office of Trade and Economic Development expresses concern about whether there will be enough gas for the facilities being planned to generate the electricity needed in the state and the region.

With regard to hydropower infrastructure, the research found that the greatest delay for licensing and relicensing projects stems from dispersed decision making among federal and state agencies.

Similarly with oil, the Association of Oil Pipelines notes expansion of oil pipeline infrastructure would occur more quickly with coordinated reviews, as well as government provided guidance and leadership in land use practices to reduce encroachments on pipeline rights of way.

And finally, the research found that there are various state and federal incentives to maximize oil and gas recovery and that the economics of the coal and rail relationship seem to be fine.

**Focus on the West  
(Graphics)**



















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## Excerpts and Highlights from Research on Energy Infrastructure (by Area)

### Electricity

*Competition and Consumer Protection Perspectives on Electric Power  
Regulatory Reform: Focus on Retail Competition*  
Federal Trade Commission  
September 2001

This report identifies several points about how restructuring has proceeded at the state level so far. It notes **that there is no indication that competition—once the transition period is completed—will not produce additional benefits to electricity customers.** It states that competition provides stronger incentives for the efficient deployment of capital for generation investments and for suppliers to offer innovative services and products to consumers. The report notes that **policies are needed in retail and wholesale markets that will increase demand-side responsiveness. In conjunction with variable pricing for generation services, retail suppliers should be permitted to offer competitive metering and billing services to their customers.** Such competition would encourage the development of innovative new services, such as real-time pricing. The report notes that competitive wholesale markets are important to achieving effective competition in retail markets.

*Report on Existing and Potential Electric System Constraints and Needs Within the  
ERCOT Region*  
Electric Reliability Council of Texas (ERCOT)  
October 1, 2001

This is a report of the status of the ERCOT transmission system and recommendations to address transmission constraints. **Some limitations in the ERCOT transmission system have jeopardized service to load, have affected market participants' choice of electricity providers and have limited market transactions.** The current major ERCOT transmission constraints are: (1) South Texas to North Texas, (2) To and From West Texas, (3) To and From South Texas and the Rio Grande Valley, (4) To Dallas, Denton, Collin, and Tarrant Counties (5) From Northeast Texas and (6) From Houston Area

The report details all the major projects ERCOT has supported and recommended and that are currently under development by transmission service providers to mitigate these constraints. The report further details the major projects proposed by individual transmission service providers that ERCOT has reviewed and recommends. It includes

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the three regional planning groups who will determine additional actions needed to serve load and continue to resolve transmission constraints.

*Conceptual Plans for Electricity Transmission in the West*  
Western Governors' Association  
August 2001

According to the report, **transmission requirements resulting from greater use of natural gas are expected to cost about \$2.1 billion.** Greater use of coal, wind, geothermal and hydro facilities for electricity generation requires much more transmission than for gas-fired facilities because the gas facilities are primarily located near load centers. The cost of this transmission will also be significantly more: perhaps as high as \$8 billion - \$12 billion.

The study identified 4 **alternatives to conventional transmission expansion:**

- (1) emerging transmission technologies to increase transfer capability
- (2) more efficient use to reduce overall demand
- (3) peak load management and
- (4) distributed generation.

**More timely and accurate price signals to consumers are required for these alternatives to be feasible as well as to lower the overall costs of electricity.** Concepts related to infrastructure in the report are:

- (1) **maintain reliability while supporting load and resource diversity**
- (2) **build into prices and costs the incentives for regional expansions and improvements**
- (3) **establish a Western interconnection-wide planning process and**
- (4) **streamline and coordinate review processes for transmission construction.**

**The report recommends:**

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- (1) spreading new transmission costs across all users of the system and using RTOs to recover costs**
- (2) using congestion costs/revenue for upgrades that relieve congestion and**
- (3) using open seasons for new transmission lines.**

*Causes and Lessons of the California Electricity Crisis*  
Congress of the United States, Congressional Budget Office  
September 2001

This paper looks at California's attempt to restructure its electric utility industry and at the crisis in the state's electricity market that began in 2000. The paper describes the various conditions in western states that put stress on California's energy market. It examines some of the elements of the state's restructuring plan that turned the stress into crisis. Finally, the report has data on capacity, net generation, market players in California's electricity market, electricity consumption, utilities' gas prices, and utilities' prices in the California Power Exchange's day-ahead auctions.

The table on the next page shows supply-side and demand-side lessons for future restructuring efforts in the report.

## Excerpts and Highlights

Table 1. Lessons for Future Restructuring Efforts

Supply-side lessons	Restructuring is more likely to succeed when more of the power in a market is free to respond to price signals
	Utilities should be free to manage the risks of adverse price movements in the competitive environment by entering into <b>long-term contracts and hedging to get critical price certainty through the market instead of through regulated fixed prices</b>
	Building enough generating capacity to meet the demand for electricity under any scenario may not be cost effective, but large reserves will help ease restructuring transitions
	In competitive markets, producers' investment in reserve capacity should be consistent with the amount of price stability (or, equivalently, supply security) that consumers are willing to pay in the form of long-term supply contracts
	<b>Restructuring must address regulatory barriers to the construction and operation of transmission system</b>
	<b>Consumers must be willing to accept that lower prices resulting from access to out-of-state power supplies will sometime rise when their state sends supplies to other parts of the region</b>
	<b>Making transmission capacity flexible and supply responsive may change the regulation and pricing of transmission services and how lines are approved, for example, through node pricing and RTOs</b>
Demand Side Lessons	<b>Consumers need to face the real cost of electricity</b>
	<b>Residential and commercial customers need to acquire many of the same demand-management capabilities that industrial customers have</b> (techniques include real-time monitoring and adjustment of household electricity use, contracts for interruption when price reaches pre-determined level)
	Price signals should encourage consumers not only to buy more or less power now but also to invest in the ability to adjust their future power use
	Demand responsiveness achieved from having consumers pay market prices may also be achieved if utilities either compensate customers for reducing their use or allow customers to resell to others (in which case, a third party is paying them to reduce their use).
	There is an <b>important distinction between long- and short-term capabilities for lowering power use</b> (California ranks among the lowest nationally in per capita use of electricity by households because of building insulation, appliance efficiency and use of natural gas, but households there have few real-time devices that would allow them to reduce electricity use on short notice because they don't see real electricity costs).

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*Transmission Planning for a Restructuring U.S. Electric Industry*  
Eric Hirst and Brendan Kirby  
June 2001

According to this report, **maintaining transmission adequacy at its year-2000 level will require a quadrupling of transmission investments over the next decade (add almost 27,000 GW miles vs the 6,000 GW-miles planned)**. The cost of the new capacity and replacing retired capacity is about \$56 billion this decade. There is likely to be twice this amount invested in generation. Information on congestion costs and locations would help energy markets and the load-serving entities in them.

The report points out the importance of planning for generation and load as an alternative to building new line. It advocates a broader geographic scope of competitive energy markets for transmission planning, to gain the benefits of new transmission investments and reduce generator opportunities for market abuses. Although advanced technologies are still too expensive for widespread application, some are economic in niche applications to solve, for example, stability problems. **Transmission planners need detailed information on timing, magnitudes, and locations of new generating units as well as future loads; developers of this generation share such competitive information only when required, for example, for environmental permits and transmission-interconnection studies. In a retail-competition world, it is uncertain who will have the information needed for reliable projections of retail load and whether they will share this information with planners.** Economies of scale argue for overbuilding, but this can increase the financial risks for transmission owners. RTOs need to develop the specifics of their transmission-planning processes including those mentioned above.

*From Opportunity, Through Risk, Challenge & Crisis, Towards Blight*  
Sweeney, James L. (Stanford University),  
October 2001

This PowerPoint presentation provides a history of the events leading to the California crisis and has some insightful graphics on the number of plant applications since 1980, the source and amounts of electricity imports into the state, the average amount of daily generating capacity offline from January 1999 through August 2001 and the capacity, and names of new generating plants under construction. The presentation makes the following recommendations to California:

- (1) allow private sector development of new generation capacity

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- (2) encourage investments to decrease risk of inadequate supply
- (3) improve fuel supply infrastructure
- (4) improve transmission infrastructure**
- (5) allow retail pricing to accurately reflect wholesale markets
- (6) increase electricity demand responsiveness**
- (7) promote competition
- (8) allow broad range of contractual structures and
- (9) reduce dependency on political decision-making.

It offers the following lessons:

- (1) The California experience does not tell us that "deregulation does not work"
- (2) economically isolating the supply side of the market from the demand side can lead to disaster
- (3) implement appropriate risk bearing**
- (4) monitoring, analysis, and leadership are crucial after major system changes**
- (5) differentiate between short-term and long-term issues.**

## Excerpts and Highlights

### *Potential Economic Benefits to California Load from Expanding Path 15 - Year 2005 Prospect*

Keith E. Casey and Jim Chen (California ISO)  
September 24, 2001

This analysis supplements a larger ISO study evaluating the costs/benefits of increasing the capacity of Path 15 in 2005. It examines the extent to which suppliers may exercise market power in 2005 under various scenarios of new generation investments and hydro conditions. The study indicates the **cost benefits to load will likely equal or exceed the \$300 million the upgrade may cost.**

### *2000 System Disturbances Review of Selected Electric System Disturbances*

North American Electric Reliability Council, Disturbance Analysis Working Group  
September 2001

In 2000, utilities in the U.S. and Canada reported **58 incidents of system disturbances.** Almost half of the disturbances reported were related to severe weather. **Personnel related actions were the cause of 12 incidents.** The third major cause (ten incidents) of disturbances was equipment failure.

**The cause of 12 of the disturbances was operator or maintenance error. Although the report draws no conclusions, it expresses concern that the number of events might be indicative of a larger problem as utilities reorganize and are deregulated.**

### *Transmission Expansion: Issues and Recommendations (Draft Report to the NERC Planning Committee)*

North American Electric Reliability Council, Transmission Adequacy Issues Task Force  
September 17, 2001

The report covers reliability, planning, cost-recovery, siting, and education. Key to justifying new transmission lines are maintaining reliability of the grid in addition to retaining its commercial value by eliminating market congestion, facilitating more liquid electricity markets and addressing safety and environmental impacts.

## Excerpts and Highlights

Table 2. NERC Task Force Recommendations

Area	Task Force Recommendation
Planning	NERC should strictly enforce its reliability planning standards
	<b>NERC should expand system adequacy definition to include economic aspects</b>
	NERC and those responsible for reliability should survey market participants on information needs regarding future capacity and other requirements and update and circulate non market-sensitive information, if appropriate from a non-competitive perspective
	Transmission owners should review and document future transmission corridor requirements with appropriate regulatory bodies
	NERC should serve as a forum for investigating, developing and applying new and existing transmission planning tools to help formulate decisions and streamline the planning process
	<b>Major transmission projects, where possible, should provide for "appropriate" margin beyond the current to near-term system requirements</b>
	The coordination process among regions, systems and others in the market should include planning for generation facilities.
	<b>Regulators should adopt clear/consistent rules for recovery of transmission investments at reasonable and pre-determined rates of return</b>
	NERC should guide parties' trying to distinguish between upgrades to the system that are needed for technical reasons and those needed to connect generation; regulators should use this information to review current policies and eliminate confusion on the cost responsibility for transmission investment
Siting	<b>NERC should sponsor a forum to develop generalized siting and routing guidelines for transmission projects that cross state (provincial) lines, federal lands and international borders.</b>
	Planning and siting should encourage greater and earlier regulatory/ stakeholder participation
	Transmission providers should be able to identify and acquire critical ROWs for projects as early as possible and should be able to acquire and recover costs for future use corridors
	Staffing levels at regulatory agencies should allow the siting process in a timely fashion; <b>siting laws should allow applicants to pay for consultants needed to make the process timely.</b>
Education	NERC should provide current information and materials for regulators/public
	Early in the planning process, project sponsors and other associated parties should develop and present project-specific information on planning, justification, environmental effects and operation of proposed transmission projects
	<b>NERC should provide SMEs to help regulators with transmission policy formulation and decisions.</b>

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*An Approach to Action for the Electricity Sector*  
North American Electric Reliability Council  
June 2001

This paper identifies physical and cyber security challenges and potential actions for organizations in the electricity sector. The four areas requiring the greatest investigation or special care are:

- (1) the interdependencies between electricity and other industries
- (2) **threats to the system arising from employees of companies in the electricity sector**
- (3) the need for sharing information on physical and cyber threats and
- (4) cyber security.

*10-Year Coordinated Plan Summary, 2000-2009—Planning and Operation for Electric System Reliability*  
Western Systems Coordinating Council (WSCC)  
October 2000

Load growth, fuel supplies and IPP generation are creating uncertainty and affecting long-range planning. **According to the report, the projected capacity margins and fuel supplies are anticipated to be adequate to ensure reliable operation in all areas of the region. The capacity margin adequacy over the next ten years assumes the timely construction of about 30,200 MW of net new generation and assumes average weather conditions.** If demand exceeds supply, portions of the regions may be asked to reduce demand. WSCC has in place measure to reduce the likelihood of a system disturbance. **Increased generation from combined cycle resources are expected to increase 434% and account for 16.3% of total resources in WSCC by 2009.** Combustion turbine generation is expected to increase by 44% and account for 5.5% of total WSCC resources by 2009. The remaining resources projected for 2009 include: 32.6 percent hydroelectric, 19.0 percent steam-coal, 12.5 percent steam-gas, 4.9 percent nuclear and 9.2 percent miscellaneous.

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*2001 Information Summary*  
Western Systems Coordinating Council  
Summer 2000

The pamphlet presents historical and projected seasonal peak hour demand, annual energy load, capacity resource, and other information for the WSCC region and each of its four areas or sub-regions.

**Annual energy loads and summer peak demand grew most in the Rocky Mountain Power Area for the reporting period.** The summer peak grew from 7,640 MW in 1999/2000 to 8,589 MW in 2000/2001 (12.4%). The Annual Energy loads from 46,277 GW to 51,481 GW (11.2%) respectively for the same period.

Winter peak demand grew the most in the Arizona-New Mexico-Southern Nevada Power Area, from 13,783 MW in 1999/2000 to 14,944 MW 2000/2001 (8.4%). Rocky Mountain Power Area was a close second, with a change rate of 7.8% as winter peak grew from 7,427 MW to 8,003 MW.

**The greatest number of circuit miles planned for WSCC between 2001 and 2010 is for the NWPP, where 61,985 of the circuit miles planned—or 53.6% of the total circuit miles planned for the WSCC—will be built.** Most of the lines will be from 115 kV to 161 kV. The California-Mexico Power Area will build 23.7% of the total circuit miles planned for the WSCC between 2001 and 2010, most of the lines will be from 115 kV to 161 kV.

**The largest amount of IPP generation in WSCC is expected to come on line in the California-Mexico Power Area as 34,763 MW begin operations between 2001 and 2010.**

*Assessment of the 2001 Summer Operating Period*  
Western Systems Coordinating Council  
May 16, 2001

This late Spring projection of the Summer 2001 operating period forecasted that the aggregate 2001 summer total internal demand for the Region was to be 135,136 MW, 3.2% above last summer's actual peak demand. The Summer 2000 peak demand reflected normal to somewhat higher than normal high temperatures in most of the Region and occurred when service was curtailed to non-firm customers. Had the non-

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firm customers not been curtailed, Summer 2001 projection would be 1.7% above the 2000-Summer actual peak demand.

The projected energy requirements for June through September 2001 were forecast to be 3.2% above Summer 2000 requirements.

The forecast assumed average weather.

*Database Reports (needs, projects, etc.) (Website [www.wicf.org](http://www.wicf.org))*  
Western Interconnection Coordination Forum (WICF)  
October 4, 2001

The report lists the name of the company and project, a description, the estimated cost in U.S. dollars, the status of the project and the year it is to be completed.

*Infrastructure 2001: Transmission Business Line and Incremental Infrastructure Improvements for Western Power Situation – Next 5 Years*  
Bonneville Power Administration  
March 19, 2001

This Excel spreadsheet downloaded from the Web briefly describes what Bonneville Power Administration will be doing to address load service additions, generation integration, transmission constraints and other grid additions. According to the document,

### **BPA may require:**

- (1) relief in their borrowing and overtime caps
- (2) **an expedited NEPA process**
- (3) more FTEs, and
- (4) expedited processes for condemnation, cost sharing agreements, and material and construction contracts.

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*National Transmission Grid Study Website (<http://tis/eh/doe/gov/ntgs/>)*  
U.S. Department of Energy  
September 21, 2001

**The *National Transmission Grid Study* will identify the major transmission bottlenecks across the U.S., examine both the technical and economic issues resulting from these transmission constraints and provide innovative solutions to reverse these trends.** The plan is to model major transmission paths and identify the constraints that lead to high electric costs. Collaboration among states regions and the federal government should then be able to focus on eliminating the constraints. The specific issues the study will address are transmission planning and the need for new capacity, transmission siting and permitting, business models for transmission investment and operation, operation of interconnected transmission systems, reliability management and oversight, and new transmission technologies. The group putting together the study had workshops in September in Michigan, Georgia and Arizona to solicit input. **They solicited presentations on (1) alternative business models for transmission investment and operation, (2) transmission planning and the need for new capacity, (3) transmission siting and permitting (4) reliability management and oversight, (5) transmission system operation and interconnection and (6) new transmission technologies.**

*Table Summarizing Planned Grid Enhancement Projects (EL01-47-000, Removing Obstacles Order)*  
Federal Energy Regulatory Commission  
April 12, 2001

The table summarizes short-and long-term transmission grid enhancement projects that would reinforce parts of the Federal transmission system owned and operated by Western Area Power Administration.

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*California's Energy Crisis: Review of Summer 2001* (PowerPoint Presentation)  
Keith E. Casey (California ISO)  
September 20, 2001

Provides a lot of graphics to tell the California story. Summarizes events. Observes that prices have moderated significantly under the FERC June 19th Order. **Reports that compliance with dispatch instructions has become a serious problem, which undermines the effectiveness of the must-offer requirement.** Concludes that it is difficult to discern how much of this change is due to the June 19th Order and other favorable market conditions. Specifically, demand has been moderate because of mild weather and conservation. Supply has increased because (1) there have been fewer generation outages, (2) there were more new generation additions and (3) hydro conditions were better than expected. And the final favorable market condition is that natural gas prices declined significantly.

### Price-Responsive Demand

*Puget Sound Energy's "Personal Energy Management" Program* (Website, [www.pse.com](http://www.pse.com))  
Puget Sound Energy  
as of August 2001

**Puget Sound Energy, Bellevue, Wash., the utility subsidiary of Puget Energy (NYSE:PSD), was awarded the Edison Award (the electric industry's highest honor) for becoming the first electric distribution utility in the nation to provide time-of-day price and comparative time-of-day consumption information to all classes of customers.** The program exposes customers to the cost savings and efficiency benefits of shifting electricity demand to off-peak periods. Customers can plan and check their energy usage on PSE's Website, using the Personal Energy Management™ system (PEM). Overall, the company is honored for combining advanced technology with practical tools that will give customers a real stake in energy markets.

The Puget Website tells that the main purpose of the program is to lower customers' electricity costs and help the environment by providing them with an incentive – a lower rate—for using energy during the hours when electricity costs less to provide. Customers under the PSE time-of-day billing program pay a lower rate—about 15% lower than a flat, fixed rate—for power used during the low-demand, off-peak hours.

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Conversely, they pay about 15% more than the fixed rate for electricity used during peak-demand hours.

With the Puget program, PSE encourages customers to both conserve power and shift their energy use to lower demand times. By doing so, PSE doesn't have to use additional resources to meet the demand, such as fossil fuel burning power plants--that are the Website points out "hard on the environment"--and purchasing electricity wholesale. PSE points out that by making small changes, such as doing laundry after 9 p.m., consumers are doing their part to reduce the overall power demand in the region.

As part of their program, PSE also allows customers to get a credit of 5¢ per kilowatt hour (kWh) for all kilowatt hours beyond the 10% cutback if they reduce their electric use by 10% or more compared to the same month last year.

**The Personal Energy Management Program is made possible through a highly integrated software platform called ConsumerLinX™.** A central-office "brain" or customer data system, ConsumerLinX™ ties together usage, service and billing information. Designed and built by ConneXt®, ConsumerLinX™ is organized around the customer, not the meter. **ConneXt® is a Seattle-based developer of billing and customer case systems for energy utilities and subsidiary of Puget Sound Energy.** PSE's wireless meters send energy-usage data from customers' homes and businesses. Together with the Internet-based energy-information tool ConsumerLinX™, real-time energy usage is matched with real-time energy-market pricing.

**The Website includes a map of customers who are in the program; a printed version of it is available.**

*Florida's Gulf Power "GoodCents SELECT" Efficiency Program (Website, [www.southerncompany.com](http://www.southerncompany.com))*

Southern Company  
as of October 18, 2001

For \$4.53, customers can get a **special rate, a programmable thermostat and a smart meter** Customers can program the thermostats to take advantage of electricity when it is lower than the standard residential rate 80% of the time. The smart meters customers get in the GoodCents program are a communication gateway to talk with Gulf Power on how much energy a customer is purchasing at each price and will be able to provide

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access to other services such as cable TV and the Internet in the future. Customers also get GoodCents Surge Protection, a \$3.45 monthly value, at no cost.

*Florida Power & Light's "On Call" Energy Management Program (Website, [www.fpl.com](http://www.fpl.com))*  
as of October 18, 2001

*On Call* is a free, no obligation residential energy management program in which customers agree to let FPL occasionally cycle off selected appliances for short periods - but only when absolutely necessary to conserve energy during heavy demand. In exchange, FP&L credits the customer's electric bill every month, even when the program isn't activated. **Customers can save up to \$161 a year. In areas where customers can enroll, over 600,000 are participating.** To qualify for the program, customers must live in an area served by the *On Call* program, be a residential customer, receive service under FPL's standard rate and plan on remaining in their current residence for at least six months, agree to allow FPL to remotely control the customer's appliance(s) at specific times and not require life-sustaining equipment in the home.

FPL installs a special energy management device that is connected to the circuits controlling the flow of electricity to one or more qualifying appliances. Only appliances on the program will be affected. All other electrical equipment in the home continues to operate normally. There are times when FPL does not call on a customer for a month or more. When FP&L needs to use *On Call*, the utility's load management computer activates the program, usually just a few days a month and only during peak demand times, and interrupts the flow of electricity to the selected appliances for the time specified in the *On Call* agreement. FPL would extend an interruption only during power system emergencies.

*Xcel Energy's "Saver's Switch" Program for Some Midwest States, (Website, [www.xcelenergy.com](http://www.xcelenergy.com))*  
XcelEnergy  
as of October 18, 2001

BudgetSmart from Xcel Energy(SM) offers the free *Saver's Switch* program to help customers in Minnesota, North Dakota and South Dakota save money. **Xcel cuts 15% off of the electric energy charge on participating customers' bills for June, July, August and September, whether the utility uses Saver's Switch or not.** The program

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helps XCEL: (1) reduce peak electric demand; (2) maintain system reliability on peak days; (3) maintain low electric rates and (3) help the environment by reducing the need for more power plants. A certified energy expert installs the Saver's Switch device on the outside of the customer's home next to the central air conditioner condenser unit. On high-demand days between June 1 and September 30, Xcel cycles the condenser on and off in 15 minute cycles from late morning through the evening. Only the condenser is turned off; the system fan will continue to run. Those interested in participating must be an Xcel Energy residential electric customer with central air conditioning. Saver's Switch is not available for those who live in an apartment or if have a window or wall air conditioning unit. The switch is installed three to five weeks after sign up. The 15% savings begin after *Saver's Switch* is installed and will run through the September bill. The number of participants are limited and some restrictions apply. The company has been accepting applications on a first-come, first-served basis. Xcel Energy automatically renews a customer's participation on a yearly basis.

*Pepco's "Kilowatchers Club" and "Curtable Load Program"* (Website,  
<http://www.pepco.com>)

Potomac Electric Power Company  
Summer 2001

Over 162,000 residential customers volunteered to allow Pepco to cycle their air conditioners off-and-on on weekday afternoons as part of the Kilowatchers Club and more than 300 commercial and governmental customers in the Curtable Load Program agreed to reduce demand during Summer 2001. Pepco limits how often it activates the Kilowatchers program to 15 afternoons during May through September and never on weekends or holidays. Program members get bill credit for each day that cycling occurs.

*Efficient Reliability: The Critical Role of Demand-Side Resources in Power Systems and Markets*

The National Association of Regulatory Utility Commissioners  
June 2001

Load growth has increased while demand-side management programs have declined. Consequently, the power system infrastructure is strained. Demand-side resources can help enhance the reliability of electricity supply. These resources include efficiency and load management, customer-owned generation, and customer responses to market prices. The benefits of demand-side resources are both economic and

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environmental. They match needs with resources and avoid weak links in the supply chain. Consideration of cost-effective efficiency and load-management resources will result in greater reliability and economy than a strategy focused exclusively on supply. Energy efficiency, pricing reforms, and load management programs have the potential to displace as much as half of the nation's anticipated load growth over the next decade. Presently, market barriers and flaws block demand-side responses. There are **three major venues for deploying cost-effective efficiency resources: wholesale market structures, rates and rules for wires companies, and promoting end-use efficiency.** In conclusion, energy efficient investments can "peak-proof" the electric system.

*Peak Load Management or Demand Response Programs--A Policy Review*  
 Association of Energy Services Professionals International, Inc.  
 August 2001

The drivers for peak load management are system reliability, cost avoidance, risk management, system efficiency, and customer service. The following table shows the peak load management programs currently available for energy end users.

Table 3. Peak Load Management Programs

End User Class	Program Option
Residential	direct load control
	demand bidding or buyback programs
	time-of-use rates
Commercial and industrial	interruptible programs
	curtailable load programs
	real time pricing
	demand bidding or buyback programs

Implementation of these programs in marketing and operations is critical for success. **Challenges and opportunities for peak load management remain concerning utility restructuring, independent system operators, distributed resources and backup generation, power exchanges, information systems, hedging with call options, value-added service as part of facility management, and retailers, aggregators, and distributors.**

*Savings Seen in Hour of Energy Use*

## Excerpts and Highlights

Fred Bayles (USA Today)  
August 13, 2001

A phrase search on the Internet turned up this article quoting Dilip Wagle with McKinsey & Co in Seattle as saying that **if instituted nationally, time-of-day programs could save \$10 billion to \$15 billion annually while eliminating the need for 200 additional power plants over the next decade. More than a dozen utility companies in 17 states offer pilot program with time-of-day pricing for electricity.** In some cases, the article states, consumers are charged different rates during the day instead of a fixed rate.

### Gas

*Item AD-3, September 26 Public Meeting--California Infrastructure Update,*  
(Sept. 21, 2001 memo to the Commission)  
Federal Energy Regulatory Commission (Energy Projects: Rob Cupina, Bill Zoller and Ken Niehaus)  
September 21, 2001

All estimates indicate a deficit in take away capacity in California. Infrastructure improvements (whether done by the state's utilities or by the interstate pipelines) to meet California's growing electric generation demand are needed and are preferable to an increasing reliance on curtailment rules.

*Item AD-3 September 26 Public Meeting--California Infrastructure Update* (Sept. 27, 2001 memo to the Commission)  
Federal Energy Regulatory Commission (Ken Niehaus, Energy Projects)  
September 27, 2001

**Recently certificated interstate capacity for southern California totals 755 MMcf/d.** Over the same time period, a total take-away capacity of 585 MMcf/d has been authorized in southern California. Kern River's project in Docket No. CP01-422-000 is designed to bring additional mainline capacity and supplies into California. North Baja's project will in part bring supplies to California; however, that project is intended to serve markets in Mexico. Tuscarora's project would serve markets in Nevada and northern California. Both North Baja's and Tuscarora's projects would be downstream of other interstate systems that otherwise deliver gas into California. The additional capacity

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expected by their proposals is 1,763 MMcf/d. CPUC says PG&E is considering two expansions for 2003, one for the north and the other from the east, totaling 700 Mmcf/d.

### *California Energy Projects Recently Certificated*

Federal Energy Regulatory Commission (Ken Niehaus, Energy Projects)  
September 2001

FERC has recently certificated for Southern California, a total of 755.5 MMcf/day, 1,536.1 miles using 259,256 HP in compression and costing \$513.8 million. For all California, FERC has recently certificated a total of 962.5 MMcf/d, 1,557.1 miles of pipe and 356,756 HP in compression costing \$635.4 million.

### *Natural Gas Infrastructure Issues*

California Energy Commission  
September 2001

In this report the California Energy Commission (CEC) examines supply, interstate pipeline capacity, intrastate pipeline capacity, and storage serving California natural gas markets. The report sums up a large amount of background information on projected natural gas demand, especially potential gas-fired electric generation projects across the west, supply, projected and planned interstate and intrastate pipeline projects, and storage. The report concludes that **California should:**

- (1) facilitate increased natural gas production within California
- (2) support expansion of intrastate pipeline backbone systems through integrated planning, by investigating incentives, and by developing new design criteria and reliability standards
- (3) re-examine curtailment policies
- (4) optimize non-core use of storage, and
- (5) encourage more storage development.

## Excerpts and Highlights

*Final Report of the IOGCC/NARUC Pipeline Siting Work Group*  
IOGCC/NARUC Pipeline Siting Group  
July 2001

The report has ten recommendations for state governments to facilitate timely and efficient state and local permitting of pipelines. The main thrust of the recommendations appears to target the elimination of duplicative review of pipeline siting proposals.

*Major Projects: Certificated, Pending, and On the Horizon*  
Federal Energy Regulatory Commission (Office of Energy Projects, Jeff Wright)  
October 4, 2001

These tables show major interstate natural gas pipelines certificated since 1997, major projects pending Commission review, and projects that have been announced but not yet filed with the Commission. [These tables show the capacity, miles of pipe, compression horsepower, location, and costs.](#)

### Gas and Electric

*Convergence: Natural Gas and Electricity in Washington*  
Washington State Office of Trade & Economic Development  
May 2001

The construction of natural gas-fired generation in the Pacific Northwest may cause economic problems. This depends on when the new power plants come on line and the region's ability to deliver low-priced gas. Various circumstances such as sustained hot weather in California and subsequently reduced inventories of natural gas in 2000-01 resulted in increased gas bills. Prices at key delivery points and the capacity of pipelines also have a significant influence on natural gas flows. The development of new gas supplies may not completely offset diminishing reserves. In conclusion, wholesale electricity and natural gas prices are subject to extreme price volatility. This volatility is likely to affect both markets simultaneously because of the increasing convergence of electricity and natural gas markets. The report expresses concerns about the region's increased demand for gas and pipeline capacity.

## Hydro

*Report on Hydroelectric Licensing Policies, Procedures and Regulations—  
Comprehensive Review and Recommendations Pursuant to Section 603 of the Energy Act  
of 2000*

Federal Energy Regulatory Commission  
May 2001

**The median time for FERC processing of an application is 43 months. The cause of delay is generally the statutory scheme dispersing decision-making among federal and state agencies.** This scheme also contributes to the costs of preparing a license application. To streamline the application process, **the Commission advises Congress to restore the Commission's position as the sole federal decisional authority.** Changes in Commission regulations and policies may promote efficiency, but they are not a substitute for legislative reform.

*Pending Applications for Hydroelectric Project License and Relicense*  
Federal Energy Regulatory Commission (John Paquin, Office of Energy  
Projects)  
October 16, 2001

This table lists pending dockets related to licensing and relicensing of projects. It lists the applicant, the date filed and the states in which the projects are located.

## Oil

*Comments for the Record re: Prices of Refined Petroleum Products*  
(follow up to questions asked in FERC Outreach Meetings, no docket)  
Association of Oil Pipelines  
September 2001

Pipelines carry about 68% of petroleum and petroleum products moved domestically; 27% is moved by water and about 5% by truck or rail. The transportation component of \$1.56/gallon gasoline is about 2 cents. Quality-requirements for the growing variety of products shipped through pipes affect pipeline capacity and operating flexibility. **Oil pipeline infrastructure would expand more quickly if agencies**

**coordinated reviews and the government provided guidance and leadership in land use practices to reduce encroachments on pipeline rights-of-way.**

### Oil and Gas

*Investments in Energy Security: State Incentives to Maximize Oil and Gas Recovery*

Interstate Oil and Gas Compact Commission  
December 1999 and Supplement

This is a catalogue of various state and federal programs promoting oil and gas exploration and production. **State incentive programs are diverse. They include tax relief and petroleum information services provided to the oil and gas industry.** There is an economic analysis of selected state incentives.

### Coal and Rail

*Investments in Energy Security: State Incentives to Maximize Oil and Gas Recovery*

Interstate Oil and Gas Compact Commission  
December 1999 and Supplement

U.S. coal production is second only to China's among world producers. Like China, the U.S. consumes most of its own production. **Domestic coal consumption and production have been growing steadily over the past 25 years, and they continued to do so over the past 25 years. In 1989, domestic consumption equated to 91.4% of U.S. coal production. By the end of 1999 the pattern had changed very little 94.3% of production. As of December 2000, the latest long-term EIA projections anticipate a .9% annual growth rate in coal production from 1999 to 2020 or a 20.6% increase over the period. These projections assume that electricity generation will continue to rely largely on existing coal-fired units for baseload, with increasing capacity utilization at existing coal units, and on natural gas turbine units for most new capacity.** The projections did not assume any of the proposed scenarios for ratification of the Kyoto Accords or any future regulation of hazardous pollutants under the Clean Air Act Amendments of 1990, such as mercury or airborne particulates. U.S. coal prices in inflation-adjusted dollars peaked in 1975 shortly after the oil embargo crisis and

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declined steadily for the next 25 years. **Prices started to increase in November or December 2000.** The average prices of coal delivered to electric generators will decrease only 1.1% per year. This reflects the transportation cost factor, which is expected to add slightly to the bottom line prices paid as consumption of western coals continue to increase, adding to average transportation distances for steam coal. **Transportation costs can constitute a sizable part of the cost of coal delivered to a plant, depending on its location and/or distance from the import dock. A recent study EIA cites shows that, historically, coal transportation costs for steam coal shipped by rail to electric utilities have been steadily declining. The most important reasons why coal price have increased recently are (from an energy infrastructure perspective) are that (1) in Appalachia during the past 15 years, the number of mines fell from 3,990 mines in 1986 to 1,518 in 1998 and (2) throughout the U.S. mines have been closed prematurely where the costs to overcome geologic problems cannot be recovered in the remaining years.**

### *Rail Rates Continue Multi-Year Decline*

Office of Economics, Environmental Analysis and Administration, Surface  
Transportation Board  
December 2000

Rail rates continued their multi-year decline in 1999, led by reductions in the rates charged to eastern coal and grain. **Since 1984, with no adjustment for inflation, eastern rates have fallen 1.2%, western rail rates have fallen 24.7%, and rates for the nation as a whole have fallen 19.7%.** The economic regulatory reform resulting from the Staggers Rail Act of 1980 has helped railroads become financially stronger while lowering average rate levels. While there are clearly instances where railroads retain a degree of pricing power, nearly all of the productivity gains have been passed along to rail customers (and ultimately consumers) in the form of lower rates. The significant rate reductions cited in the study imply that **shippers would have paid an additional \$31.7 billion for rail service in 1999 if revenue per ton-mile had remained equal to its 1984 inflation-adjusted level. Had revenue per ton-mile not fallen by 45.3 percent, rates would have been 1.828 times higher, or \$69.9 billion. Compared to the 1984 rate level, shippers saved nearly \$31.7 billion in 1999 alone.** While average rail rates have fallen, and while \$31.7 billion in annual savings is an enormous sum of money, it is fair to say that **not all rail customers have benefitted equally from these savings.** Certain individual rates have increased, not all sectors have enjoyed the same level of rate declines, and even when a shipper's rates have declined in absolute terms, that shipper

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might feel disadvantaged if a key competitor's rates have fallen relatively more. However, consumers, and the Nation as a whole, have benefitted enormously.

*Energy Policy Act Transportation Rate Study: Final Report on Coal Transportation*  
Energy Information Administration  
October 2000

The share of coal from higher-sulfur regions of Northern Appalachia and the Illinois Basin declined, while shipments of low-sulfur sub-bituminous coal from the Powder River Basin increased. The combined effects of larger quantities of Basin coal moving greater distances to Eastern markets led to a **24 percent increase in the average distance of all contract coal shipments, from 640 miles in 1988 to 793 miles in 1997.**

Since over 85 percent of the coal distributed from the Powder River Basin is transported by rail, the overall rail share of total domestic coal shipments increased from 57.5 percent in 1988 to 61.8 percent in 1997 as the Powder River Basin accounted for an increasing share of total coal distributed. **Shipments of coal by river barge and by truck generally retained their shares, while the aggregate of shipments by other modes (including shipments via the Great Lakes, tidewater ports, conveyor, tramway, and slurry pipelines) lost market share to rail.**

The study found **no evidence of widespread inflation of shipping rates by the major coal-hauling railroads.**

## Energy

*It's Time for a National Energy Policy Reality Check: A Review of the Current Energy Policy Debate from a Taxpayer and Consumer Perspective*  
Glenn R. Schleede  
June 21, 2001

This report gives the author's opinions about various aspects of the current energy policy debate. It includes observations about the recent growth in natural gas demand, and suggests that natural gas can fuel much of the nation's near-term growth in electric generation demand with little change in current government policy. The author's recommendations include government action to promote reasonable and timely access of producers to natural gas reserves both onshore and offshore, timely permitting of new

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pipeline, market-based prices for the commodity, and reasonable rates of return on regulated assets.

*Staff Proposed California Energy Demand 2002-2012 Forecast*  
California Energy Commission  
October 2001

The forecasts and scenarios in this document are for the Electricity Outlook report. This document alerts readers about the uncertainty of projections--especially the extent to which demand reductions of 2001 will continue in the future, as well as the full impacts of rate surcharges, newly legislated programs and the effects of the September 11<sup>th</sup> attack on economic growth in California and on energy growth. The report (1) lays out a “business as usual” case, excluding the summer 2001 demand reductions and (2) applies the demand reduction patterns to the “business as usual case” to develop three scenarios.

*Energy Policy in the South*  
Southern Governors’ Association  
September 2001

Southern Governors, through the Southern States Energy Board, organized state energy officials to identify their key national energy policy principles and options. **They recommend an integrated set of actions to address the U.S./Southern States’ energy future.** The Governors point out that although most decisions on a state by state level are necessary, **a regional approach can offer advantages for seeking solutions to securing the overall goals of energy security, stability, reliability and affordability, while improving the environment.**

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Table 4. Principles and Options from Southern Governors’ Association

<b>Principles</b>	<b>Options</b>
Ensure diversity of domestic energy resources to achieve energy and economic stability	Look at energy sources as a whole and consider incentives that will <b>encourage investment in production of all types of fuels</b> . Review and revise regulations to create a reliable energy system that is environmentally responsible
Address supply to enable market stability and ensure energy reliability	Recognize that regional approaches to ensuring coordination and cooperation are important for addressing energy and environmental issues across states
Increase conservation and improve efficiency to minimize environmental impact and foster demand response	Reach out and educate people more aggressively on choices affecting quality of life of future generations.
<b>Expand and strengthen infrastructure capacity</b>	Note regulatory and jurisdictional challenges resulting from restructuring infrastructure limits
Advance research & development and use of clean energy technologies and systems	To continue environmental improvements, policy makers need to examine what financial and regulatory incentives align technology advancement more closely with environmental regulatory requirements

*Toward a National Energy Strategy*  
 United States Energy Association (USEA)  
 February 2001

Among other things, the USEA makes numerous policy recommendations and suggests a large number of tools on infrastructure-related issues. Following are the highlights of their recommendations and a sampling of the tools they suggest.

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Table 5. Some USEA Recommendations and Tools

<b>Highlights of USEA Recommendations</b>	<b>Sampling of USEA Suggested Tools</b>
Enhance availability of diverse energy supplies	Balance consideration of competing uses for federal lands under Federal Land Policy Management Act
	Maintain and use Strategic Petroleum Reserve only for severe supply disruptions
	Use investment tax credits, tax incentives and accelerated depreciation (or their equivalents to encourage facility construction, but don't subsidize product costs
<b>Encourage energy efficiency and affordable prices</b>	<b>Focus government policies on supply and demand—expand the type and magnitude of price-responsive demand in electricity markets.</b>
	Promote efficiency products through directed research and market availability, but avoid artificial efforts to mandate market penetration of efficiency schemes
<b>Rely on properly structured marketplace for energy decision regarding pricing, technology deployment, energy efficiency and selection of fuels and energy suppliers</b>	Regulators should <b>only cautiously impose new regulations on the energy chain</b>
	Regulators should base efforts to address health, safety and environmental concerns on sound science and cost-effective options
	Regulators should not impose regulation in the hope of reaching a goal that researchers cannot demonstrate as achievable at a reasonable cost
	<b>Regulators should reject attempts to impose restriction or competitive handicaps that limit the ability of distribution utilities to compete in newly emerging energy service markets, while ensuring against cross-subsidization between regulated and unregulated business</b>
	Extend LIHEAP; increase funding/expand low-income weatherization program
Balance energy use and environmental concerns	Develop/deploy infrastructure in favor of all technologies capable of producing energy at emission levels below existing national standards.
	Improve U.S. infrastructure to give more attention to safe and efficient movement of energy goods and services

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<b>Highlights of USEA Recommendations</b>	<b>Sampling of USEA Suggested Tools</b>
<p><b>Unify the energy policy process and create regulatory predictability</b></p>	<p>Establish interagency task force on energy policy; have Secretary of Energy as chair and economic policy departments and agencies and appropriate national security organizations as members</p>
	<p>Adopt long term view and do not impose new regulatory standards until acceptable technology to achieve the new standards is demonstrable</p>
	<p><b>Comprehensive electric industry restructuring should encourage long-term improvements to electric system and address issues in electricity restructuring bills, like repealing PURPA and PUHCA, facilitating new state restructuring actions by resolving federal/state jurisdictional issues, resolving market power and transmission access problems, and grandfathering existing state restructuring plans to protect them from federal preemption</b></p>
	<p><b>Adopt comprehensive tax legislation for construction of new transmission and fair electric competition among munis, coops and share-holder owned.</b></p>
	<p>Develop policies that promote investment in new generation and transmission lines</p>
	<p><b>Promote voluntary, flexible approaches to RTOs and electricity markets</b></p>
	<p><b>NERC should evolve into self-regulating organization, with FERC oversight, that enforces reliability rules on all transmission operators and users.</b></p>

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*Memorandum of Understanding (MOU) regarding Energy Development and Conservation in the Western United States*

U.S. Department of Energy, U.S. Department of the Interior, U.S. Department of Agriculture, U.S. Environmental Protection Agency, and Members of the Western Governors  
August 2001

This MOU establishes a framework for cooperation between Western States and the Federal government to rapidly address immediate energy problems facing the West. The effort will assist the work of the federal interagency task force that President Bush created under Executive Order 13212 to expedite energy-related projects.

List of Excerpts and Highlights from Research, by Topic and Author

Note: \*\*\* = Means the item was not printed and summarized, an e-version is available

**Electric**

Bonneville Power Administration, *Infrastructure 2001* (Excel spreadsheet)

Casey, Keith E. (California ISO), *California's Energy Crisis: Review of Summer 2001*, September 20, 2001

Casey, Keith E. and Jim Chen (California ISO), *Potential Economic Benefits to California Load from Expanding Path 15 - Year 2005 Prospect*, September 24, 2001

Congress of the United States, Congressional Budget Office, *Causes and Lessons of the California Electricity Crisis*, September 2001

Electric Reliability Council of Texas (ERCOT), *Report on Existing and Potential Electric System Constraints and Needs Within the ERCOT Region*, October 1, 2001

Federal Energy Regulatory Commission, *Table Summarizing Planned Grid Enhancement Projects under EL01-47-000 (Removing Obstacles Order)*, April 12, 2001

Federal Trade Commission, *Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform: Focus on Retail Competition*, September 2001

Hirst, Eric and Brendan Kirby, *Transmission Planning for a Restructuring U.S. Electricity Industry*, June 2001

\*\*\*MAAC-ECAR-NPCC (MEN) Study Committee, *2001 Summer MAAC-ECAR-NPCC Interregional Transmission System Reliability Assessment*, May 2001

North American Electric Reliability Council, Transmission Adequacy Issues Task Force *Transmission Expansion: Issues and Recommendations (Draft Report to the NERC Planning Committee)*, September 17, 2001

## Excerpts and Highlights

North American Electric Reliability Council, *2000 System Disturbances Review of Selected Electric System Disturbances*, September 2001

North American Electric Reliability Council, *An Approach to Action for the Electricity Sector*, June 2001

\*\*\*San Diego Gas & Electric and California Review Group, *Comprehensive Progress Report of the "South-of-Songs Path Re-Rating*, March 23, 2001

Sweeney, James L. (Stanford University), *From Opportunity, Through Risk, Challenge & Crisis, Towards Blight*, October 2001

U.S. Department of Energy, *National Transmission Grid Study* (Website, <http://tis/eh/doe/gov/ntgs/>), as of September 21, 2001

\*\*\*VACAR-ECAR-MAAC (VEM) Study Committee, *Report on the VEM 2001 Summer Interregional Transmission System Reliability Assessment*, May 2001

Western Governors' Association, *Conceptual Plans for Electricity Transmission in the West*, August 2001

Western Interconnection Coordination Forum (WICF), *Database Reports (needs, projects, etc.)* (Website, [www.wicf.org](http://www.wicf.org)), as of September 2001

Western Systems Coordinating Council, *2001 Information Summary*, Summer 2000

Western Systems Coordinating Council, *10-Year Coordinated Plan Summary, 2000-2009—Planning and Operation for Electric System Reliability*, October 2000

\*\*\*Western Systems Coordinating Council, *Transmission Facilities in the West* (Adobe graphic)

\*\*\*Western Systems Coordinating Council, *Map of Principle Transmission Lines in the West* (Adobe graphic)

Western Systems Coordinating Council, *Assessment of the 2001 Summer Operating Period*, May 16, 2001

### Price-Responsive Demand

Association of Energy Services Professionals, *Peak Load Management or Demand Response Programs: A Policy Review*, August 2001

Bayles, Fred, *Savings Seen in Hour of Energy Use*, August 13, 2001

Cowart, Richard, *Efficient Reliability: The Critical Role of Demand-Side Resources in Power Systems and Markets*, June 2001 (prepared for NARUC)

XcelEnergy, *XcelEnergy's "Saver's Switch" Program for Some Midwest States* (Website, [www.xcelenergy.com](http://www.xcelenergy.com)) as of October 18, 2001

Florida Power & Light, *Florida Power & Light's "On Call" Energy Management Program*, (Website, [www.fpl.com](http://www.fpl.com)) as of October 18, 2001

Puget Sound Energy, *Puget Sound Energy's "Personal Energy Management" Program* (Website, [www.pse.com/pem](http://www.pse.com/pem)), as of August 2001

Potomac Electric Power Company, *Pepco's "Kilowatchers Club" and "Curtable Load Program"* (Website, [www.pepco.com](http://www.pepco.com)), Summer 2001

Southern Company, *Florida's Gulf Power "GoodCents SELECT" Efficiency Program* (Website, [www.southerncompany.com](http://www.southerncompany.com)), as of October 18, 2001

### Gas

California Energy Commission, *Natural Gas Infrastructure Issues*, September 2001

Federal Energy Regulatory Commission (Jeff Wright, Energy Projects), *Major Projects Certificated (1997 to present), Pending and On the Horizon* (gas reports), October 4, 2001

Federal Energy Regulatory Commission (Energy Projects: Rob Cupina, Bill Zoller and Ken Niehaus), *Item AD-3, September 26 Public Meeting--California Infrastructure Update*, (memo to the Commission), September 21, 2001

Federal Energy Regulatory Commission (Ken Niehaus, Energy Projects), *Item AD-3, September 26 Public Meeting--California Infrastructure Update*, (memo to the Commission), September 27, 2001

## Excerpts and Highlights

Federal Energy Regulatory Commission (Ken Niehaus, Energy Projects), *California Projects Recently Certificated*, (table), September 2001

Interstate Oil and Gas Compact Commission (IOGCC)/National Association of Regulatory Utility Commissioners (NARUC), *Final Report of the IOGCC/NARUC Pipeline Siting Group*, July 2001

### Gas & Electric

Washington State Office of Trade & Economic Development, *Convergence: Natural Gas and Electricity in Washington*, (News Release) May 2001

### Hydro

Federal Energy Regulatory Commission, *Report on Hydroelectric Licensing Policies, Procedures and Regulations Comprehensive Review and Recommendations Pursuant to Section 603 of the Energy Act of 2000*, May 2001

Federal Energy Regulatory Commission (John Paquin, Energy Projects), *Pending Hydroelectric Project and Relicense* (hydro report), October 16, 2000

### Oil

American Petroleum Institute Association of Oil Pipe Lines, *Comments for the Record re: Prices of Refined Petroleum Products*, September 2001

### Oil & Gas

Interstate Oil and Gas Commission and the Energy Council, *Investments in Energy Security*, December 1999 and year 2000 supplement

### Coal/Rail

\*\*\*Burlington Northern & Santa Fe Railroad, *System Map* (graphic)

Energy Information Administration, *Energy Policy Act Transportation Rate Study: Final Report on Coal Transportation*, October 2000

Energy Information Administration, *U.S. Coal, Domestic and International Issues*, March 27, 2001

## Excerpts and Highlights

Office of Economics, Environmental Analysis and Administration, Surface  
Transportation Board, *Rail Rates Continue Multi-Year Decline* (December 2000)

\*\*\*Union Pacific Railroad, *System Map* (graphic)

### Energy

California Energy Commission, *Staff Proposed California Energy Demand 2002-2012  
Forecast*, October 2001 (attachment for October 12, 2001 committee workshop)

Schleede, Glenn R. *It's Time for a National Energy Policy Reality Check*, June 21, 2001

Southern Governors Association, *Energy Policy in the South*, September 2001

United States Energy Association, *Toward a National Energy Strategy*, February 2001

U.S. Department of Energy, U.S. Department of the Interior, U.S. Department of  
Agriculture, U.S. Environmental Protection Agency, and Members of the Western  
Governors *Memorandum of Understanding regarding Energy Development and  
Conservation in the Western United States*, August 2001

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