XII. EXISTING GAS SUPPLY-SIDE PORTFOLIO RESOURCES

Chapter XII provides an overview of PSE's existing gas supply-side resource portfolio. The chapter details PSE's pipeline capacity, storage capacity, other capacity resources and gas supplies. The chapter continues with an assessment of PSE's existing gas supply/demand balance for PSE's gas customers. Finally, the chapter concludes with a summary of PSE's gas resources related to its electric generation portfolio.

In the natural gas industry, long-term resource planning has traditionally focused on company-owned or contracted transportation and storage services. With the maturation of liquid supply trading points and unbundled pipeline services, planners have presumed that if a company were to hold firm transportation capacity from the supply point to the city-gate, one could always access supplies on a short- or long-term basis. This fundamental principle is still true. However, as the overall supply-demand balance has come into an equilibrium status, occasional supply imbalances can create extremely volatile pricing. PSE's policies have long acknowledged the potential for this situation. Those policies provide for maintaining long-term firm contracts from reliable suppliers for both pipeline capacity and gas supply from geographically diverse locations.

A. Pipeline Capacity Resources

PSE holds two categories of pipeline capacity: "direct connect" pipeline capacity, which moves supplies from production areas, storage or interconnections with other pipelines, and delivers directly into PSE's distribution system; and "upstream" capacity, which accesses production, storage and market centers further upstream from the direct connect capacity.

Direct-Connect Pipeline Capacity

As PSE's only direct connect pipeline, all gas delivered to PSE's gas distribution system is handled last by Northwest Pipeline ("NWP"). PSE holds 465,053 Dth/day and 413,557 Dth/day of firm TF-1 and TF-2 transportation capacity, respectively, on NWP. Receipt points on the NWP contracts allow access to supplies from British Columbia, Alberta and the Rocky Mountain producing regions. The structure of some of the contracts allows for significant flexibility in sourcing gas from the various production regions on a day to day basis. Furthermore, it provides valuable zonal delivery point flexibility.

Given such exclusive reliance, PSE was understandably concerned when in 2003, NWP experienced two pipeline failures on its 26-inch mainline in Washington. On Dec. 17, following the second failure, NWP notified customers that it was taking steps to idle a 268-mile segment of the 26-inch pipeline between Sumas and Washougal, near Portland.

As a result of this action, pipeline capacity south from Sumas was temporarily reduced by about 360,000 Dth/d, from 1,310,000 to approximately 950,000 Dth/d. To date, no customers have been affected as a result of this reduction, nor has there been any decrease in transportation volumes. Even during the cold snaps in January of 2004 and 2005, NWP was able to meet the firm service requirements of its customers. NWP worked with the Office of Pipeline Safety (OPS) to restore 131,000 Dth/d of capacity by the end of June 2004. This effort is expected to allow NWP to satisfy customers' firm nominations between the summer of 2004 and fall of 2006.

NWP has recently filed an application with the Federal Energy Regulatory Commission (FERC) to replace the contractual capacity of the 26-inch pipeline with a new, larger diameter pipe and additional compression by November 2006. This "Capacity Replacement Project" is not a mile-for-mile replacement of the 26-inch pipeline, but is expected to restore all of the capacity flexibility and reliability of the original facilities. The Capacity Replacement Project is expected to cost approximately $334 million. When it is incorporated into rates in January 2007, it will have a significant impact on gas costs in the region. The current 31-cent per Dth 100 percent load factor rate for vintage system capacity is expected to increase to about 39 cents, and capacity from the Evergreen Expansion in 2003 is expected to rise from a levelized 100 percent load factor rate of 43 cents per Dth to 44 cents.

PSE reviewed the NWP Capacity Replacement Project proposal, compared it to other proposals to transport gas to western Washington, and concluded that it is the most cost-effective solution for the region to retain access to gas supplies. As a result, PSE has pronounced its support for the timely completion of the Capacity Replacement Project.

Upstream Pipeline Capacity

In order to transport gas supply from production basins or trading hubs to the NWP system, PSE holds capacity on several upstream pipelines. To transport supplies from the AECO trading hub in Alberta to the interconnect with NWP in eastern Washington, PSE holds the following: approximately 80,000 Dth/day of capacity on each of TransCanada's Alberta

systems—TCPL-Alberta (formerly known as the "Nova" or NGTL system) and TransCanada's BC system (TCPL-BC, formerly known as the Alberta Natural Gas or "ANG" system), and 90,392 Dth/day on TransCanada's Gas Transmission Northwest ("GTN," formerly known as PG&E Gas Transmission or PGT).

To transport supplies from the producing area in northern British Columbia, PSE holds approximately 40,000 Dth/day of capacity on Duke Energy Gas Transmission's Westcoast Pipeline ("Westcoast") from Station 2 to the interconnect with NWP at Huntingdon, B.C. / Sumas, WA. Further discussion of trends in the gas supply market and the growing need for upstream pipeline capacity appears in the next chapter, which discusses new gas supply-side resource opportunities.

Exhibit XII-1 provides a summary of PSE's pipeline capacity position.

Exhibit XII-1.1
PSE Pipeline Direct Connect Capacity Position (Dth/Day)

Pipeline / Receipt Point	Notes	TOTAL	Year of Expiration			
			2006	2008	2009	Other
Direct Connect Pipeline / Receipt Point						
NWP / Westcoast Interconnect (Sumas)	1	204,761	-	58,000	128,705	18,056 (in 2016)
NWP / GTN Interconnect (Spokane)	1	75,936	-	-	75,936	-
NWP / various Rockies	1	184,356	616	43,848	131,836	8,056 (in 2016)
Total TF-1		***465,053***	**616**	***101,848***	***336,477***	***26,112***
NWP / Jackson Prairie	1,2	343,057	343,057	-	-	-
NWP / Plymouth LNG	1,2	70,500	70,500	-	-	-
Total TF-2		***413,557***	***413,557***	**-**	**-**	**-**
Total Capacity to City-Gate		***878,610***	***414,173***	***101,848***	***336,477***	***26,112***

Exhibit XII-1.2
PSE Pipeline Upstream Capacity Position (Dth/Day)

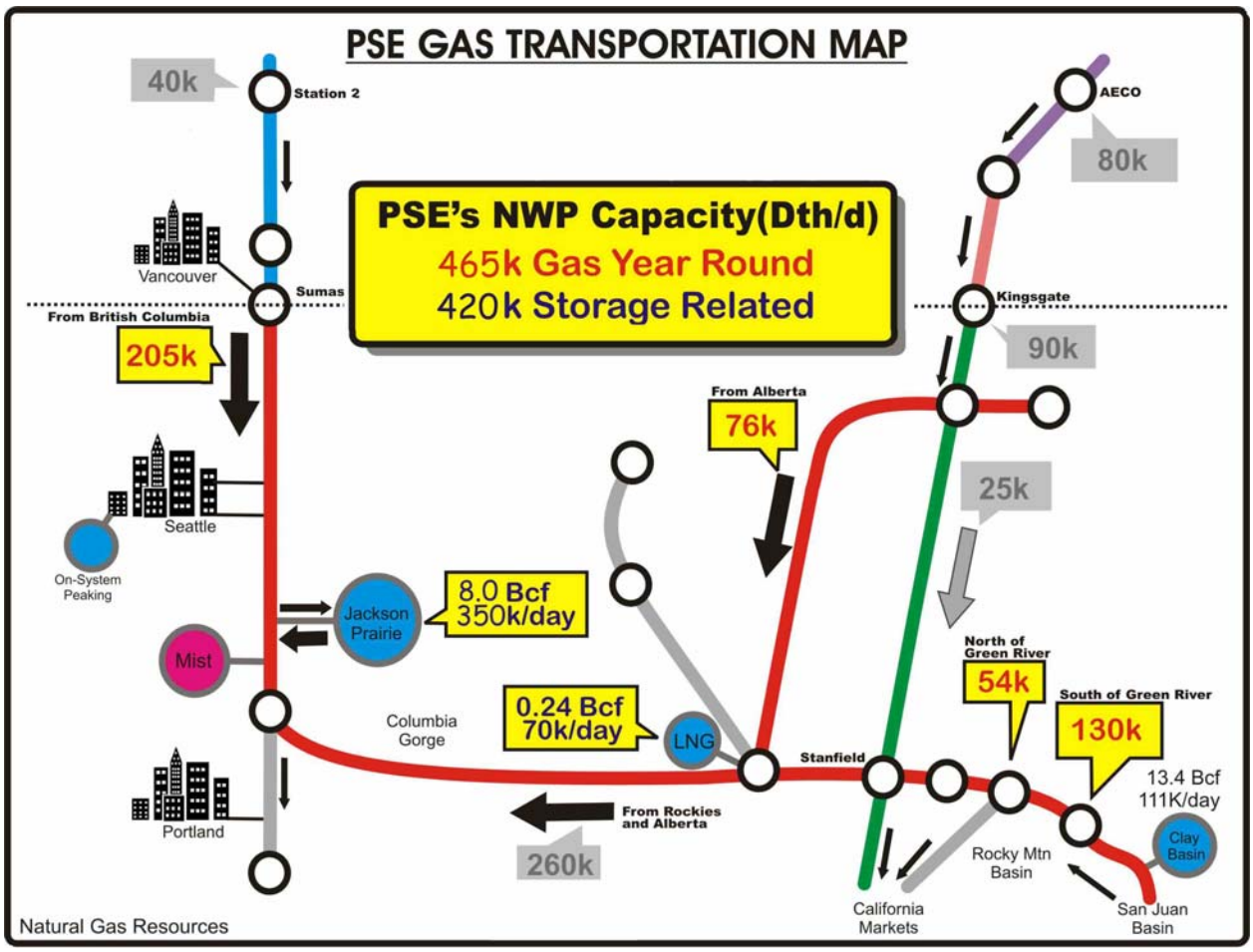
Pipeline / Receipt Point	Notes	TOTAL	Year of Expiration			
			2006	2008	2009	Other
Upstream Pipeline / Corridor						
TCPL-Alberta / from AECO to TCPL-BC Interconnect (A-BC Border)	3	80,000				
TCPL-BC / from TCPL-Alberta to TCPL-GTN Interconnect (Kingsgate)	4	80,000				
TCPL-GTN / from TCPL-BC Interconnect to NWP Interconnect (Spokane)	5	65,392	-	-	-	65,392 (in 2023)
TCPL-GTN / fromTCPL-BC Interconnect to NWP Interconnect (Stanfield)	5,6	25,000	-	-	-	25,000 (in 2023)
Westcoast / from Station 2 to NWP Interconnect (Sumas)	4,7	40,000	-	-	-	25,000 (in 2014) 15,000 (in 2019)
Total Upstream Capacity	8	***290,392***				

Notes to Tables XII-1A and XII-1B:

1) *NWP contracts have automatic annual renewal provisions, but can be canceled by PSE upon one year's prior notice.*
2) *TF-2 service is intended only for redelivery of storage volumes during the winter heating season, and as such has significantly lower annual costs than the year-round service provided under TF-1.*
3) *Converted to approximate Dth per day from contract stated in gigajoules per day.*
4) *Converted to approximate Dth per day from contract stated in cubic meters per day.*
5) *TCPL-GTN contracts have automatic renewal provisions, but can be canceled by PSE upon one year's prior notice.*
6) *Capacity can alternatively be used to deliver additional volumes to Spokane.*
7) *The Westcoast contracts contain a right of first refusal upon expiration.*
8) *Upstream Capacity is not necessary for supplies acquired at interconnects in the Rockies and for some of the supplies available at Sumas.*

Exhibit XII-2 graphically displays PSE's direct connect and upstream pipeline capacity:

Exhibit XII-2



Firm pipeline transportation capacity carries the right, but not the obligation, to transport up to a maximum daily quantity (MDQ) of gas from one or more receipt points to one or more delivery points.[1] This transportation activity is conducted in accordance with the pipeline's published tariff, as approved by FERC for U.S. pipelines or by the National Energy Board (NEB) or provincial regulators for Canadian pipelines. The tariff defines the scope of service, which includes the number of days that the transportation service is available, along with the rates, rate adjustment procedures and other operating terms and conditions.

[1] From a risk management perspective, pipeline capacity can be viewed as an option that provides the contract holder with the right, but not the obligation, to buy gas at one location and deliver or sell it at another.

All of the transportation contracts are firm contracts, available for use 365 days each year. The NWP TF-2 firm transportation contracts have annual contract quantities (ACQ) that generally correspond to the storage capacity held by the shipper at the receipt point and are intended for use only during the heating season. While the annual contract term limits TF-2 service to a quantity equal to the storage ACQ, the cost of this service proves to be significantly lower than holding firm pipeline capacity for the entire year.

PSE may also use interruptible transportation, sometimes referred to as "best-efforts" agreements, from NWP under rate schedule TI-1. This service allows NWP to provide a transportation service that is subordinate to the rights of the shippers holding and using firm transportation capacity. To the extent that the firm shippers do not use their pipeline capacity, they may receive interruptible capacity. Since TI-1 transportation service can be interrupted, PSE does not rely upon it to meet peak demand; thus it serves a limited role in PSE's gas resource portfolio.

Additionally, firm transportation capacity on NWP and GTN may be "released" and remarketed to third parties under the FERC-approved pipeline tariffs. Firm capacity on Westcoast can also be remarketed under recently instituted "streamlined capacity assignment" provisions. PSE aggressively releases capacity during time periods when it has identified surplus capacity and where market conditions provide value back to customers. The capacity release market can also provide PSE with access to additional firm capacity, when available.

Consistent with the pipeline's service obligations, the rate for firm transportation capacity requires a fixed payment, regardless of whether PSE uses the capacity. The rate for interruptible capacity is negotiable, and is typically billed as a variable charge.

B. Storage Resources

PSE's natural gas storage represents an important and cost-effective component of the Company's capacity portfolio because of the many advantages it offers. Primarily, storage offers an immediate and controllable source of firm gas supply. Storage also proves advantageous as it can be used as a pooling point for the quantities of gas purchased, but not consumed during off-peak seasons, or times of the year when gas prices tend to be less expensive. PSE can achieve significant commodity price savings by buying gas during the relatively low demand period of the summer. In addition, coupling the market area storage and

peaking facility located near PSE's system (Jackson Prairie and Plymouth LNG) with the TF-2 transportation service, allows PSE to purchase significantly less year-round pipeline capacity than it would otherwise need.

Further, storage allows PSE to use its annual transportation and gas supply contracts at a higher load factor, minimizing the average cost of gas to its customers. In addition, PSE uses underground storage for daily balancing of its distribution system loads and its volumes flowing on the interstate pipeline. If PSE's loads run higher or lower than the forecasted amount, PSE will use its storage to handle operational imbalances throughout the day, and minimize any pipeline balancing or scheduling penalties.

PSE also uses storage to balance the city-gate gas receipts with the actual loads of its Gas Transportation customers. The industrial and commercial customers who elect gas transportation service (as an alternative to gas sales service) make nominations directly or through marketer-agents to move city-gate gas deliveries to their respective meters. Customers, or marketers providing services to customers, often have daily imbalances since their scheduled gas deliveries do not match their actual gas consumption. On a daily basis, PSE provides balancing services in connection with its transportation tariff, and relies upon storage to manage these imbalances.

PSE has contractual access to two underground storage projects, each of which serves a different purpose in the Company's resource portfolio. Jackson Prairie storage, located in Lewis County, Wa., is an aquifer-driven storage field that has been designed to deliver large quantities of gas over a relatively short period of time. Clay Basin—a depleted reservoir storage field located in northeast Utah—provides supply area storage and a winter gas supply. PSE has 343,057 Dth/day of TF-2 transport capacity to deliver gas from Jackson Prairie and can use its Rockies-originated TF-1 transportation capacity from Clay Basin. Exhibit XII-3 provides more detail about PSE's storage capacity.

Exhibit XII-3
PSE Gas Storage Position

	STORAGE CAPACITY (DTH)	INJECTION CAPACITY (DTH/DAY)	WITHDRAWAL CAPACITY (DTH/DAY)	EXPIRATION DATE
Jackson Prairie – Owned (1)	6,854,879	147,334	294,667	N/A
Jackson Prairie – NWP SGS-2F (2)	1,181,021	24,195	48,390	2006
Jackson Prairie – NWP SGS-2F (3)	140,622	3,352	6,704	2006
Clay Basin	13,419,000	55,900	111,825	2013/19
Total	**21,454,900**		**454,882**	

Notes to Exhibit XII-3:

1 Storage Capacity at 12/31/2004. Storage Capacity will continue to grow due to current expansion of the process.

2 NWP contracts have automatic annual renewal provisions, but can be canceled by PSE upon one year's prior notice.

3 Obtained through capacity release market.

Located in PSE's market area in Chehalis, Wa., the Company uses Jackson Prairie and the associated NWP TF-2 transportation capacity to meet seasonal load requirements, for daily load balancing, and to eliminate the need to contract for year-round pipeline capacity to meet winter-only demand. PSE primarily uses Jackson Prairie to meet the intermediate peaking requirements of core customers.

PSE, NWP and Avista Utilities each own an undivided 1/3 interest in the Jackson Prairie Gas Storage Project. PSE operates the project under FERC authorizations. Included in Exhibit XII-4 is PSE's share of the firm daily deliverability and firm seasonal capacity from the project. PSE has access to additional deliverability and seasonal capacity through a contract for SGS-2F storage service from NWP and from a third party through the capacity release market. The storage contract with NWP allows for automatic annual renewal from the October 31, 2004 termination date, but PSE holds the unilateral right to terminate the agreement on one-year notice. PSE has access to best efforts withdrawal rights of up to 58,000 Dth/day, and interruptible transportation service from Jackson Prairie, which we believe would be quite reliable.

Questar Pipeline owns and operates the Clay Basin storage facility in Daggett County, Utah. This depleted gas reservoir was developed to allow gas to be stored during the summer and

withdrawn all winter. PSE holds the right, under two contracts, to store up to 13,419,000 Dth, and withdraw up to 111,825 Dth/day. FERC regulates the terms and conditions, including rates, of this agreement.

PSE also uses Clay Basin as a pooling point for purchasing gas, and as a partial supply backup in the case of well freeze-offs, or other supply disruptions in the Rocky Mountains during the winter.[2] As such, gas stored at Clay Basin provides a reliable source of available gas throughout the winter, including on-peak days. Gas withdrawn from Clay Basin is delivered to PSE's system, and to other markets directly or indirectly, using firm, TF-1 transportation.

Similar to firm pipeline capacity, firm storage arrangements require that a fixed charge be paid regardless of whether the storage service is used. Charges for Clay Basin service and the non-PSE-owned portion of Jackson Prairie service are billed to PSE pursuant to FERC-approved tariffs, and recovered from customers through the Company's PGA, while the cost of service associated with the PSE-owned portion of Jackson Prairie is recovered from customers through base rates. PSE pays a variable charge for gas injected or withdrawn from storage at Clay Basin.

C. Peaking Supply and Capacity Resources

PSE has firm access to other resources that provide capacity and gas supplies to meet peaking requirements or short-term operational needs. Liquefied natural gas (LNG) storage, LNG satellite storage, vaporized propane-air (LP-Air) and a Peak Gas Supply Service (PGSS) provide firm gas supplies on short notice for relatively short periods of time. PSE typically uses these sources to meet extreme peak demand during the coldest few hours or days, and generally only as the supply of last resort due to their relatively higher variable cost. LNG, PGSS, and LP-Air do not afford all of the flexibility of other supply sources. Exhibit XII-4 provides an overview of PSE's peaking gas resources.

[2] From a risk management perspective, Clay Basin provides value as an arbitrage tool, and serves as a partial hedge to price spikes in the Rockies supply basins.

Exhibit XII-4
PSE Peaking Gas Resources

	STORAGE CAPACITY (DTH)	INJECTION CAPACITY (DTH/DAY)	WITHDRAWAL CAPACITY (DTH/DAY)	TRANSPORT TARIFF
Plymouth LNG	241,700	1,208	70,500	TF-2
Gig Harbor LNG (1)	5,250 10,500 ('06-07) 15,750 ('10-11)	1,500 3,000 ('06-07)	2,000 3,000 ('06-07) 4,000 ('08-09) 5,250 ('10-11)	On-system
Swarr LP-Air	128,440	16,680 (2)	10,000	On-system
PGSS	NA	NA	48,000	City-gate delivered, via TF-1 or commercial arrangement
Total	375,390	19,388	131,500	

Notes to Exhibit XII-4:

1 Withdrawal capacity will grow as the load on the distribution system grows thus allowing more supply to be absorbed.

2 Swarr holds 1.24 million gallons. At a refill rate of 111 gallons/minute, it takes 7.7 days to refill Swarr. This equates to 16,680 Dth/day

NWP owns and operates an LNG storage facility located at Plymouth, Wa., and provides a gas liquefaction, storage, and vaporization service under its LS-1 and LS-2F tariffs. PSE holds a long-term contract that provides for seasonal storage with an ACQ of 241,700 Dth, liquefaction with an MDQ of 1,208 Dth/day, and a withdrawal MDQ of 70,500 Dth/day. The ratio of injection and withdrawal rates to the storage capacity means that it can take PSE over 200 days to fill to capacity, but only three and one-half days to empty. Due to these operating characteristics, PSE uses the LS-1 service to meet its needle-peak demands, with LS-1 gas delivered to PSE's city-gate using firm TF-2 transportation.

PSE supplements its gas-distribution system in the Gig Harbor area with a new, satellite liquid natural gas (LNG) facility. The facility has been constructed to ensure that a remote but rapidly growing region of the distribution system has sufficient gas supply during peak weather events.

The LNG facility is referred to as a "satellite" because it is designed to receive, store, and vaporize LNG that has been liquefied at other LNG facilities. PSE transports the LNG by tanker truck from third-party providers. Because the source of the LNG is outside the PSE distribution system, the Gig Harbor LNG facility represents an incremental supply source and is therefore included in the Peak Day resource stack, even though the plant was justified based on the distribution capacity need. The hourly deliverability, total storage capacity, and the ability of the distribution system to absorb the supply limit the daily deliverability of the plant. The deliverability rating increases over time as loads on the distribution system increase. Although this LNG facility can benefit only that portion of the distribution system adjacent to the Gig Harbor plant, its operation allows gas supply from pipeline interconnects or other storage to be diverted elsewhere. By fall of 2006, an additional tank will be installed at the site. This will double the on-site storage capacity and increase the operational flexibility of the plant, as one tank can be filled while the other is used. PSE anticipates that a third tank may be installed by 2010. However, that decision will be based on distribution capacity need rather than supply need.

PSE maintains the Swarr LP-Air facility with a net storage capacity of 128,440 Dth equivalent, and has the ability to vaporize approximately 30,000 Dth per day. At the maximum vaporization capacity, this provides a little over four days of supply. Since the propane air facilities connect to PSE's distribution system, PSE requires no upstream pipeline capacity. PSE typically uses this LP-Air facility to meet extreme hourly or daily peak demand, or to supplement distribution pressures in the event of a pressure decline on NWP. Given the operational flow characteristics of its system, PSE has determined that it is highly unlikely to operate the LP-Air facility for more than 8 hours per day, to meet the early morning and evening peak demand periods on the distribution system. Therefore, for peak-day planning purposes this facility will be considered to supply only 10,000 Dth per day.

Under its PGSS agreements, PSE has the contractual right to call on third party gas supplies for a limited duration during peak periods. Currently, PSE has the right to purchase up to 48,000 Dth/day at a price tied to the replacement cost of distillate oil for up to twelve days during the winter season.[3] This supply is available at Sumas and would be delivered to PSE distribution city gates on a firm basis through dedication of TF-1 capacity (when such capacity is not needed for other supplies) or by way of a commercial exchange agreement with a third party.

The PGSS agreement expires after the 2011-2012 heating season, and renewal options are uncertain at this time.

Some of PSE's peak shaving resources require that a fixed charge be paid regardless of whether the resource is used. The LNG service is billed to PSE pursuant to a FERC-approved tariff, and recovered from customers through the company's PGA. The cost of the PGSS contract is also recovered through the PGA. The cost of service associated with the on-system LP-Air plant and Gig Harbor LNG plant is recovered from customers through base rates. PSE pays a variable charge on gas injected or withdrawn from LNG storage.

D. Gas Supplies

By maintaining pipeline capacity to various supply basins or trading hubs, PSE gains access to sources of natural gas. The price and delivery terms across supply basins tend to be very similar, although the price levels from one day to the next can vary significantly. Longer term, prices at a given supply hub may "separate" from other regional supply locations due to shortages of pipeline capacity. This separation cycle typically lasts one to three years and is alleviated with the construction of additional pipeline infrastructure. Over the 20 year planning horizon, PSE would expect the regional supply basins to have generally comparable pricing, with differentials primarily driven by differences in the cost of transportation.

Gas supply contracts tend to have a shorter duration than transportation contracts. While the terms outlined in gas supply contracts ensure that the gas supplier will perform, PSE's firm transportation capacity grants access to supply basins and trading hubs that offer a greater likelihood of availability and liquidity. In the event of supplier default, PSE can always use its pipeline capacity to buy gas from other suppliers or marketers at market locations along the pipeline. PSE's long-term planning has primarily focused on the reliability of its pipeline delivery capacity and the long-term outlook for natural gas supply.

In recent times, current and long-term views for natural gas availability suggest slower rates of growth in gas supply, and increased rates of growth in demand. This leads many experts to believe that significant imports of LNG into North America will be required to maintain a supply/demand balance. Like many LDCs, PSE is somewhat disadvantaged in the buying arena because of its very low load-factor market relative to industrial and power-generation

[3] In essence, this is a call option with a variable strike price equal to the then current, delivered price of distillate oil.

markets, meaning access to additional gas supply may be more difficult over time. PSE has therefore developed a policy to maintain supply under long-term contracts at a level sufficient to serve at least 50 percent of its annual sales volumes.

PSE has a mix of long-term gas supply contracts (more than 2 years) and short-term gas supply contracts (2 years or less) to meet average loads during different months. Long-term contracts and medium-term contracts are typically baseload supplies delivered at a constant daily rate over the contract period. Additionally, PSE can contract for seasonal baseload firm supply, typically for the winter months. The Company enters into forward-month transactions to supplement the baseload transactions, particularly for the months of November through March. During "bid week"—the week prior to the beginning of the upcoming delivery month—PSE estimates the average load requirements for the upcoming month and enters into month-long transactions to balance load. On a daily basis, the company does not plan to be long or short going into any day, but instead balances the position using storage and day-ahead purchases and off-system sales transactions. During the gas day, the company uses its Jackson Prairie storage for balancing.

Exhibit XII-5 provides an example of the weighting between different contract terms in 2004-2005. It summarizes the long-term gas contracts in PSE's portfolio as of the beginning of 2005. As can be seen in the table, the contracts have primary-term termination dates that are spread out over a number of years. The volumes under contract today, taken at their contractual 100 percent load factor, represent approximately 66 percent of PSE's forecasted 2005 annual sales volumes. As contracts expire, PSE will renew, extend or replace the contracts with similar long-term contracts.

Exhibit XII-5
Long-term Gas Supply Contracts at Jan.2005

Contract	Basin	Winter Volume (Dth/d)	Summer Volume (Dth/d)	Primary Term Start Date	Primary Term Termination Date
Contract 1	**System**	**500**	**500**	05/15/85	05/15/05
Contract 2	BC/Sumas	20,000	20,000	11/01/90	10/31/06
Contract 3	BC/Sumas	10,000	10,000	11/01/04	10/31/08
Contract 4	BC/Sumas	20,000	20,000	11/01/04	10/31/09
Contract 5	BC/Sumas	10,000	10,000	11/01/04	10/31/09
Contract 6	BC/Stn 2	10,000	10,000	11/01/04	10/31/09
Subtotal	**BC**	**70,000**	**70,000**		
Contract 7	Alberta	20,000	20,000	11/01/04	10/31/08
Contract 8	Alberta	10,000	10,000	11/01/04	10/31/09
Subtotal	**Alberta**	**30,000**	**30,000**		
Contract 9	Rockies	9,000	9,000	05/01/03	04/30/06
Contract 10	Rockies	10,000	10,000	04/01/05	10/31/09
Contract 11	Rockies	10,000	10,000	04/01/05	10/31/09
Contract 12	Rockies	30,000	20,000	11/01/04	10/31/14
Subtotal	**Rockies**	**59,000**	**49,000**		
TOTAL		159,500	149,500		

PSE will continue to monitor and evaluate the gas markets to identify trends and opportunities to fine-tune its policy for contracting gas supply on a long-term vs. short-term basis. Because of the liquidity of the markets in which PSE participates, there does not appear to be a significant advantage (other than reliability) to holding long-term contracts. PSE will continue to model and analyze varying levels of long-term contracts, seeking to identify costs and benefits to develop a more clearly delineated policy guideline.

PSE Participation in the Gas Futures Market

PSE began hedging its core gas portfolio as of September 2002. The Company utilizes hedge instruments, such as fixed-price physical transactions and fixed-price financial swap transactions. These were determined to be the most effective means of hedging at the time.

The New York Mercantile Exchange (NYMEX) futures market has a delivery point at Henry Hub in Louisiana. However, there can be a significant price variance between Henry Hub and the physical locations from which PSE sources its supply (the Rockies, British Columbia and Alberta). In order for a futures hedge to be fully effective, PSE would need to enter into an Exchange for Physical (EFP) transaction with another party to execute local delivery. In this way, PSE could enter into a fixed price hedge that transpires into physical delivery.

Having a futures account requires opening an account with a clearing firm, and establishing commercial relationships with floor brokers who can execute transactions with the NYMEX on behalf of customers. The clearing firm would require PSE to post a margin call, and there would be a daily settlement into and out of the PSE account, depending upon the size of PSE's futures position and the daily direction of futures prices. Then, PSE would enter into an EFP transaction with a counterparty, who would agree to physical delivery at the agreed upon location. The two parties would exchange futures at the NYMEX as part of the EFP transaction. The level at which the futures are exchanged, combined with the basis price of the EFP contract, sets the price for the physical delivered gas.

While the EFP mechanism provides a viable means to hedge, PSE has been able to negotiate much more simple, fixed-price physical agreements directly with regional suppliers. Not only are these transactions far simpler, they remove the need for both opening and managing a futures account with a clearing firm, and entering into EFPs with regional suppliers.

In addition, a liquid market has developed for the over-the-counter financial derivatives for fixed-price and basis transactions. From a pricing perspective, these transactions are similar to futures trades and EFPs, but they involve a simpler process, as transactions do not require intermediary clearing firms, floor brokers and the NYMEX. A master agreement, or an ISDA agreement, governs these transactions, and the parties negotiate a range of contractual items including credit, netting and cross-collateral terms. These transactions have worked well for PSE, as they can be combined with physical index purchases. Moreover, many of PSE's long-term and short-term contracts are index-based contracts, thus the financial derivatives work well within the company's portfolio.

On a going-forward basis, the company will continue to evaluate the hedging mechanisms available in the market to weigh the benefits of each device to determine its applicability in

PSE's portfolio. PSE will consider the values afforded to price stability by its customers (market research underway) in developing further internal policies and procedures for determining the appropriate mix of market price vs. fixed price gas supply. Please refer to the discussion of portfolio management and optimization in Chapter XV.

E. PSE Gas Resource / Demand Balance

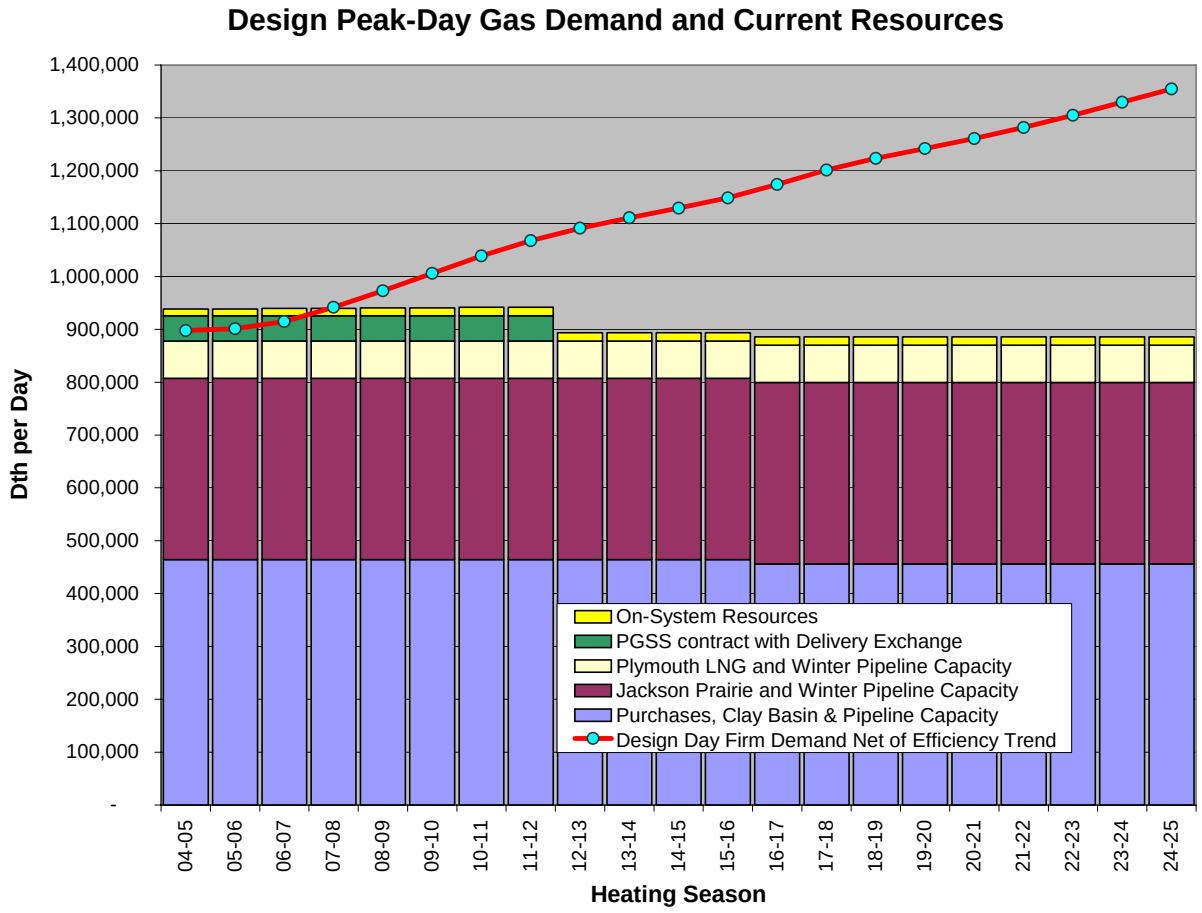
PSE holds firm pipeline transportation and peaking capacity that allows the Company to transport or otherwise deliver gas, on a firm basis, from points of receipt to customers. This capacity ensures that PSE can provide its customers with reliable and cost-effective gas supplies during the coldest expected weather, and over a range of expected scenarios. In addition, PSE maintains upstream pipeline capacity to ensure direct access to gas production areas and the inherent reliability that this brings. PSE also maintains a mix of on-system resources that assist in meeting peak demands and contribute to the reliability of the distribution system.

Based on the current base case forecast, and assuming no increase or decrease in energy efficiency measures identified in PSE's 2003 Least Cost Plan, the Company does not anticipate requiring additional firm capacity until the winter of 2008-2009. Until that time, PSE has adequate capacity to meet the expected requirements of its firm customers.

In the 2003 Least Cost Plan PSE anticipated it would not require additional delivery resources until the 2010-2011 heating season. The adoption of a slightly higher peak-day design standard (1 degree colder), and substantially higher load growth in the past three years have eroded the future adequacy of PSE's gas resources.

Exhibit XII-6 summarizes PSE's direct resource/demand balance position.

Exhibit XII-6
Summary of PSE's Gas Capacity Position
(Dth/Day)



F. PSE Gas Resource for Power Generation Portfolio

PSE holds firm pipeline transportation capacity to supply fuel to its various gas-fired generation plants for the benefit of its electric customers. The following table summarizes the capacity held by the Power Generation Portfolio:

Exhibit XII-7
Summary of PSE- Power Generation Gas Capacity Position
(Dth/Day)

Direct Connect Capacity

Plant	Transporter	Service	CD	Primary Path	Primary Term End	Renewal Right
Whitehorn	Cascade Natural Gas	Firm	(Note 1)	Westcoast/CNG Interconnect (Sumas) to plant	12/31/2000	Yr to Yr
Tenaska	Cascade Natural Gas	Firm	(Note 1)	Westcoast/CNG Interconnect (Sumas) to plant	12/31/2000	Yr to Yr
Encogen	Cascade Natural Gas	Firm	(Note 1)	NWP-Bellingham to plant	6/30/2008	Yr to Yr
Fredonia	Cascade Natural Gas	Firm	(Note 1)	NWP-Sedro-Wooley to plant	7/31/2021	Yr to Yr
Freddy 1	NWP	Firm	21,747	Westcoast/NWP Interconnect (Sumas) to plant	9/30/2018	Yr to Yr

Upstream Capacity

Plant	Transporter	Service	CD	Primary Path	Primary Term End	Renewal Right
Freddy 1	Westcoast	Firm	22,000 (Note 2)	Station 2 to Westcoast/NWP Interconnect (Sumas)	10/31/2019	Yes
Encogen	NWP	Firm (Note 3)	9,300	Westcoast/NWP Interconnect (Sumas) to Bellingham	10/31/2009	No
Encogen	NWP	Firm (Note 3)	27,700	Rockies to Bellingham	10/31/2009	No

Note 1: Plant requirements

Note 2: Converted to approximate Dth per day from contract stated in cubic meters per day,.

Note 3: Capacity held by a third party, controlled by PSE via a grandfathered Buy/Sell agreement

Several of the gas-fired generation units for which PSE is obligated to provide gas fuel, specifically Whitehorn, Tenaska, Fredonia and Frederickson have fuel-oil firing capability and thus do not require firm capacity. [The planning standard for gas fuel for generation is far less stringent than for core gas customers, therefore, firm transportation capacity upstream all the

way to a gas supply source is not necessarily required to support even the "firm" generation plants.]

For modeling purposes PSE has grouped the current PSE generation plants into 4 categories:

- Firm via NWP: Encogen "must run" and Freddy 1
- Interruptible via NWP: Frederickson, Fredonia, Encogen dispatchable
- Firm via Westcoast: Tenaska- winter only, to support PGSS Agreement
- Interruptible via Westcoast: Whitehorn

Incremental gas-fired generation resources (generic CCCT) as selected in the Electric Planning scenario "Business As Usual" are assumed to be located in the I-5 Corridor and require firm transportation on NWP. Thus the current load-resource balance for Power Generation Gas transportation capacity is shown in Exhibit XII-8.

Exhibit XII-8
Summary of PSE's Gas for Generation Capacity Position
(MDth/Day)