

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Transwestern Pipeline Company, LLC)
) Docket No. RP06-____-000
)

PREPARED DIRECT TESTIMONY
OF
JOHN J. REED

1 I. INTRODUCTION AND QUALIFICATIONS

2 **Q. Please state your name and business address.**

3 A. My name is John J. Reed. My business address is 313 Boston Post Road West, Suite 210,
4 Marlborough, Massachusetts 01752.

5 **Q. By whom are you presently employed and in what capacity?**

6 A. I am Chairman and Chief Executive Officer of Concentric Energy Advisors, Inc. and CE
7 Capital Advisors, Inc. (together "CEA").

8 **Q. What is your educational background?**

9 A. I have a Bachelor of Science Degree in Economics and Finance from Wharton School,
10 University of Pennsylvania, and have passed the NASD Series 7, 24 and 63 securities license
11 exams.

12 **Q. Please describe your professional experience.**

13 A. I have more than 30 years of experience in the energy industry, and have worked as an
14 executive in and consultant to the energy industry for the past 25 years. Over the past decade,
15 I have directed the financial advisory services of CEA, Navigant Consulting and Reed
16 Consulting Group, and I have been involved in the purchase or sale of more than \$15 billion
17 of electric generation facilities. I have served as Vice Chairman and Co-CEO of the nation's

1 largest publicly traded consulting firm, and as Chief Economist for the nation's largest gas
2 utility. My background is presented in more detail in Exhibit No. TW-68.

3 **Q. Have you provided testimony in prior regulatory proceedings?**

4 A. Yes, I have provided testimony in numerous regulatory proceedings. A detailed listing of
5 previous testimony I have given is included as part of Exhibit No. TW-68.

6 **Q. On whose behalf are you sponsoring testimony in this proceeding?**

7 A. I am sponsoring testimony on behalf of Transwestern Pipeline Company, LLC
8 ("Transwestern").

9 **II. PURPOSE AND OVERVIEW OF TESTIMONY**

10 **Q. What is the purpose of your testimony?**

11 A. The purpose of my testimony is to identify the business risks faced by interstate pipelines and
12 to describe the importance of considering these types of risk when establishing the appropriate
13 rate of return. As part of this discussion, I will identify the major risks that exist in the current
14 market for interstate pipeline transportation, including 1) supply source competition, 2)
15 ratemaking risk, 3) general service risk, 4) demand for pipeline transportation and 5) shipper
16 creditworthiness. I will describe the increased business risk pipelines operating in the
17 Southwest are exposed to as compared to pipelines in other regions of the country. Finally, I
18 will discuss how Transwestern specifically is affected by these risks relative to other pipelines in
19 its service area.

1 **Q. What is the relationship between your testimony and the testimony of other witnesses**
2 **in this proceeding?**

3 A. My testimony provides an explanation of the business risks faced by interstate pipelines based
4 on my involvement with the industry throughout the U.S. Transwestern Witness Ms. Corman
5 will discuss the market dynamics faced by Transwestern, including Transwestern's specific risk
6 in the Southwest service area. Transwestern Witness Mr. Hevert has submitted testimony
7 regarding the appropriate return on equity ("ROE") for Transwestern. Mr. Hevert's testimony
8 provides the regulatory guidelines and financial considerations pertinent to rate of return
9 estimates, and considers my testimony and the testimony submitted by Ms. Corman in
10 determining the appropriate ROE for Transwestern.

11 **III. EXHIBITS**

12 **Q. What exhibits are you sponsoring?**

13 A. I am sponsoring the following exhibits:

- 14 • Exhibit No. TW-68: Qualifications of John J. Reed
- 15 • Exhibit No. TW-69: Proposed LNG Projects
- 16 • Exhibit No. TW-70: Natural Gas Price Comparison
- 17 • Exhibit No. TW-71: Interstate Capacity Expirations

18 **Q. Were these exhibits prepared by you or under your direction?**

19 A. Yes.

1 **IV. BUSINESS RISKS OF INTERSTATE PIPELINES**

2 **Q. Please explain why business risk is an important factor in establishing an appropriate**
3 **roe for an interstate pipeline.**

4 A. As is discussed in greater detail by Mr. Hevert, interstate pipelines, like other publicly-traded,
5 investor-owned companies, require capital from outside investors in order to maintain the
6 pipeline system, and to provide safe, reliable service to existing as well as new customers. The
7 capital market is very competitive, publicly-traded, investor-owned companies compete for
8 capital on the basis of investors' assessment of which investments will allow them the greatest
9 opportunity to maximize the returns on their investment given their risk tolerance. Because
10 capital markets are fungible, investors can seek out projects that meet their risk/return
11 threshold from the global market. Therefore, in order to attract capital from the marketplace,
12 it is essential that an interstate pipeline have the ability to offer a rate of return that is
13 commensurate with the level of business risk that would be assumed by investing in the
14 pipeline company. Limiting the return on equity of a pipeline to a level below that which is
15 commensurate with the risk profile of that pipeline will reduce the pipeline's ability to attract
16 the capital that is necessary for normal operations and for continued growth.

17 **Q. How do investors assess the level of risk involved in competing investment**
18 **opportunities?**

19 A. Rating agency reports, equity analysts' research, and publicly available financial reports are
20 heavily relied upon by investors to gain a general understanding of the risks in the industry and
21 as well as the competitive position of the company within its industry.

1 **Q. What are the key factors that contribute to the risk profile of interstate pipelines?**

2 A. The key factors in determining the risk profile of an interstate pipeline and establishing its
3 credit rating include: supply risk, ratemaking treatment, general service risk, demand for natural
4 gas, and shipper creditworthiness. I describe each of these risk factors in the sections which
5 follow.

6 **V. SUPPLY SOURCE RISK**

7 **Q. What is meant by supply source risk?**

8 A. A pipeline's proximity to diverse, sizable and economic gas supplies will affect its economic
9 opportunity, and accordingly, its overall risk. In general, the rating agencies have indicated that
10 access to diverse supply basins mitigates exposure to supply risks and is favorable for the credit
11 quality of the pipeline. In addition, rating agencies look more favorably upon pipelines with
12 access to supply basins with sustainable or growing production forecasts. On this point,
13 Standard & Poor's noted that "Pipelines with access to mature production basins in Oklahoma,
14 West Texas and onshore Gulf of Mexico areas may not be viewed as favorably as pipelines
15 with access to the Rocky Mountain region, which has experienced production growth in recent
16 years"¹.

17 **Q. Please explain how the supply source can affect the risk profile of the pipeline.**

18 A. A pipeline's business risk can change significantly based on national shifts in supply, changes in
19 production in the supply basins, and changes in regional demand. As new supply sources are
20 developed, new pipelines are constructed and existing pipelines develop expansions necessary
21 to move these supplies to the market areas. The development of these new supply sources and

¹ "S&P Cites FERC Pipeline Regulation, Order 636 as Supportive of Industry Creditworthiness", *Inside F.E.R.C.*, August 15, 2005, p. 2.

1 the supporting transportation infrastructure changes the flow of gas supplies to the market
2 areas and can make some segments of pipeline capacity obsolete.

3 **Q. Do you expect that there will be changes in the sources of natural gas in the near**
4 **future?**

5 A. Yes. Over the next five years, the sources of natural gas are projected to change dramatically.
6 The addition of imported liquefied natural gas (“LNG”) is expected to be “a major disruptive
7 force”², with forecasts of imports exceeding 7.0 Bcf/d by 2010³. Exhibit No. TW-69 identifies
8 the projects that have been proposed for the West Coast. As is illustrated in this exhibit, there
9 are five LNG projects that have been approved or proposed for the West Coast of the United
10 States, and five additional projects proposed on the West Coast of Canada and Mexico
11 combined. The addition of all of these projects would bring approximately 6.4 Bcf/d of LNG
12 to the western natural gas markets. While it is not expected that all projects will be
13 constructed, to date, one project, Sempra’s Costa Azul project, has received all its permits and
14 has begun construction. This project is expected to be on line in 2007, providing average
15 natural gas vaporization capability of 1.0 Bcf/d. Other projects are at various stages of
16 development, with projected in-service dates between 2007 and 2011.⁴

17 There are a significant number of proposed projects in other parts of the United States
18 as well. As shown on Exhibit No. TW-69, there are at least eleven proposed projects in the
19 Gulf Coast region and there are at least eleven projects that have been proposed for the East
20 Coast, including Eastern Canadian projects. The addition of any number of these projects will

² “All Pipes Are Not Created Equal, A Comprehensive Review of 20 Major US Natural Gas Pipelines” Banc of America Securities, June 14, 2005, p. 7

³ Ibid.

⁴ West Coast LNG Projects and Proposals, California Energy Commission, August 2006.

1 discount its rates in order to minimize uncommitted capacity. The pipeline's approved revenue
2 requirement and a projected level of committed pipeline capacity are used to establish the
3 maximum recourse rates for pipeline transportation. If the pipeline does not meet its revenue
4 requirement, due to discounting or uncommitted capacity, the pipeline is at risk of not earning
5 its approved rate of return until such time as the pipeline rates are re-established in a general
6 rate proceeding. In extreme situations, if the pipeline has negotiated discounted transportation
7 rates for a significant amount of its capacity or has significant uncommitted capacity, it is
8 possible that the pipeline may not be able to recover its costs even if it is granted an increase in
9 its revenue requirement and rate of return.

10 **Q. Are there differences between the risk profile of interstate pipelines and local**
11 **distribution companies ("LDCs")?**

12 A. Yes. The competition that pipelines face in the market for services makes most pipelines a
13 riskier business. Pipelines operate in a competitive marketplace, serving a customer base that
14 has competitive alternatives for service. In contrast, LDCs have a franchise distribution
15 service for customers that have limited options with which to contract for distribution service.

16 **Q. Is the interstate pipeline rate structure different than the structure under which**
17 **LDCs operate?**

18 A. Yes. As I described above, pipelines' economics are shaped by the competitive market. The
19 rates that have been approved for LDC services are the rates that the LDC will receive from its
20 customers; it is highly unusual for LDCs to discount their firm services.

21 While the FERC approves the tariff rates that can be charged by pipelines based on
22 straight fixed variable rate design principles, these rates merely represent a cap on the price that
23 pipelines can receive for the service provided. Since pipelines operate in the competitive

1 wholesale market for natural gas, pipeline rates are affected by the number of shippers, the
2 demand on other competing pipelines, resales of capacity by existing shippers and competing
3 fuel sources. All of these sources of competition affect the pipeline's ability to achieve its
4 maximum tariff rate. LDCs have the right to charge approved tariff rates for the services
5 provided to their customers, with little or no competition for their services. In addition, many
6 LDCs have moved towards flat rate structures that decouple revenue and throughput and
7 further stabilize revenue.

8 VII. GENERAL SERVICE RISKS

9 Q. Has the risk to interstate pipelines changed over time?

10 Yes. The risk profile of a pipeline operating under the current competitive market conditions
11 is significantly greater than that of interstate pipelines operating in the pre-Order 436 and pre-
12 Order 636 environment. Prior to open access and unbundling, pipelines were delivering a
13 bundled product consisting of supply and transportation to market areas with fewer options
14 for delivered gas supply service. In that environment, pipelines faced significantly fewer
15 challenges to their service, and were much less likely to find that a significant portion of their
16 market had dropped off the system.

17 In the post-Order 436 and post-Order 636 environment, pipelines provide
18 transportation service, not supply, and in many markets face stiff pipeline-to-pipeline
19 competition. Over the past several years, the natural gas pipeline system has expanded
20 considerably, bringing additional competition from new pipelines and supply basins to market
21 areas that were once supplied by only one or a few pipelines. Furthermore, the addition of
22 market-area production and storage capacity has increased the options available to shippers
23 and has reduced traditional shippers' dependence on interstate pipeline capacity. From a

1 regulatory policy perspective, these changes have been beneficial to shippers and end-users of
2 gas, but, from the perspective of the pipelines, there is no question that their risks have
3 increased dramatically. As a result of these changes in the market, interstate pipelines are
4 currently faced with greater service-related risk than ever before. As I have discussed
5 previously, these risks have not gone unnoticed by the capital markets and, therefore, must be
6 recognized when establishing the allowed rate of return for an interstate pipeline company.

7 **Q. What are the major service-related risks for interstate pipelines?**

8 A. There are three main categories of general service risks: 1) uncontracted capacity, 2) discounted
9 rates, and 3) short-term contracts. Pipeline economics are shaped by the competitive market,
10 the number of shippers, the demand on other competing pipelines, resales of capacity by
11 existing shippers and competing fuel sources. As more options for delivered supplies become
12 available to traditional long-term shippers (LDCs, merchant generators and industrial end-
13 users), there is increasing risk to the pipelines that these shippers will choose not to renew
14 contracts and the pipelines will be left with higher levels of unsubscribed capacity. In some
15 markets, even if shippers do recontract, aggressive competition to acquire customers has
16 depressed the value of pipeline transportation below the maximum tariff rate, decreased the
17 duration of shipper contracts and increased the risk to pipelines of unsubscribed capacity.

18 For example, as I will discuss later in my testimony, the competition among pipelines in
19 the Southwest region of the interstate pipeline grid is intense. This can be seen in the recent
20 recontracting practices on El Paso Natural Gas Company ("El Paso"). As discussed in greater
21 detail in the testimony of Ms. Corman, El Paso held capacity contracts with Southern
22 California Gas Company ("SoCal") that were set to expire in August 2006. Following the
23 California Public Utility Commission's ("CPUC") Order Initiating Rulemaking ("OIR") that

1 authorized the LDCs to turnback contracts on several pipelines (El Paso, Transwestern and
2 Gas Transmission Northwest (“GTN”)), El Paso, being aware that Transwestern had capacity
3 contracts with SoCal that would expire prior to the El Paso contracts, chose to enter into
4 contract negotiations with SoCal early in an attempt to minimize the competition to recontract
5 this capacity. El Paso signed a new contract agreement with SoCal eighteen months prior to
6 the expiration of its existing contracts. The resulting agreement included a discount below El
7 Paso’s tariff transportation rate and a term of five years.

8 **Q. Have other pipelines serving the California market been exposed to the risk of**
9 **uncontracted capacity?**

10 A. Yes. In 2005 and 2006, a large percentage of GTN’s capacity contracts expired and the
11 pipeline has increased its exposure to uncontracted capacity. In its recent rate proceeding⁶,
12 GTN stated that the average amount of unsold long-term firm capacity between November
13 1, 2006 and October 31, 2007 is 448,388 Dth/d at Kingsgate and 402,640 Dth/d at Malin. In
14 addition, GTN indicated that while it has been successful in recontracting some of its
15 uncommitted capacity, it has done so at “steeply discounted rates”⁷.

16 **Q. Please discuss the competition that interstate pipelines now face as shippers consider**
17 **the renewal of interstate pipeline capacity contracts.**

18 A. With the increased competition among pipelines and other market area suppliers, shippers
19 facing contract renewal decisions have several options in addition to renewing a traditional
20 long-term contract with the pipeline. Such options include purchasing supplies in the market

⁶ Docket No. RP06-407.

⁷ Direct Testimony of Leslie Ferron-Jones, Exhibit No. GTN-26, Docket No. RP06-407, p. 12.

1 area, contracting for capacity from a third party and negotiating shorter term contracts with the
2 interstate pipeline.

3 **Q. Please discuss these sources of competition.**

4 A. As I have discussed previously, the national pipeline grid and the sources of supply that are
5 available in the market have changed considerably over the past twenty years. As such,
6 interstate pipelines face competition from many sources when shipper contracts expire. Major
7 market areas have become liquid trading points where shippers can contract for flowing gas
8 supplies, in some cases eliminating the need to hold interstate capacity. For shippers that
9 continue to require interstate capacity, there are many more options available from new
10 pipelines that have been built to serve the market.

11 Another source of competition for pipelines seeking to renew shipper contracts is
12 released capacity from other shippers on the pipeline. If the supply and demand balance in a
13 region is such that there is excess capacity to that region, the pipeline can face competition
14 from its own customers, or customers of other pipelines who are offering to release capacity at
15 discounted prices. Competition from other shippers could also exist as shippers seek to
16 diversify their supply portfolios as a means of mitigating supply risk.

17 **Q. What has been the general trend with respect to pipelines' ability to recontract
18 capacity?**

19 A. The success of pipelines in recontracting depends on the regional market conditions; however,
20 in general, the terms of capacity contracts have been reduced from the traditional 10 to 20 year
21 terms to 3 to 5 year terms. In regions where supply exceeds demand for capacity, there has
22 been aggressive competition between pipelines seeking to maintain market share and other

1 market participants seeking to contract uncommitted capacity. In these competitive conditions,
2 shippers have negotiated shorter terms and discounted rates for capacity.⁸

3 **VIII. DEMAND FOR PIPELINE CAPACITY**

4 **Q. Please explain the issues that pipelines face with respect to shipper demand.**

5 A. There are two main demand-side concerns for pipelines: 1) the risk associated with
6 renegotiating expiring capacity contracts with existing shippers, and 2) demand destruction.
7 The success of a pipeline in its recontracting efforts is dependent on some of the same market
8 dynamics that have been discussed previously; the supply of natural gas, the demand for
9 natural gas in the end-use market, and the quantity of competing capacity and alternative
10 supply sources serving the market. The potential for significant LNG imports to the market
11 area increases the pressure on pipelines to negotiate to maintain their market share. Other
12 local area production poses a similar threat to the pipelines' customer bases. Furthermore, in
13 some regions, where the quantity of capacity available to serve the market outpaces demand,
14 the capacity market is a buyers' market. Shippers in these markets can aggressively negotiate
15 the term and price of capacity renewals. Pipelines in these regions have little to no leverage in
16 negotiations with recontracting shippers.

17 **Q. In addition to recontracting risk, you indicated that pipelines also face demand
18 destruction. Please explain what you mean by demand destruction.**

19 A. The significant increases in the price of natural gas that have occurred over the past five to six
20 years have been a major contributing factor to the destruction of the demand for gas by large
21 scale end-users. In 2000, the annual average price of gas at Henry Hub was \$4.29 per MMBtu.

⁸ SoCalGas Advice No. 3443, California Public Utility Commission, Docket No. 04-09-022, December 22, 2004.

1 In 2005, the average gas price was \$8.69 per MMBtu, an increase of 1.03%. This price shift
2 undermined the economics of gas as a fuel source for market segments such as electric
3 generation and other large industrial users where the demand for natural gas was projected to
4 be increasing rapidly.

5 The effect of demand destruction on pipelines has been more significant in areas where
6 electric generation was a significant portion of the potential load. For example, when the price
7 of natural gas was relatively low and the economics of gas-fired generation were attractive
8 relative to other fuel sources, gas-fired generation was built to serve the projected increase in
9 demand for electricity in the California market. Additional interstate pipeline capacity was
10 constructed to support the projected demand from this new load. With current gas prices at
11 \$6.82 per MMBtu⁹, gas fired generation is less competitive, and the demand for gas pipeline
12 capacity has been diminished. On a normalized basis California is projecting slow growth in
13 the demand for natural gas. Statewide demand is projected to be an average of 6.15 Bcf/d this
14 year, growing to 6.69 Bcf/d in 2025. Electric generation would represent the largest single
15 sector use, averaging 1.46 Bcf/d this year, and reaching close to 2 Bcf/d in 2025 (1.93 Bcf/d),
16 a growth rate of 1.8% per year. Demand for gas by California power generators is projected to
17 grow 1.8% annually over the next 20 years while overall state gas demand growth will only be
18 0.5% per year. Residential and commercial sectors are projected to see low growth and there
19 will be no demand growth among industrials¹⁰. Local area production and interstate pipelines
20 serving California have all experienced declines in deliveries to this market area; supplies from
21 California producers declined from an average of 1 Bcf/d in 2001 to 861 MMcf/d in 2005; El

⁹ September 2006 first of month price of gas at Henry Hub as reported by *Gas Daily*.

¹⁰ *Natural Gas Intelligence* weekly gas market newsletter, July 10, 2006.

1 Paso's supplies to this market declined from 2.16 Bcf/d in 2001 to 1.37 Bcf/d in 2005;
2 Transwestern's deliveries declined from an average of 869 MMcf/d in 2001 to 585 MMcf/d in
3 2005; and western Canadian supplies declined from 1.71 Bcf/d in 2001 to 1.34 Bcf/d in
4 2005.¹¹

5 IX. SHIPPER CREDITWORTHINESS

6 **Q. Does the pipeline face any other customer-related risks?**

7 A. Yes. Shipper creditworthiness is another service-related risk for pipelines that affects the credit
8 rating of a pipeline. Rating agencies have stated that several pipelines with exposure to
9 marketers and power generators have experienced a decline in shipper creditworthiness which
10 affects the overall risk of the pipeline. Therefore, the pipeline's concentration of customers in
11 these segments of the industry can increase the risk of the pipeline.

12 **Q. Please provide an example of how shipper creditworthiness has affected pipelines.**

13 A. The reorganization of Calpine Corporation ("Calpine") increased the operating risk of many
14 interstate pipelines. In December 2005, Calpine filed to restructure under Chapter 11 of the
15 U.S. Bankruptcy Code. As the owner of more than 70 natural gas-fired power plants, Calpine
16 holds pipeline capacity across the national pipeline grid. In addition, the company's energy
17 management services subsidiary managed 2.6 Bcf/d of transportation capacity and 8 Bcf/d of
18 storage capacity. As noted in Calpine's 2005 Annual Report, the company will be reviewing all
19 contracts and "will seek to reject further leases or other contracts as we continue our efforts to
20 strengthen and stabilize the Company's financial condition."¹²

¹¹ Ibid.

¹² Calpine Corporation 2005 Annual Report, p. 64.

X. REGIONAL RISK

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

Q. Does the location of the pipeline change its exposure to market risk?

A. Yes. The competitive pressures that pipelines face differ according to market regions. As has been discussed previously, the market dynamics that influence the risk profile of the pipeline are the supply risk, general service competition, demand, and shipper creditworthiness. Each of these key factors is established by the competitive dynamics of the region in which the pipeline operates. Pipelines that have multiple options to source gas supplies, long-term capacity contracts, increasing market area demand for supplies and limited competition to meet the demand in their market area would have significantly lower risk than a pipeline that did not have these desirable conditions.

Q. You have made reference to the California market in your discussions of key risk factors. Please provide an overview of the California gas market.

A. The California market for delivered supplies of natural gas is a highly competitive market driven largely by an over-supply of pipeline capacity for the current level of demand. Since the energy crisis of 2001, additional interstate pipeline capacity has been constructed to bring gas to California. These expansions include an expansion of the Kern River pipeline system, increasing capacity from the Rocky Mountain basin, and increased capacity on the El Paso system with the conversion of the All American pipeline. In addition, California storage capacity increased significantly, by almost 41 Bcf, providing a good buffer for the peaking winter months.¹³

As is illustrated in Ms. Corman's Exhibit No. TW-33, the California market currently has interstate pipeline capacity of 9.7 Bcf/d and demand of 6.2 Bcf/d in 2006, resulting in

¹³ California 2005 Integrated Energy Policy Report, Appendix I, November 2005, pp. A-8-A-9.

1 excess pipeline capacity of 3.5 Bcf/d. As a result, the value of interstate pipeline capacity
2 serving the California market has been declining over the past five years. In addition, the
3 pipelines serving this market face competition from market area production and storage
4 facilities. California currently obtains about 86 percent of supplies from out-of-state sources via
5 major interstate pipelines. The remaining 14 percent is produced in California.¹⁴ The majority
6 of the supplies that are delivered to the region via interstate pipelines are delivered to the
7 wholesale market, which is primarily comprised of investor-owned LDCs and municipal gas
8 distribution companies.

9 **Q. Please describe the interstate pipeline infrastructure that serves the California market.**

10 A. The interstate pipeline infrastructure that includes the California market for delivered supplies
11 of natural gas is a highly competitive market. Ms. Corman discusses the interstate pipeline
12 infrastructure to the California market in greater detail. In summary, the pipelines that serve
13 this market include GTN, which delivers Canadian supplies to the market, Kern River Gas
14 Transmission Company (“Kern”) which brings natural gas from the Rocky Mountain basin, El
15 Paso, which brings gas from the San Juan and Permian Basins, and Transwestern, which
16 transports supplies primarily from the San Juan and Permian Basins. Transwestern and El
17 Paso also have access to Rocky Mountain supplies via interconnections with two interstate
18 pipelines, Northwest Pipeline Corporation (“NWPL”) and TransColorado Gas Transmission
19 Company (“TransColorado”). In addition, Questar Southern Trails Pipeline Company brings
20 gas from the Rocky Mountain basin and delivers at Topock, CA into Sempra Utilities’
21 pipelines. Exhibit No. TW-33, prepared by Ms. Corman, provides the capacity of each of these
22 pipelines.

¹⁴ California 2005 Integrated Energy Policy Report, Appendix I, November 2005, p. A-8.

1 **Q. You stated that the value of pipeline capacity to the California market has been**
2 **declining. Please explain how you determine the value of pipeline capacity.**

3 A. As I have discussed previously, the market for pipeline capacity is highly competitive and
4 pipelines serving the California market in particular are price takers. The price of gas in the
5 supply basins and the price at the California border are set based on the supply and demand
6 for gas in these markets. Under these market dynamics, the maximum value of the interstate
7 pipeline capacity serving the region is the difference between the market value of gas at the
8 supply basin and the market value of the gas at the market area. Exhibit No. TW-70 provides
9 the annual average daily price of gas in the San Juan Basin, the California border (SoCal) price
10 and the differential between these price locations. The differential represents the maximum
11 value that the market should be willing to pay for interstate pipeline capacity and all associated
12 fuel costs between these two points. As is illustrated in Exhibit No.
13 TW-70, in 2006, the average basis differentials between the San Juan and Permian Basins and
14 the California border have been \$0.29 and \$0.21, respectively. These differentials are
15 considerably less than the maximum reservation rates on the Transwestern and El Paso
16 pipelines, indicating the need for pipelines to offer discounts on these paths of capacity to
17 encourage customers to commit to capacity contracts.

18 **Q. Please explain why the basis between the California market and the onshore supply**
19 **basins has been declining.**

20 A. The declining basis between the California market area and the supply regions that serve this
21 market is the result of two market dynamics 1) the price of gas in the supply region, and 2) the
22 demand for gas in the market area. The California market is served by gas supplies from the
23 San Juan and Permian Basins and from the Rocky Mountain region, in addition to western

1 Canadian supplies. As gas demands in other regions of the U.S. have increased, the price of
2 supplies in the production areas have also increased, reducing the value of pipeline capacity
3 between these basins and the California market and increasing the pipelines' risk of under-
4 recovery. For example, SoCal stated that "uneconomic price spreads between the California
5 border and the Permian Basin result in a monthly utilization rate ranging from 39% to 67% on
6 a primary flow basis for the SoCal core capacity with assigned Permian Basin receipt point
7 rights. Therefore, in the Precedent Agreement for New TSAs, SoCal has focused on
8 contracting for more capacity from the San Juan Basin."¹⁵ Exhibit No.
9 TW-70 illustrates the increase in prices in these regions.

10 **Q. What are the implications for interstate pipelines?**

11 A. As was the case with SoCal, other shippers will not be willing to contract for interstate pipeline
12 capacity that result in a total delivered price of supply that exceeds the price at the California
13 border. Therefore, the differential between the market area price and the supply basin price
14 will become a cap on the rate that pipelines will be able to obtain for interstate pipeline
15 capacity.

16 **Q. Do the pipelines in the California market face greater risk than pipelines in other
17 markets?**

18 A. Yes. Pipelines that were constructed with California as the primary market area are subject to
19 significantly higher risk than pipelines serving other regions of the country. The greatest
20 exposure for pipelines operating in this region is supply basin risk and recontracting risk
21 stemming largely from the supply-demand imbalance. As shippers' contracts expire, pipelines
22 in this region are exposed to competition from other pipelines and capacity release options that

¹⁵ SoCalGas Advice No. 3443, California Public Utility Commission, Docket No.04-09-022, December 22, 2004.

1 are available to customers that seek to recontract for capacity. In addition, the excess capacity
2 in the region provides customers with the option of purchasing flowing gas supplies at the
3 California border and reducing their capacity contracts back to the supply regions.

4 **Q. How will LNG projects affect the market for pipeline capacity in this region?**

5 The projects in the Southwest region of the United States have the potential to displace
6 supplies from some traditional supply sources. These LNG projects pose a significant threat
7 to interstate pipelines serving the California market and potentially the Arizona market.
8 Pipelines that face extensive contract renewals in the short term face the risk of losing shippers
9 to the new LNG projects coming on-line in 2007 through 2009.

10 **Q. Have Southwest pipelines seen evidence of the threat of LNG?**

11 **A.** Yes. In the near term, LNG poses the greatest threat to pipelines in the Southwest largely due
12 to recontracting concerns. As has been discussed previously, there are five LNG projects that
13 have been approved or proposed on the West Coast that could provide as much as 6.4 Bcf/day
14 of supply to the Southwest market areas. In the past year, as shippers' capacity contracts
15 expire, shippers in this region have demonstrated the intention to keep their supply options
16 open, shortening contract terms or acquiring longer-term release capacity at deep discounts.
17 Industry analysts have suggested that the addition of the Sempra LNG facility on the coast of
18 Mexico will bring up to 1.3 Bcf/day to northern Mexico and the Southern California market,
19 potentially driving additional San Juan Basin supplies out of the California market.¹⁶

¹⁶ "Southwest to Need More Pipe Capacity" *Platts*, August 11, 2006.

1 **Q. How is the recontracting risk of the Southwest pipelines different than that of pipelines**
2 **operating in other regions?**

3 A. In addition to the types of risks that all interstate pipelines are exposed to in general, pipelines
4 serving the California market have increased risk due to the CPUC's 2004 Order Instituting
5 Rulemaking ("OIR"). In 2004, the CPUC opened a proceeding to ensure reliable, long-term
6 supplies of natural gas to the State of California. The issues to be addressed in the Order
7 Instituting Rulemaking ("OIR") were divided into two phases. Phase 1 primarily dealt with the
8 amount of interstate capacity SoCal and other California LDCs were required to hold and
9 sought to establish a pre-approval process to allow the LDCs greater flexibility and
10 responsiveness in dealing with interstate capacity decisions.¹⁷ In the Phase I order, the CPUC
11 stated its preference that the LDCs develop diversified pipeline capacity portfolios. The order
12 also granted authority to SoCal and Pacific Gas & Electric ("PG&E") to negotiate reduced
13 amounts of capacity and to terminate expiring contracts with Transwestern and El Paso:

14 "Diversified interstate pipeline capacity portfolios, with staggered terms, maximizes
15 opportunities to benefit core customers with enhanced supply reliability and gas
16 price stability. Subject to the Commission review process discussed below, we
17 grant the utilities authority to negotiate reduced amounts of capacity and to
18 terminate the expiring contracts with El Paso, Transwestern Pipeline Company,
19 LLC (Transwestern), and Gas Transmission Northwest Corporation (GTNC) in

¹⁷ Phase 2 of this proceeding will consider issues regarding operational balancing agreements, gas quality specifications and utility infrastructure, including intrastate transmission capacity and firm receipt point capacity on SoCal's intrastate system.

1 conjunction with preserving the utilities' rights of first refusal for firm capacity on
2 these interstate pipelines."¹⁸

3 **Q. Has the CPUC provided any guidance on the term of interstate capacity contracts?**

4 A. The CPUC has stated that it encourages staggering the terms of capacity contracts within the
5 LDCs' capacity portfolios. In addition, the CPUC has imposed a contract term limit of three
6 years for any capacity contract that can be processed under its pre-approval procedures.

7 **Q. What effect will the term limits on pre-approved capacity contracts have on the risk to**
8 **interstate pipelines?**

9 A. The risk to interstate pipelines from shorter term contracts will increase based on the term
10 limits established by the CPUC. While the term limit established by the CPUC is not a cap on
11 the duration of all contracts, the limit, taken in conjunction with the CPUC's stated preference
12 for staggered contracts, will undoubtedly shape the contracting practices of the LDCs and
13 shorten the term of capacity contracts. A movement toward shorter capacity will have a
14 significant effect on Transwestern in the next three years. As is discussed in greater detail in
15 the testimony of Ms. Corman, over the next three years, Transwestern will need to renegotiate
16 contracts for 50% of the capacity on its system.

17 **Q. Please explain the risk that has been created by the CPUC's order for interstate**
18 **pipelines.**

19 A. The CPUC's order has significantly increased the risk to interstate pipelines operating in
20 California, specifically the Transwestern, El Paso and GTN pipelines, on which the CPUC has
21 authorized the LDCs to turn back expiring capacity contracts. Based on the timing of the

¹⁸ California Public Utility Commission, Order Instituting Rulemaking to Establish Policies and Rules to Ensure Reliable, Long-Term Supplies of Natural Gas to California, Decision 04-09-022, September 2, 2004.

1 contract expirations, Transwestern may face the greatest risk from the CPUC's mandate. The
2 risk associated with recontracting this quantity of capacity is greater than the risk faced by any
3 other pipeline in Transwestern's market region. Furthermore, of this capacity, the CPUC
4 granted SoCal and PG&E authorization to turnback substantial capacity on Transwestern.

5 **Q. Do Southwest shippers have access to markets other than California?**

6 A. The California market is the largest market for most Southwest pipelines. However, El Paso
7 and Transwestern have access to markets in New Mexico and Arizona. In addition,
8 Transwestern has access to markets in West Texas where Transwestern interconnects with
9 other pipelines.

10 **Q. Are pipelines exposed to similar risks in the New Mexico and Arizona markets as in**
11 **the California market?**

12 A. The Arizona and New Mexico markets for natural gas are growing and there is increased
13 demand for pipeline capacity in this region. In December 2003, the Arizona Corporation
14 Commission ("ACC") issued its Policy Statement Regarding New Natural Gas Pipeline and
15 Storage Costs. In this statement the ACC recognized the need for additional natural gas
16 infrastructure to meet current and forecasted demand. Pipelines serving these markets will also
17 be exposed to supply risk as LNG facilities are brought on line in the west; however, increases
18 in supply will be somewhat offset by the demand growth. These markets are projected to be
19 the growth opportunity for gas supplies from the San Juan and Permian Basins.

20 **Q. Compared to pipelines in other regions, are pipelines operating in the Southwest**
21 **market exposed to more or less business risk?**

22 A. The Southwest region is currently a high risk business environment for interstate pipelines
23 compared to other market areas in the United States. Approximately one-third of the capacity

1 built to serve the California natural gas market, the major market in this region, is not currently
2 needed to meet the current demand for delivered supplies of natural gas. Pipelines operating
3 in this market are further threatened by the expected near-term development of LNG projects
4 that may make pipeline transportation from the mid-continent supply sources to the Southwest
5 less attractive options for major shippers such as LDCs. Even before the first LNG project
6 takes its first delivery, California LDCs are structuring their supply contracts to enable them to
7 take advantage of this new supply source. Diversification of supply and pipeline transportation
8 options has been authorized and endorsed by the CPUC. These market dynamics make the
9 California market extremely high risk as compared to other markets across the continent.

10 **Q. How does the Southwest market compare to Northeast or Midwest markets?**

11 A. Banc of America Securities analysts have indicated in a recent study¹⁹ that the pipelines in the
12 Southwest market are exposed to greater risk than the Northeast and Midwest market areas. In
13 the Northeast, excluding Tennessee Gas Pipeline²⁰, pipelines are currently well contracted and
14 expecting moderate contract roll-offs in 2006 and 2007.²¹ In the Southwest market, analysts
15 have stated that of the 20 pipelines reviewed in the study, “Transwestern and El Paso Natural
16 Gas systems, in our opinion, face the greatest challenges and risks to earnings and cash flows
17 over the near and medium term. SUG is most exposed, and we see \$0.15 to \$0.20 per share at
18 risk over the 2005 to 2007 period as a result.”²²

¹⁹ “All Pipes Are Not Created Equal, A Comprehensive Review of 20 Major US Natural Gas Pipelines” Banc of America Securities, June 14, 2005.

²⁰ Ibid p.16.

²¹ Ibid.

²² Ibid.

1 California, Transwestern and the other pipelines serving this market compete on price and
2 terms to contract with shippers to provide transportation service.

3 **Q. You have discussed the risks of the pipeline industry. Does Transwestern face these**
4 **same business risks?**

5 A. Transwestern faces the same general risks as other pipelines: supply competition, ratemaking,
6 general service, demand and shipper creditworthiness risk.

7 **Q. Please discuss Transwestern's exposure to supply risk.**

8 A. As I have discussed previously, national shifts in the source of supply can change the business
9 risks to which a pipeline is exposed. As new LNG terminals come online in the West,
10 Transwestern's share of the Southwest market may continue to erode as customers diversify
11 their portfolios and include this new resource. The results of recent recontracting efforts
12 suggest that shippers are keeping their options open to new supply sources by entering into
13 shorter term contracts.

14 **Q. Please discuss Transwestern's exposure to ratemaking risk.**

15 A. In order to retain and attract customers, Transwestern has negotiated discounted rates for a
16 significant amount of the capacity on both the east and west areas of the pipeline. Under
17 ordinary circumstances, a pipeline's exposure to lost revenue resulting from discounts is a
18 temporary exposure that can be adjusted in the company's next rate filing when the company's
19 revenue requirement and rates are adjusted. However, as greater percentages of the pipeline
20 capacity is contracted at fixed rates that are less than the maximum recourse rate, as is the case
21 with Transwestern, it becomes increasingly more difficult to achieve the company's allowed
22 return.

1 **Q. What is Transwestern's exposure to general service risk?**

2 A. Transwestern is exposed to all the same general service related risks that are present in the
3 interstate pipeline industry, including uncontracted capacity, discounted rates and short term
4 contracts. While all pipelines face these risks on an ongoing basis, the greatest exposure to
5 these risks is when the pipeline's contracts with existing shippers are expiring. Transwestern
6 has significantly greater exposure to recontracting risk than its competitors in the Southwest
7 region.

8 **Q. How does Transwestern's recontracting exposure compare to its major competitors,
9 Kern and El Paso?**

10 A. Exhibit No. TW-71 provides a summary of the expiring capacity on Transwestern, El Paso and
11 Kern. Over the next three years, 50% of Transwestern's mainline west capacity has contracts
12 that are expiring as compared to 25% of El Paso's capacity. Kern is essentially fully contracted
13 during this time period²³ and will not experience its first significant capacity roll-off until 2011,
14 when 11% of its capacity contracts will expire.

15 **Q. Does Transwestern have any recent recontracting history to suggest that it faces
16 increased exposure due to near-term contract expirations?**

17 A. Yes. Recent recontracting history in the California market area suggests that Transwestern
18 should expect highly competitive negotiations in future recontracting efforts which may result
19 in uncommitted or discounted capacity. As discussed in detail in the testimony of Ms.
20 Corman, Transwestern has recently negotiated new contracts with SoCal and PG&E. In 2005,
21 SoCal had 306,000 Dth/d of capacity that expired. SoCal turned back 106,000 Mcf/d. This
22 capacity had been effectively rendered uneconomic due to uncompetitive supply pricing from

²³ In 2008, 6,000 Dth/d or less than 0.1% of the capacity contracts on Kern will expire.

1 the Permian basin. The remaining 200,000 Mcf/d was recontracted for terms of 3 and 5 years
2 at rates that reduce Transwestern's annual revenue by \$17.8 million in the first year and \$12.0
3 million in years two and three, \$18.4 million in year four and \$23 million in year five.

4 Transwestern negotiated a new contract with PG&E for its capacity of 150,000 MMBtu/d at a
5 similarly discounted reservation rate of \$0.30. The term of this agreement is three years.

6 **Q. What conclusions can be drawn from these recontracting experiences?**

7 A. While Transwestern was successful in recontracting some portion of the SoCal capacity and all
8 of the PG&E capacity, the terms of these contracts demonstrate a high degree of competition
9 in the Southwest market for interstate pipeline capacity. These two contracting experiences
10 highlight the price and demand risk that are inherent in the Southwest markets and the
11 exposure that Transwestern faces over the next three years as 50% of its western capacity
12 contracts expire.

13 **Q. How would you compare Transwestern's business risk to that of its competitors?**

14 A. Transwestern has considerably greater exposure to business risk than its competitors. As I
15 have discussed, market dynamics and recontracting risk are the most significant risks facing
16 interstate pipelines. With significant excess capacity, the Southwest market for pipeline
17 capacity is a buyer's market. Therefore, pipelines facing recontracting decisions are at risk of
18 increased levels of uncommitted capacity. Over the next three years, Transwestern is exposed
19 to the highest levels of recontracting risk in the Southwest region.

20 **Q. Does this conclude your prepared direct testimony?**

21 A. Yes, it does.

John J. Reed
Chairman and Chief Executive Officer

John J. Reed is a financial and economic consultant with more than 25 years of experience in the energy industry. Mr. Reed has also been the CEO of an NASD member securities firm, and Co-CEO of the nation's largest publicly traded management consulting firm (NYSE: NCI). He has provided advisory services in the areas of mergers and acquisitions, asset divestitures and purchases, strategic planning, project finance, corporate valuation, energy market analysis, rate and regulatory matters and energy contract negotiations to clients across North and Central America. Mr. Reed's comprehensive experience includes the development and implementation of nuclear, fossil, and hydroelectric generation divestiture programs with an aggregate valuation in excess of \$20 billion. Mr. Reed has also provided expert testimony on financial and economic matters on more than 125 occasions before the FERC, Canadian regulatory agencies, state utility regulatory agencies, various state and federal courts, and before arbitration panels in the United States and Canada. After graduation from the Wharton School of the University of Pennsylvania, Mr. Reed joined Southern California Gas Company, where he worked in the regulatory and financial groups, leaving the firm as Chief Economist in 1981. He served as executive and consultant with Stone & Webster Management Consulting and R.J. Rudden Associates prior to forming REED Consulting Group (RCG) in 1988. RCG was acquired by Navigant Consulting in 1997, where Mr. Reed served as an executive until leaving Navigant to join CEA as Chairman and Chief Executive Officer.

REPRESENTATIVE PROJECT EXPERIENCE

Executive Management

As an executive-level consultant, worked with CEOs, CFOs, other senior officers, and Boards of Directors of many of North America's top electric and gas utilities, as well as with senior political leaders of the U.S. and Canada on numerous engagements over the past 20 years. Directed merger, acquisition, divestiture, and project development engagements for utilities, pipelines and electric generation companies, repositioned several electric and gas utilities as pure distributors through a series of regulatory, financial, and legislative initiatives, and helped to develop and execute several "roll-up" or market aggregation strategies for companies seeking to achieve substantial scale in energy distribution, generation, transmission, and marketing.

Financial and Economic Advisory Services

Retained by many of the nation's leading energy companies and financial institutions for services relating to the purchase, sale or development of new enterprises. These projects included major new gas pipeline projects, gas storage projects, several non-utility generation projects, the purchase and sale of project development and gas marketing firms, and utility acquisitions. Specific services provided include the development of corporate expansion plans, review of acquisition candidates, establishment of divestiture standards, due diligence on acquisitions or financing, market entry or expansion studies, competitive assessments, project financing studies, and negotiations relating to these transactions.

Litigation Support and Expert Testimony

Provided expert testimony on more than 125 occasions in administrative and civil proceedings on a wide range of energy and economic issues. Clients in these matters have included gas distribution utilities, gas pipelines, gas producers, oil producers, electric utilities, large energy consumers, governmental and regulatory agencies, trade associations, independent energy project developers, engineering firms, and gas and power marketers. Testimony has focused on issues ranging from broad regulatory and economic policy to virtually all elements of the utility ratemaking process. Also frequently testified regarding energy contract

interpretation, accepted energy industry practices, horizontal and vertical market power, quantification of damages, and management prudence. Have been active in regulatory contract and litigation matters on virtually all interstate pipeline systems serving the U.S. Northeast, Mid-Atlantic, Midwest, and Pacific regions.

Also served on FERC Commissioner Terzic's Task Force on Competition, which conducted an industry-wide investigation into the levels of and means of encouraging competition in U.S. natural gas markets. Represented the interests of the gas distributors (the AGD and UDC) and participated actively in developing and presenting position papers on behalf of the LDC community.

Resource Procurement, Contracting and Analysis

On behalf of gas distributors, gas pipelines, gas producers, electric utilities, and independent energy project developers, personally managed or participated in the negotiation, drafting, and regulatory support of hundreds of energy contracts, including the largest gas contracts in North America, electric contracts representing billions of dollars, pipeline and storage contracts, and facility leases.

These efforts have resulted in bringing large new energy projects to market across North America, the creation of hundreds of millions of dollars in savings through contract renegotiation, and the regulatory approval of a number of highly contested energy contracts.

Strategic Planning and Utility Restructuring

Acted as a leading participant in the restructuring of the natural gas and electric utility industries over the past fifteen years, as an adviser to local distribution companies (LDCs), pipelines, electric utilities, and independent energy project developers. In the recent past, provided services to many of the top 50 utilities and energy marketers across North America. Managed projects that frequently included the redevelopment of strategic plans, corporate reorganizations, the development of multi-year regulatory and legislative agendas, merger, acquisition and divestiture strategies, and the development of market entry strategies. Developed and supported merchant function exit strategies, marketing affiliate strategies, and detailed plans for the functional business units of many of North America's leading utilities.

PROFESSIONAL HISTORY

Concentric Energy Advisors, Inc. (2002 – Present)

Chairman and Chief Executive Officer

Navigant Consulting, Inc. (1997- 2002)

President, Navigant Energy Capital (2000 – 2002)

Executive Director (2000 – 2002)

Co-Chief Executive Officer, Vice Chairman (1999 – 2000)

Executive Managing Director (1998 – 1999)

President, REED Consulting Group, Inc. (1997 – 1998)

REED Consulting Group (1988-1997)

Chairman, President and Chief Executive Officer

R.J. Rudden Associates, Inc. (1983-1988)

Vice President

Stone & Webster Management Consultants, Inc. (1981-1983)

Senior Consultant

Consultant

Southern California Gas Company (1976-1981)

Corporate Economist
Financial Analyst
Treasury Analyst

EDUCATION AND CERTIFICATION

BS, Economics and Finance, Wharton School, University of Pennsylvania, 1976
Licensed Securities Professional: NASD Series 7, 63, and 24 Licenses.

BOARDS OF DIRECTORS (PAST AND PRESENT)

Concentric Energy Advisors, Inc.
Navigant Consulting, Inc.
Navigant Energy Capital
Nukem, Inc.
New England Gas Association
R. J. Rudden Associates
REED Consulting Group

AFFILIATIONS

National Association of Business Economists
International Association of Energy Economists
American Gas Association
New England Gas Association
Society of Gas Lighters
Guild of Gas Managers

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Alaska Public Utilities Commission				
Chugach Electric	12/86	Chugach Electric	Docket No. U-86-11	Cost Allocation
Chugach Electric	6/87	Enstar Natural Gas Company	Docket No. U-87-2	Tariff Design
Chugach Electric	12/87	Enstar Natural Gas Company	Docket No. U-87-42	Gas Transportation
Chugach Electric	2/88	Chugach Electric	Docket No. U-87-35	Cost of Capital
California Energy Commission				
Southern California Gas Co.	8/80	Southern California Gas Co.	Docket No. 80-BR-3	Gas Price Forecasting
California Public Utility Commission				
Southern California Gas Co.	3/80	Southern California Gas Co.	TY 1981 G.R.C.	Cost of Service, Inflation
Pacific Gas Transmission Co.	10/91	Pacific Gas & Electric Co.	App. 89-04-033	Rate Design
Pacific Gas Transmission Co.	7/92	Southern California Gas Co.	A. 92-04-031	Rate Design
Colorado Public Utilities Commission				
AMAX Molybdenum	2/90	Commission Rulemaking	Docket No. 89R-702G	Gas Transportation
AMAX Molybdenum	11/90	Commission Rulemaking	Docket No. 90R-508G	Gas Transportation
Xcel Energy	8/04	Xcel Energy	Docket No. 031-134E	Cost of Debt
Conn. Department of Public Utilities Control				
Connecticut Natural Gas	12/88	Connecticut Natural Gas	Docket No. 88-08-15	Gas Purchasing Practices
United Illuminating	3/99	United Illuminating	Docket No. 99-03-04	Nuclear Plant Valuation
Southern Connecticut Gas	2/04	Southern Connecticut Gas	Docket No. 00-12-08	Gas Purchasing Practices
Southern Connecticut Gas	4/05	Southern Connecticut Gas	Docket No. 05-03-17	LNG/Trunkline

**EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--**

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
District Of Columbia PSC				
Potomac Electric Power Company	3/99	Potomac Electric Power Company	Docket No. 945	Divestiture of Gen. Assets & Purchase Power Contracts (Direct)
Potomac Electric Power Company	5/99	Potomac Electric Power Company	Docket No. 945	Divestiture of Gen. Assets & Purchase Power Contracts (Supplemental Direct)
Potomac Electric Power Company	7/99	Potomac Electric Power Company	Docket No. 945	Divestiture of Gen. Assets & Purchase Power Contracts (Rebuttal)
Federal Energy Regulatory Commission				
Western Gas Interstate Company	5/84	Western Gas Interstate Company	Docket No. RP84-77	Load Fost. Working Capital
Southern Union Gas	4/87	El Paso Natural Gas Company	Docket No. RP87-16-000	Take-or-Pay Costs
Connecticut Natural Gas	11/87	Penn-York Energy Corporation	Docket No. RP87-78-000	Cost Alloc./Rate Design
AMAX Magnesium	12/88	Questar Pipeline Company	Docket No. RP88-93-000	Cost Alloc./Rate Design
Western Gas Interstate Company	6/89	Western Gas Interstate Company	Docket No. RP89-179-000	Cost Alloc./Rate Design, Open-Access Transportation
Associated CD Customers	12/89	CNG Transmission	Docket No. RP88-211-000	Cost Alloc./Rate Design
Utah Industrial Group	9/90	Questar Pipeline Company	Docket No. RP88-93, Phase II	Cost Alloc./Rate Design
Iroquois Gas Trans. System	8/90	Iroquois Gas Transmission System	Docket No. CP89-634-000	Gas Markets, Rate Design, Cost of Capital, Capital Structure
Boston Edison Company	1/91	Boston Edison Company	Docket No. ER91-243-000	Electric Generation Markets
Cincinnati Gas and Electric Co., Union Light, Heat and Power Company, Lawrenceburg Gas Company	7/91	Texas Gas Transmission Corp.	Docket No. RP90-104-000, RP88-115-000, RP90-192-000	Cost Alloc./Rate Design Comparability of Svc.
Ocean State Power II	7/91	Ocean State Power II	ER89-563-000	Competitive Market Analysis, Self-dealing
Brooklyn Union/PSE&G	7/91	Texas Eastern	RP88-67, et al	Market Power, Comparability of Service
Northern Distributor Group	9/92	Northern Natural Gas Company	RP92-1-000, et al	Cost of Service

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Canadian Association of Petroleum Producers and Alberta Pet. Marketing Comm.	10/92	Lakehead Pipe Line Co. L.P.	IS92-27-000	Rate Case Analysis Cost of Service
Colonial Gas, Providence Gas	7/93	Algonquin Gas Transmission	RP93-14	Cost Allocation, Rate Design
Colonial Gas, Providence Gas	8/93	Algonquin Gas Transmission	RP93-14 - Rebuttal	Cost Allocation, Rate Design
Iroquois Gas Transmission	94	Iroquois Gas Transmission	RP94-72-000	Cost of Service and Rate Design
Transco Customer Group	1/94	Transcontinental Gas Pipeline Corporation	Docket No. RP92-137-000	Rate Design, Firm to Wellhead
Pacific Gas Transmission	2/94	Pacific Gas Transmission	Docket No. RP94-149-000	Rolled-in vs. Incremental Rates
Tennessee GSR Group	1/95	Tennessee Gas Pipeline Company	Docket Nos. RP93-151-000, RP94-39-000, RP94-197-000, RP94-309-000	GSR Costs
Pacific Gas Transmission	2/95	Pacific Gas Transmission	RP94-149-000	Rate Design
Tennessee GSR Customer Group	3/95	Tennessee Gas Pipeline Company	Docket Nos. RP93-151-000, RP94-39-000, RP94-197-000, RP94-309-000	GSR Costs
ProGas and Texas Eastern	1/96	Tennessee Gas Pipeline Company	RP93-151	Declaration
PG&E and SoCal Gas	96	El Paso Natural Gas Company	RP92-18	Stranded Costs
Iroquois Gas Transmission System, L.P.	97	Iroquois Gas Transmission System, L.P.	RP97-126-000	Cost of Service, Rate Design
BEC Energy - Commonwealth Energy System	2/99	Boston Edison Company/ Commonwealth Energy System	EC99-___-000	Market Power Analysis - Merger
Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc.	10/00	Central Hudson Gas & Electric, Consolidated Co. of New York, Niagara Mohawk Power Corporation, Dynegy Power Inc.	Docket No. EC00-___	Market Power 203/205 Filing
Wyckoff Gas Storage	12/02	Wyckoff Gas Storage	CP03-33-000	Need for Storage Project
Indicated Shippers/Producers	10/03	Northern Natural Gas	Docket No. RP98-39-029	Ad Valorem Tax Treatment
Maritimes & Northeast Pipeline	6/04	Maritimes & Northeast Pipeline	Docket No. RP04-360-000	Rolled-In Rates
ISO New England	8/04	ISO New England	Docket No. ER03-563-030	Cost of New Entry

**EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--**

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Hawaii Public Utility Commission				
Hawaiian Electric Light Company, Inc. (HELCO)	6/00	Hawaiian Electric Light Company, Inc.	Docket No. 99-0207	Standby Charge
Indiana Utility Regulatory Commission				
Northern Indiana Public Service Company	10/01	Northern Indiana Public Service Company	Docket No. 99-0207	Direct Testimony, Valuation of Electric Generating Facilities
Iowa Utilities Board				
Interstate Power and Light	7/05	Interstate Power and Light and FPL Energy Duane Arnold, LLC	Docket No. SPU-05-15	Sale of Nuclear Plant
Maine Public Utility Commission				
Northern Utilities	5/96	Granite State and PNGTS	Docket No. 95-480, 95-481	Transportation Service and PBR
Maryland Public Service Commission				
Eastalco Aluminum	3/82	Potomac Edison	Docket No. 7604	Cost Allocation
Potomac Electric Power Company	8/99	Potomac Electric Power Company	Docket No. 8796	Stranded Cost & Price Protection (Direct)
Mass. Department of Public Utilities				
Haverhill Gas	5/82	Haverhill Gas	Docket No. DPU #1115	Cost of Capital
New England Energy Group	1/87	Commission Investigation		Gas Transportation Rates
Energy Consortium of Mass.	9/87	Commonwealth Gas Company	Docket No. DPU-87-122	Cost Alloc./Rate Design
Mass. Institute of Technology	12/88	Middleton Municipal Light	DPU #88-91	Cost Alloc./Rate Design
Energy consortium of Mass.	3/89	Boston Gas	DPU #88-67	Rate Design
PG&E Bechtel Generating Co./ Constellation Holdings	10/91	Commission Investigation	DPU #91-131	Valuation of Environmental Externalities
The Berkshire Gas Company	5/92	The Berkshire Gas Company	DPU #92-154	Gas Purchase Contract Approval
Essex County Gas Company	5/92	Essex County Gas Company	DPU #92-155	Gas Purchase Contract Approval

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Fitchburg Gas and Elec. Light Co.	5/92	Fitchburg Gas and Elec. Light Co.	DPU #92-156	Gas Purchase Contract Approval
Boston Edison Company	7/92	Boston Edison	DPU #92-130	Least Cost Planning
Boston Edison Company	7/92	The Williams/Newcorp Generating Co.	DPU #92-146	RFP Evaluation
Boston Edison Company	7/92	West Lynn Cogeneration	DPU #92-142	RFP Evaluation
Boston Edison Company	7/92	L'Energia Corp.	DPU #92-167	RFP Evaluation
Boston Edison Company	7/92	DLS Energy, Inc.	DPU #92-153	RFP Evaluation
Boston Edison Company	7/92	CMS Generation Co.	DPU #92-166	RFP Evaluation
Boston Edison Company	7/92	Concord Energy	DPU #92-144	RFP Evaluation
The Berkshire Gas Company	11/93	The Berkshire Gas Company	DPU #93-187	Gas Purchase Contract Approval
Colonial Gas Company	11/93	Colonial Gas Company	DPU #93-188	Gas Purchase Contract Approval
Essex County Gas Company	11/93	Essex County Gas Company	DPU #93-189	Gas Purchase Contract Approval
Fitchburg Gas and Electric Company	11/93	Fitchburg Gas and Electric Company	DPU #93-190	Gas Purchase Contract Approval
Bay State Gas Company	10/93	Bay State Gas Company	Docket No. 93-129	Integrated Resource Planning
Boston Edison Company	94	Boston Edison	DPU #94-49	Surplus Capacity
Hudson Light & Power Department	4/95	Hudson Light & Power Dept.	DPU #94-176	Stranded Costs - Direct
Essex County Gas Company	5/96	Essex County Gas Company	Docket No. 96-70	Unbundled Rates
Boston Edison Company	8/97	Boston Edison Company	D.P.U. No. 97-63	Holding Company Corporate Structure
Berkshire Gas Company	6/98	Berkshire Gas Mergco Gas Co.	D.T.E. 98-87	Regulatory Issues
Eastern Edison Company	8/98	Montaup Electric Company	D.T.E. 98-83	Marketing for divestiture of its generation business.
Boston Edison Company	98	Boston Edison Company	D.T.E. 97-113	Fossil Generation Divestiture
Boston Edison Company	98	Boston Edison Company	D.T.E. 98-119	Nuclear Generation Divestiture
Eastern Edison Company	12/98	Montaup Electric Company	D.T.E. 99-9	
Mass. Energy Facilities Siting Council				
Mass. Institute of Technology	1/89	M.M.W.E.C.	EFSC-88-1	Least-Cost Planning
Boston Edison Company	9/90	Boston Edison	EFSC-90-12	Electric Generation Mkts
Silver City Energy Ltd. Partnership	11/91	Silver City Energy	D.P.U. 91-100	State Policies; Need for Facility

**EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--**

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
Michigan Public Service Commission				
Detroit Edison Company	9/98	Detroit Edison Company	Case No. U-11726	Market Value of Generation Assets
Minnesota Public Utilities Commission				
Xcel Energy/No. States Power	9/04	Xcel Energy/No. States Power	Docket No. G002/GR-04-XXX	Cost of Debt
Northern States Power Company d/b/a Xcel Energy	3/06	Northern States Power Company	Docket No. E002/GR-05-1428	NRG Impacts on Debt Costs
Missouri Public Service Commission				
Missouri Gas Energy	1/03	Missouri Gas Energy	Case No. GR-2001-382	Gas Purchasing Practices; Prudence
Aquila Networks	2/04	Aquila-MPS, Aquila L&P	Case Nos. ER-2004-0034 HR-2004-0024	Cost of Capital, Capital Structure
Aquila Networks	2/04	Aquila-MPS, Aquila L&P	Case No. GR-2004-0072	Cost of Capital, Capital Structure
Montana Public Service Commission				
Great Falls Gas Company	10/82	Great Falls Gas Company	Docket No. 82-4-25	Gas Rate Adjust. Clause
Nat. Energy Board of Canada				
Alberta-Northeast	2/87	Alberta Northeast Gas Export Project	Docket No. GH-1-87	Gas Export Markets
Alberta-Northeast	11/87	TransCanada Pipeline	Docket No. GH-2-87	Gas Export Markets
Alberta-Northeast	1/90	TransCanada Pipeline	Docket No. GH-5-89	Gas Export Markets
Indep. Petroleum Association of Canada	1/92	Interprovincial Pipe Line, Inc.	RH-2-91	Pipeline Valuation, Toll
The Canadian Association of Petroleum Producers	11/93	Transmountain Pipe Line	RH-1-93	Cost of Capital
Alliance Pipeline L.P.	6/97	Alliance Pipeline L.P.	GH-3-97	Market Study
Maritimes & Northeast Pipeline	97	Sable Offshore Energy Project	GH-6-96	Market Study
Maritimes & Northeast Pipeline	2/02	Maritimes & Northeast Pipeline	GH-3-2002	Natural Gas Demand Analysis
TransCanada Pipelines	8/04	TransCanada Pipelines	RH-3-2004	Segmented Service

**EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--**

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
New Hampshire Public Utilities Commission				
Bus & Industry Association	6/89	P. S. Co. of New Hampshire	Docket No. DR89-091	Fuel Costs
Bus & Industry Association	5/90	Northeast Utilities	Docket No. DR89-244	Merger & Acq. Issues
Eastern Utilities Associates	6/90	Eastern Utilities Associates	Docket No. DF89-085	Merger & Acq. Issues
EnergyNorth Natural Gas	12/90	EnergyNorth Natural Gas	Docket No. DE90-166	Gas Purchasing Practices
EnergyNorth Natural Gas	7/90	EnergyNorth Natural Gas	Docket No. DR90-187	Special Contracts, Discounted Rates
Northern Utilities, Inc.	12/91	Commission Investigation	Docket No. DR91-172	Generic Discounted Rates
New Jersey Board of Public Utilities				
Hilton/Golden Nugget	12/83	Atlantic Electric	B.P.U. 832-154	Line Extension Policies
Golden Nugget	3/87	Atlantic Electric	B.P.U. No. 837-658	Line Extension Policies
New Jersey Natural Gas	2/89	New Jersey Natural Gas	B.P.U. GR89030335J	Cost Alloc./Rate Design
New Jersey Natural Gas	1/91	New Jersey Natural Gas	B.P.U. GR90080786J	Cost Alloc./Rate Design
New Jersey Natural Gas	8/91	New Jersey Natural Gas	B.P.U. GR91081393J	Rate Design; Weather Norm. Clause
New Jersey Natural Gas	4/93	New Jersey Natural Gas	B.P.U. GR93040114J	Cost Alloc./Rate Design
South Jersey Gas	4/94	South Jersey Gas	BRC Docket No. GR080334	Revised levelized gas adjustment
New Jersey Utilities Association	9/96	Commission Investigation	BPU AX96070530	PBOP Cost Recovery
New Mexico Public Service Commission				
Gas Company of New Mexico	11/83	Public Service Co. of New Mexico	Docket No. 1835	Cost Alloc./Rate Design
New York Public Service Commission				
Iroquois Gas. Transmission	12/86	Iroquois Gas Transmission System	Case No. 70363	Gas Markets
Brooklyn Union Gas Company	8/95	Brooklyn Union Gas Company	Case No. 95-6-0761	Panel on Industry Directions
Central Hudson, ConEdison and Niagara Mohawk	9/00	Central Hudson, ConEdison and Niagara Mohawk	Case No. 96-E-0909 Case No. 96-E-0897 Case No. 94-E-0098 Case No. 94-E-0099	Section 70

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Central Hudson, New York State Electric & Gas, Rochester Gas & Electric	5/01	Joint Petition of NiMo, NYSEG, RG&E, Central Hudson, Constellation and Nine Mile Point	Case No. 01-E-0011	Section 70, Rebuttal Testimony
Rochester Gas & Electric	12/03	Rochester Gas & Electric	Case No. 03-E-1231	Sale of Nuclear Plant
Rochester Gas & Electric	01/04	Rochester Gas & Electric	Case No. 03-E-0765	Sale of Nuclear Plant; Ratemaking Treatment of Sale
Oklahoma Corporation Commission				
Oklahoma Natural Gas Company	6/98	Oklahoma Natural Gas Company	Case PUD No. 980000177	Evaluate their use of storage
Oklahoma Gas & Electric Company	9/05	Oklahoma Gas & Electric Company	Cause No. PUD 200500151	Prudence of McLain Acquisition
Ontario Energy Board				
Market Hub Partners Canada, L.P.	5/06	Natural Gas Electric Interface Roundtable	File No. EB-2005-0551	Market-based Rates For Storage
Pennsylvania Public Utility Commission				
ATOC	4/95	Equitrans	Docket No. R-00943272	Tariff Changes
ATOC	3/96	Equitrans	Docket No. P-00940886	Rate Service - Direct
Rhode Island Public Utilities Commission				
Newport Electric	7/81	Newport Electric	Docket No. 1599	Rate Attrition
South County Gas	9/82	South County Gas	Docket No. 1671	Cost of Capital
New England Energy Group	7/86	Providence Gas Company	Docket No. 1844	Cost Alloc./Rate Design
Providence Gas	8/88	Providence Gas Company	Docket No. 1914	Load Forecast., Least-Cost Planning
Providence Gas Company and The Valley Gas Company	1/01	Providence Gas Company and The Valley Gas Company	Docket No. 1673 and 1736	Gas Cost Mitigation Strategy
The New England Gas Company	3/03	New England Gas Company	Docket No. 3459	Cost of Capital
Texas Public Utility Commission				
Southwestern Electric	5/83	Southwestern Electric		Cost of Capital, CWIP
P.U.C. General Counsel	11/90	Texas Utilities Electric Company	Docket No. 9300	Gas Purchasing Practices

EXPERT TESTIMONY OF JOHN J. REED
--REGULATORY AGENCIES--

SPONSOR	DATE	CASE/APPLICANT	DOCKET NO.	SUBJECT
Texas Railroad Commission				
Southern Union Gas	5/85	Southern Union Gas Company	G.U.D. 1891	Cost of Service
Utah Public Service Commission				
AMAX Magnesium	1/88	Mountain Fuel Supply Company	Case No. 86-057-07	Cost Alloc./Rate Design
AMAX Magnesium	4/88	Utah P&L/Pacific P&L	Case No. 87-035-27	Merger & Acquisition
Utah Industrial Group	7/90	Mountain Fuel Supply	Case No. 89-057-15	Gas Transportation Rates
AMAX Magnesium	9/90	Utah Power & Light	Case No. 89-035-06	Energy Balancing Account
AMAX Magnesium	8/90	Utah Power & Light	Case No. 90-035-06	Electric Service Priorities
Vermont Public Service Board				
Green Mountain Power	8/82	Green Mountain Power	Docket No. 4570	Rate Attrition
Green Mountain Power	12/97	Green Mountain Power	Docket No. 5983	Tariff Filing
Green Mountain Power	7/98	Green Mountain Power	Docket No. 6107	Direct Testimony
Green Mountain Power	9/00	Green Mountain Power	Docket No. 6107	Rebuttal Testimony
Wisconsin Public Service Commission				
WEC & WICOR	11/99	WEC	Docket No. 9401-YO-100 Docket No. 9402-YO-101	Approval to Acquire the Stock of WICOR

**EXPERT TESTIMONY OF JOHN J. REED
--COURTS AND ARBITRATION--**

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
American Arbitration Association				
Michael Polsky	3/91	M. Polsky vs. Indeck Energy		Corporate Valuation, Damages
ProGas Limited	7/92	ProGas Limited v. Texas Eastern	Arbitration Panel	Gas Contract Arbitration
Attala Generating Company	12/03	Attala Generating Co v. Attala Energy Co.	Case No. 16-Y-198-00228-03	Power Project Valuation; Breach of Contract; Damages
Commonwealth of Massachusetts, Suffolk Superior Court				
John Hancock	1/84	Trinity Church v. John Hancock	C.A. No. 4452	Damages Quantification
State of Delaware, Court of Chancery, New Castle County				
Wilmington Trust Company	11/05	Calpine Corporation vs. Bank Of New York and Wilmington Trust Company	C.A. No. 1669-N	Bond Indenture Covenants
State of Colorado District Court, County of Garfield				
Questar Corporation, et al	11/00	Questar Corporation, et al.	Case No. 00CV129-A	Partnership Fiduciary Duties
Illinois Appellate Court, Fifth Division				
Norweb, plc	8/02	Indeck No. America v. Norweb	Docket No. 97 CH 07291	Breach of Contract; Power Plant Valuation
Independent Arbitration Panel				
Ocean State Power	9/02	Ocean State Power v. ProGas Ltd.	2001/2002 Arbitration	Gas Price Arbitration
Ocean State Power	2/03	Ocean State Power v. ProGas Ltd.	2002/2003 Arbitration	Gas Price Arbitration
Ocean State Power	6/04	Ocean State Power v. ProGas Ltd.	2003/2004 Arbitration	Gas Price Arbitration
Shell Canada Limited	7/05	Shell Canada Limited and Nova Scotia Power Inc.		Gas Contract Price Arbitration

**EXPERT TESTIMONY OF JOHN J. REED
--COURTS AND ARBITRATION--**

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
International Court of Arbitration				
Wisconsin Gas Company, Inc.	2/97	Wisconsin Gas Co. vs. Pan-Alberta	Case No. 9322/CK	Contract Arbitration
Minnegasco, A Division of NorAm Energy Corp.	3/97	Minnegasco vs. Pan-Alberta	Case No. 9357/CK	Contract Arbitration
Utilicorp United Inc.	4/97	Utilicorp vs. Pan-Alberta	Case No. 9373/CK	Contract Arbitration
IES Utilities	97	IES vs. Pan-Alberta	Case No. 9374/CK	Contract Arbitration
U.S. Securities and Exchange Commission				
Eastern Utilities Association	10/92	EUA Power Corporation	File No. 70-8034	Value of EUA Power
State of Rhode Island, Providence City Court				
Aquidneck Energy	5/87	Laroche vs. Newport		Least-Cost Planning
State of Texas Hutchinson County Court				
Western Gas Interstate	5/85	State of Texas vs. Western Gas Interstate Co.	Case No. 14,843	Cost of Service
U.S. Bankruptcy Court, District of New Hampshire				
EUA Power Corporation	7/92	EUA Power Corporation	Case No. BK-91-10525-JEY	Pre-Petition Solvency
U.S. Bankruptcy Court, District of New Jersey				
Ponderosa Pine Energy Partners, Ltd.	7/05	Ponderosa Pine Energy Partners, Ltd.	Case No. 05-21444	Forward Contract Bankruptcy Treatment
U.S. Bankruptcy Court, So. District of New York				
Johns Manville	5/04	Enron Energy Mktg. v. Johns Manville; Enron No. America v. Johns Manville	Case No. 01-16034 (AJG)	Breach of Contract; Damages

**EXPERT TESTIMONY OF JOHN J. REED
--COURTS AND ARBITRATION--**

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
U.S. Bankruptcy Court, Northern District of Texas				
Southern Maryland Electric Cooperative, Inc. and Potomac Electric Power Company	11/04	Mirant Corporation, et al. v. SMECO	Case No. 03-4659; Adversary No. 04-4073	PPA Interpretation; Leasing
U. S. District Court, Boulder County, Colorado				
KN Energy, Inc.	3/93	KN Energy vs. Colorado GasMark, Inc.	Case No. 92 CV 1474	Gas Contract Interpretation
U. S. District Court, Northern California				
Pacific Gas & Electric Co./PGT PG&E/PGT Pipeline Exp. Project	4/97	Norcen Energy Resources Limited	Case No. C94-0911 VRW	Fraud Claim
U. S. District Court, District of Connecticut				
Constellation Power Source, Inc.	12/04	Constellation Power Source, Inc. v. Select Energy, Inc.	Civil Action 304 CV 983 (RNC)	ISO Structure, Breach of Contract
U.S. District Court, Massachusetts				
Eastern Utilities Associates & Donald F. Pardus	3/94	NECO Enterprises Inc. vs. Eastern Utilities Associates	Civil Action No. 92-10355-RCL	Seabrook Power Sales
U. S. District Court, Montana				
KN Energy, Inc.	9/92	KN Energy v. Freeport MacMoRan	Docket No. CV 91-40-BLG-RWA	Gas Contract Settlement
U.S. District Court, New Hampshire				
Portland Natural Gas Transmission and Maritimes & Northeast Pipeline	9/03	Public Service Company of New Hampshire vs. PNGTS and M&NE Pipeline	Docket No. C-02-105-B	Impairment of Electric Transmission Right-of-Way

**EXPERT TESTIMONY OF JOHN J. REED
--COURTS AND ARBITRATION--**

SPONSOR	DATE	CASE/APPLICANT	DOCKET No.	SUBJECT
U. S. District Court, Southern District of New York				
Central Hudson Gas & Electric	11/99	Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin	Civil Action 99 Civ 2536 (BDP)	Expert Report, Shortnose Sturgeon Case
Central Hudson Gas & Electric	8/00	Central Hudson v. Riverkeeper, Inc., Robert H. Boyle, John J. Cronin	Civil Action 99 Civ 2536 (BDP)	Revised Expert Report, Shortnose Sturgeon Case
Consolidated Edison	3/02	Consolidated Edison v. Northeast Utilities	Case No. 01 Civ. 1893 (JGK) (HP)	Industry Standards for Due Diligence
Merrill Lynch & Company	1/05	Merrill Lynch v. Allegheny Energy, Inc.	Civil Action 02 CV 7689 (HB)	Due Diligence, Breach of Contract, Damages
U. S. District Court, Eastern District of Virginia				
Aquila, Inc.	1/05	VPEM v. Aquila, Inc.	Civil Action 304 CV 411	Breach of Contract, Damages
U. S. District Court, Portland Maine				
ACEC Maine, Inc. et al.	10/91	CIT Financial vs. ACEC Maine	Docket No. 90-0304-B	Project Valuation
Combustion Engineering	1/92	Combustion Eng. vs. Miller Hydro	Docket No. 89-0168P	Output Modeling; Project Valuation

Status of proposed and existing LNG facilities on the West Coast

Facility [1]	Location	Status	Average Production Capacity (million cubic feet/day)	Expected on-line date	Possible markets
Cabrillo Deepwater Port (BHP Billiton)	Oxnard, CA (offshore)	proposed to MARAD/Coast Guard	800	2008	Southern California
Clearwater Port LLC (NorthernStar Natural Gas LLC)	Oxnard, CA (offshore)	proposed to MARAD/Coast Guard	800	2009	Southern California
Esperanza Energy LLC	Long Beach, CA (offshore)	project feasibility study announced 4/4/06	TBA	TBA	TBA
Jordan Cove Energy Project	Coos Bay, OR	proposed to FERC	200	2010	Pacific Northwest, California and Nevada
Long Beach LNG (Mitsubishi/ConocoPhillips - Sound Energy Solutions)	Long Beach, CA	proposed to FERC	700	2008	Southern California non-core customers, including electricity generations; municipal and investor-owned utilities and LNG vehicle fleets
Northern Star LNG (Northern Star Natural Gas LLC)	Bradwood, OR	proposed to FERC	1,000	2010	Pacific Northwest
Ocean Way LNG Terminal (Woodside Energy)	Maitbu, CA (offshore)	application not yet filed	800	2011	Southern California
Pacific Gateway LNG (Excelerate Energy)	offshore northern CA	initial analyses are being performed	600	2009	to be determined
Port Westward LNG	Clatskanie, OR	Port of St. Helens has approved lease; project still needs permits and financing	700	TBA	Pacific Northwest
Skipanon LNG (Calpine)	Warrenton, OR	Calpine has not started the application process	1,000	2010	Pacific Northwest
Energy Costa Azul (Sempra)	Baja CA	approved by Mexican government	1,000	2007	Western Mexico, southern California, and Southwestern U.S.
Moss-Maritime Project	Rosarito, Baja CA, (offshore)	approved by Mexico's environmental agency, other permits are pending	297	2007	Western Mexico, southern California, and Southwestern U.S.
Terminal GNL Mar Adentro de Baja California (Chevron Texaco)	offshore Baja CA	approved by Mexican government	700	2008	Northern Baja California, west coast of U.S.
Port of Kitimat LNG Facility (Galveston LNG)	Kitimat, BC	approved by Canadian government	610	early 2009	British Columbia, Alberta, Pacific Northwest, California
WestPac LNG	Ridley Island, BC	proposed to Canadian government	300	2011	to be determined

Status of proposed and existing LNG Facilities on the Gulf Coast

Facility	Location	Status [2]	Baseload Sendout Capacity (million cubic feet/day) [3]	Expected on-line date [3]	Possible markets
Cameron LNG (Sempra Energy)	Hackberry, LA	proposed to FERC	1,500	2008	U.S. markets
Cheniere LNG	Corpus Christi, TX	approved by FERC	2,600	2010	entire U.S.
Creole Trail LNG (Cheniere)	Cameron, LA	approved by FERC	3,300	2011	entire U.S.
Freeport LNG	Freeport, TX	approved by FERC	1,500	2008	to be determined
Golden Pass (ExxonMobil)	Sabine, TX	approved by FERC	2,000	2009	U.S. markets
Gulf Gateway Energy Bridge (Accelerate)	Gulf of Mexico	existing	500	began operations in March 2005	company currently relies on spot cargoes and has no long-term or short- term contracts
Gulf Landing (Shell) [4]	LA offshore	approved by MARAD/Coast Guard	1,000	2010	to be determined
Ingliside Energy (Occidental Energy Ventures)	Corpus Christi, TX	approved by FERC	1,000	2010	to be determined
Port Pelican (Chevron Texaco)	offshore LA	approved by MARAD/Coast Guard	1,600	2007	to be determined
Sabine Pass Cheniere LNG	Sabine, LA	approved by FERC	2,600	2008	entire U.S.
Sempra	Port Arthur, TX	approved by FERC	3,000	2010	to be determined
Trunkline LNG (Southern Union) [5]	Lake Charles, LA	existing	1,800	expansion completed in 2006	Southeast, West, Midwest and Great Lakes region
Altamira, Tamulipas (Shell/Total/Mitsui)	Gulf Coast, Mexico	existing	500	began receiving shipments in August 2006	Mexican state utility

[1] "West Coast LNG Projects and Proposals" California Energy Commission, August 2006, <http://www.energy.ca.gov/ing/projects.html>.

[2] "Existing and proposed North American LNG terminals", FERC, August 30, 2006.

[3] "East Coast terminal projects buck resistance, move ahead" Oil & Gas Journal, August 28, 2006.

[4] website: <http://www.accelerateenergy.com/about.php>

[5] "Gulf Coast Picture Clearing: Mexico Getting First Terminal", Oil & Gas Journal, September 4, 2006.

Natural Gas Price Comparison based on Daily Prices

Year	Average Annual Price			Price Differential	
	SoCal	Permian Average	ElPaso EPNB (San Juan)	SoCal minus Permian	SoCal minus San Juan
2000	\$6.33	\$4.19	\$3.86	\$2.15	\$2.47
2001	\$7.78	\$3.82	\$3.51	\$3.96	\$4.27
2002	\$3.14	\$3.08	\$2.64	\$0.06	\$0.50
2003	\$5.08	\$5.07	\$4.55	\$0.01	\$0.53
2004	\$5.39	\$5.32	\$5.17	\$0.07	\$0.22
2005	\$7.45	\$7.27	\$7.07	\$0.17	\$0.37
2006*	\$6.18	\$5.97	\$5.89	\$0.21	\$0.29

* Source: Gas Daily through September 11, 2006.

Interstate Pipeline Capacity Expirations (Mcf/d)

Pipeline Company	2007 Expiration		2008 Expiration		2009 Expiration		Capacity expiration 2007-2009
	Volume	% Capacity	Volume	% Capacity	Volume	% Capacity	
Kern River	0	0.000%	6,000	0.1%	0.0%	0.0%	0.1%
El Paso Corp.	741,597	19.9%	290,000	4.5%	185,500	0.5%	24.9%
Transwestern	153,810	18.4%	179,895	21.5%	102,999	12.3%	52.2%