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PUGET SOUND ENERGY
The Energy To Do Great Things

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June 8, 2012

Mr. David W. Danner
Executive Director and Secretary
Washington Utilities and Transportation Commission
1300 South Evergreen Park Drive S.W.
P.O. Box 47250
Olympia, WA 98504-7250

Subject: **Docket No. UG-120715**
Commission Investigation into the Need to Enhance the Safety of Natural Gas Distribution Systems
Comments of Puget Sound Energy, Inc.

Dear Mr. Danner:

In response to the Commission's Notice of Opportunity to File Written Comments, dated May 18, 2012 in Docket UG-120715, Puget Sound Energy, Inc. ("PSE" or the "Company") offers the following comments.

PSE has previously provided extensive testimony, evidence and argument in Docket UG-110723 in which the Company proposed a mechanism to facilitate acceleration of pipe replacement on PSE's natural gas distribution system. The proposed mechanism would have allowed PSE to move forward with sustained proactive replacement of certain facilities—specifically older plastic pipe, wrapped steel mains and wrapped steel services—by providing a steady and certain source of funding for these important pipeline replacement projects. PSE's proposed mechanism would have allowed PSE to project the timing and amount of pipeline to be replaced each year and to build into rates for that year the capital investment for such pipe replacement, subject to a true-up to actuals at the end of the year.

In addition to the extensive information available in Docket UG-110723, PSE offers the following additional information.

I. Pipeline Replacement Programs

A. For each gas company, what are the types of pipe that are currently in service that need to be replaced to enhance the safety of the company's natural gas distribution system (*e.g.*, pre-1986 polyethylene pipe, wrapped steel main, and wrapped steel services)? For each type of pipe identified, please provide the following information:

1. A description of the pipe

There are currently three types of pipe identified in PSE's system that have an increased risk of leakage; bare steel pipe, pre-1972 wrapped steel pipe, and pre-1986 polyethylene pipe. PSE will complete the replacement of all bare steel pipe by the end of 2014. For pre-1972 wrapped steel pipe and pre-1986 polyethylene pipe, PSE has integrity management programs in place that use risk models and engineering review to identify segments to be replaced. The remainder of the system is monitored and additional replacement plans developed each year.

2. The nature and quantification of the safety risks associated with the pipe

PSE has historically embraced risk management methodologies for our natural gas distribution system. In December of 2009, the Pipeline and Hazardous Materials Safety Administration issued a final rule requiring pipeline companies to develop and implement a Distribution Integrity Management Program (DIMP). The purpose of this rule is to enhance safety by requiring pipeline operators to understand threats to their system, mitigate risks, measure performance, and adjust mitigative measures as necessary based on performance. PSE's DIMP is attached as Exhibit A and provides significant information on the nature of the safety risks associated with each type of pipe as well as the risk ranking methodology used for each type of pipe. Below is a brief summary for each pipe material.

Bare Steel:

Bare steel pipe typically leaks due to corrosion. This pipe was installed without coating or cathodic protection, has the highest number of leaks per mile, and is the oldest vintage pipe remaining in PSE's distribution system.

Wrapped Steel:

Pre-1972 wrapped steel pipe is also at risk of leaks due to corrosion. Some of this pipe was initially installed without cathodic protection. While cathodic protection has been added to this pipe, some segments of the pipe continue to develop leaks. This is due to a variety of factors including coating failure as the coating ages. Although the majority of wrapped steel pipe fall within the lower risk categories that do not require replacement, PSE

continues to find areas that are candidates for replacement due to their leak history and corrosion found when the pipe is exposed.

Pre-1986 Polyethylene Pipe:

Polyethylene pipe has replaced steel pipe as the material of choice in most natural gas distribution systems. This is largely due the fact that it does not corrode and is cost effective to install and maintain. While most polyethylene (PE) pipe has performed very reliably, some of the older, pre-1986 vintages of polyethylene pipe have exhibited performance characteristics that are not equivalent to more modern installations. After years in service, the HDPE Dupont PE pipe has exhibited performance characteristics that suggest this resin is susceptible to brittle cracking due to external forces such as rock impingement. Due to the nature of brittle-like cracking that can occur on this type of vintage pipe, leaks that occur are often more hazardous. In PSE's experience, more than 75 percent of the leaks found require immediate or next day repair and less than two percent are Grade C.

In addition to the HDPE Dupont PE pipe, PSE installed HDPE pipe from other manufacturers. This pipe installed prior to 1986 has not exhibited the same susceptibility to brittle cracking as the HDPE Dupont but has shown an increased likelihood of leaks from different joining methods that were industry standard during this timeframe.

3. The extent to which the pipe is deployed in the company's natural gas distribution system

PSE is in the process of implementing a Geographic Information System that will provide better inventory and pipe location data for all of our pipe. Until that system is implemented, PSE is using a combination of different data to estimate the amount of each type of pipe within the distribution system.

- PSE has been aggressively replacing bare steel pipe, and there were approximately 64 miles of this pipe remaining in the system at the beginning of 2012.

- PSE's records indicate there are approximately 4,000 miles of pre-1972 wrapped steel pipe currently in operation in the distribution system.

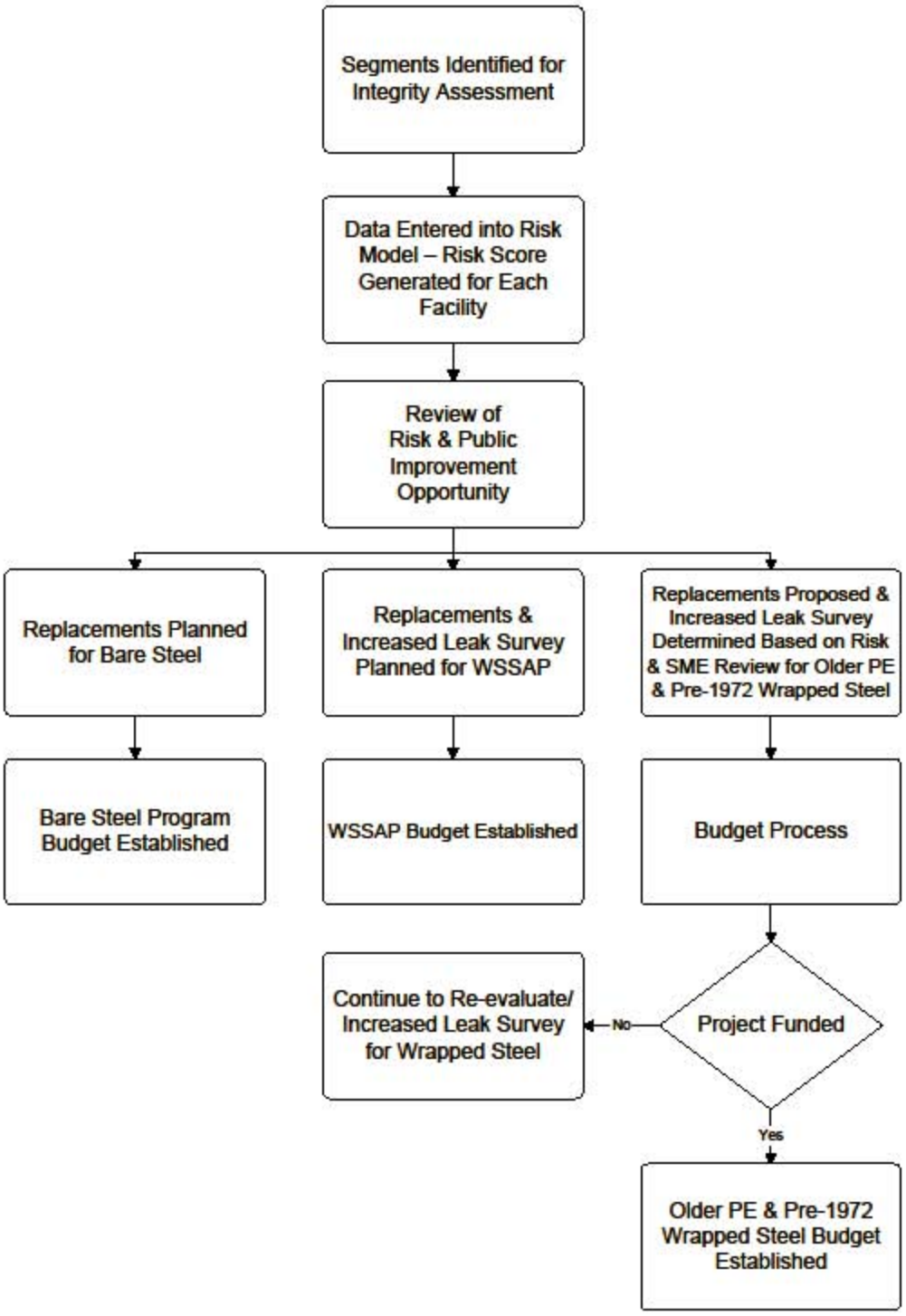
- PSE's records indicate that approximately 1,000 miles of HDPE DuPont pipe was purchased and may have been installed.

4. The actions the company is currently taking to replace the pipe

Over the past decade, PSE has worked to improve all aspects of the integrity of its gas distribution system. Some of these efforts have resulted in replacing pipe. In 2007, PSE completed the replacement of all its cast iron pipe; and in 2014 PSE will complete the replacement of all bare steel pipe. Replacement of wrapped steel mains and service piping as well as pre-1986 plastic pipe is determined based on the risk ranking of the pipe in conjunction with the annual budget process.

Each year, PSE identifies pipe segments in each of the three pipe facility types (bare steel, wrapped steel, and older polyethylene pipe) on which to perform an integrity assessment. Segments are identified based on historical performance and other system data. Information is collected and entered into a risk model. Examples of the types of data entered into the risk model include leak history, number and location of active leaks, information on the condition of the pipe, and backfill and cathodic protection history. The risk model then calculates a risk score for each facility segment. PSE uses the risk score, in conjunction with its knowledge of public improvement projects that would limit the ability to replace facilities in future years, to determine which facilities are candidates for replacement. Through an iterative process, segment boundaries may be adjusted to achieve the greatest reduction in overall system risk. Through the annual budget process, PSE makes decisions as to how many of these replacements of older PE and pre-1972 wrapped steel systems can be accomplished each year. A flow chart depicting this process for each of the four facility types is presented below.

Annual Process



Bare Steel:

PSE's bare steel replacement program is a program to systematically identify and replace all bare steel and wrought iron pipe, including mains and service piping, located in PSE's natural gas distribution system. This includes replacing more than 200 miles of main and associated service piping as well as any individual bare steel services. PSE has replaced more than 140 miles of bare steel mains and associated services since 2005. There are approximately 64 miles remaining to be replaced by December 31, 2014.

Wrapped Steel:

PSE's Wrapped Steel Service Assessment Program evaluates the risk of older (pre-1972) wrapped steel service piping and develops appropriate mitigation, including replacement, of the service piping identified as highest risk. The program was initiated in 2006 and uses a risk model to categorize approximately 100,000 wrapped steel service lines into four mitigation categories: Priority Replacement, Scheduled Replacement, Increased Leak Survey, and Standard Mitigation. These categories specify the appropriate mitigation to apply. The risk model is updated annually with current operating history and performance information and new risk scores are calculated for each service address. Based on these risk scores, each service line is placed into one of the four mitigation categories and mitigation measures are implemented as appropriate. As of 2011, the approximately 90,000 remaining service lines are distributed amongst the four mitigation categories, as follows:

Mitigation Category	Priority Replacement	Scheduled Replacement	Increased Leak Survey	Standard Mitigation	Subtotal
2011 Model Results	120	266	22,240	66,719	89,345

PSE has remediated more than 10,000 services since the program began in 2006 and continues to update the risk model on all remaining services each year as additional data on service piping is obtained. This includes information from the condition of the pipe and coating as well as leakage information. PSE performed inspections and tests on over 1,000 services in the lower risk categories to determine whether changes were needed to the risk model and to validate or identify changes needed to the mitigative measures. Based on this investigation and analysis of the data, PSE determined that much of the remaining service piping is in good condition and will continue to reliably and safely provide natural gas service for many years. PSE will continue to gather additional risk knowledge on the remaining service lines and will replace service lines based on the annual risk ranking.

PSE's Wrapped Steel Main Assessment Program evaluates risks associated with older (pre-1972) wrapped steel mains and develops appropriate mitigation, including replacement, of those identified with the highest risk. The pre-1972 wrapped steel mains adjacent to wrapped steel services categorized as "priority" and "scheduled" replacement service lines have been reviewed to determine if there is evidence of corrosion and whether these mains should be replaced. Additional pre-1972 wrapped steel mains that are not adjacent to wrapped steel services categorized as "priority" and "scheduled" replacement

service lines are also being reviewed to determine if there is evidence of corrosion and whether replacement or other mitigation is appropriate. The majority of the wrapped steel mains are performing very well, and PSE expects they will continue to reliably provide gas service for years to come. However, in certain areas, leakage rates are increasing, and PSE's review identified several locations where the main and associated services warrant replacement due to leakage and/or coating and pipe condition. A replacement program for wrapped steel mains was begun in 2010, when PSE replaced approximately one mile of wrapped steel mains and associated services. PSE replaced over 3 miles of wrapped steel main in 2011 and is targeting to replace an additional 3 miles in 2012.

Pre-1986 HDPE Dupont Pipe:

In 2008, PSE significantly improved its material failure analysis processes for HDPE DuPont pipe, focusing on obtaining as many failed parts as possible. This provided additional data that enhanced PSE's ability to identify pipe failures. In 2009, PSE developed a risk model for HDPE DuPont pipe segments that prioritizes the replacement of these pipes based on their failure history. This program identifies and replaces older vintages of HDPE DuPont pipe that have exhibited performance characteristics that are not equivalent to more modern installations. PSE replaced approximately two miles of older HDPE DuPont pipe in each year since 2009. PSE is targeting to replace over 4 miles of older HDPE DuPont pipe in 2012. PSE continues to evaluate risk on over 100 additional segments comprising more than 98 miles of older HDPE DuPont pipe with, on average, an additional 14 miles identified as candidates for replacement each year.

5. The company's future plans to replace the pipe

As previously discussed, PSE will complete the replacement of bare steel by the end of 2014. For all other types of pipe, PSE will continue to follow our Distribution Integrity Management Program to determine which pipe should be replaced. This process may lead to replacement of individual segments of pipe, entire systems in specific geographic regions, or complete replacement of certain pipe materials such as was done with cast iron and is in progress for bare steel.

In accordance with DIMP, segments that have experienced failures will be risk ranked and risk ranking will be used to prioritize these segments for replacement. This prioritization takes into consideration an analysis of what is necessary to maintain a safe natural gas distribution system and what additional replacement may not be required but may improve the safety of the natural gas system. PSE will continue to invest in pipeline replacement programs at a level that meets or exceeds pipeline safety requirements consistent with DIMP principals.

6. An estimate of the cost and time required to replace the pipe

PSE cannot at this time determine the exact amount of pipe that should be replaced to enhance pipeline safety or a timeframe or cost estimate for replacing these categories of pipe, other than what was indicated above. By necessity, integrity management under the

DIMP is an ongoing and evolving process of risk assessment and responding risk mitigation. PSE will continue to evaluate opportunities to improve its risk model and will identify segments and systems for replacement based on a combination of the evolving risk model and engineering review. A copy of PSE's 2011 Continuing Surveillance Annual Report is provided as Exhibit B.

B. Please provide a detailed explanation of the impediments, if any, to replacing pipe that needs to be replaced to enhance the safety of each company's natural gas distribution system, including but not limited to the following:

1. Cost Recovery

Regulatory support in the form of quicker recovery of capital costs would remove many impediments and enable PSE to proactively replace larger segments of pipe with characteristics similar to the highest-risk, priority replacement facilities based on factors such as pipe material and operating environment. Regulatory support for accelerated pipeline replacement would enhance pipeline integrity as well as provide greater flexibility to coordinate permitting and planning with the jurisdictions we serve.

As detailed in PSE's filings in Docket UG-110723, the current regulatory framework creates an impediment to utilities for undertaking capital-intensive pipeline safety efforts. The delay in recovery of capital expenditures that are much more costly then the plant being replaced and that do not create new revenues creates an unnecessary financial burden for a utility. State utility commissions and legislatures across the nation have recognized the appropriateness of adjusting traditional ratemaking methods when the traditional mechanisms are inconsistent with and undermine modern energy policy goals such as enhancing pipeline safety.[1]

Traditional cost-of-service ratemaking based on a historical test year delays recovery of capital expenses that can exceed two years when utilities invest in capital-intensive programs. Under traditional rate structures, utilities are encouraged to replace pipe that is necessary to maintain a safe system—no more and no less.[2] In the current economic

[1] *See, e.g., Pet. of Bay State Gas Co.*, Mass. D.P.U. 09-30 at 132–34 (Oct. 30, 2009) (finding that proposed "Targeted Infrastructure Reinvestment Factor" mechanism would provide appropriate incentives to expedite replacement of unprotected bare steel pipe; reasoning that "[w]ithout approval of the TIRF mechanism, recovery of this capital will be delayed until a future rate case. The Department expects that providing more certainty for, and more timely recovery of, the revenue requirement associated with capital expenditures for steel replacement between rate cases will provide appropriate incentives for the Company to expedite the replacement of the unprotected steel in its distribution system."); *Petition of New England Gas Co.*, Mass. D.P.U. 10-114 at 62 (Mar. 31, 2011) ("Although we agree with the Attorney General that current rate regulation does not necessarily hinder NEGC from providing safe and reliable distribution service, and that there is no record evidence to demonstrate that NEGC does not maintain safe and reliable service under such a regulatory framework, we reaffirm our previous conclusion that approval of a TIRF mechanism is likely to provide an incentive for more sustained and aggressive replacement of aging infrastructure, because it lessens the impediment of current capital constraints on a gas distribution company.").

[2] *See Pet. of Bay State Gas Co.*, Mass. D.P.U. 09-30 at 132–34 (Oct. 30, 2009); *Pet. of New England Gas Co.*, Mass. D.P.U. 10-114 at 62 (Mar. 31, 2011).

climate, with tight budgets and numerous competing budget demands, sustained, accelerated replacement of higher risk pipe is unlikely to occur except at the risk of delaying other critical projects.

2. Shortage of personnel or equipment

Uncertainty in the amount of pipeline replacement work that will be done from year to year can be an impediment to accelerating the replacement of pipelines with integrity issues due to shortage of qualified personnel and available equipment. Accelerating the replacement of pipe in a planned manner enables the company to more gradually ramp up and down the replacement efforts over time to address concerns with availability of qualified personnel and equipment.

3. Access, e.g., rights-of-way or government permitting issues

There are similar impediments related to access and permitting constraints as discussed above related to shortage of personnel and equipment. Accelerating the replacement of pipe in a planned manner enables the company to more proactively replace pipe with marginal integrity concerns prior to public improvement projects and subsequent paving moratoriums as well as collaborate with municipalities on long term replacement plans minimizing permitting delays and overall replacement costs. Additional benefits include the ability to replace mains/service piping for an entire neighborhood that will ultimately need replacement, rather than just mains/service piping of the immediate block that has demonstrated a history of poor performance. This means mobilizing crews in the neighborhood only one time rather than two, three, or four times if the work is done over time in multiple stages. Customers benefit from only one disruption when larger segments of pipe replacement take place in one neighborhood.

C. Risk assessment criteria and methodology

1. Describe and summarize the risk assessment methodology used by the Company to evaluate pipeline infrastructure.

2. What are some of the key assumptions used in such methodology, which may change over time, and what process is used to update these?

3. What are some of the important criteria, such as high consequence areas (HCAs), and how are they used as criteria in developing the priority schedule for pipe replacement schedules?

PSE's Distribution Integrity Management Program, Exhibit A hereto, provides detail on our risk assessment criteria and methodology. The risk assessment model includes evaluating leak history, active leaks, information on the condition of the pipe, information on the type of backfill, cathodic protection history, and the population density near the pipeline facilities. This incorporates consideration of both the likelihood of leaks as well as the potential consequence of leaks.

II. Interim Cost Recovery Mechanism

A. Would allowing the company to recover its pipeline replacement costs sooner than those costs are recoverable through traditional ratemaking principles provide a financial incentive to expedite such replacement? If so, please describe in detail how an interim cost recovery mechanism would result in accelerated pipeline replacement.

Please see PSE's comment in response to question 1B, above. Allowing companies to recover pipeline replacement costs sooner than what would occur under traditional ratemaking methods is a helpful first step, and PSE supports the efforts of Commission Staff to develop an expedited limited rate case proceeding. However, if the goal is to accelerate pipeline replacement at levels above and beyond minimum pipeline safety standards, more action is necessary. An expedited, limited rate case proceeding, for example, could still result in regulatory lag (albeit for a shorter period of time), and pipeline safety enhancements would still have to compete for capital dollars amid budget constraints even with such a mechanism in place. PSE believes that only a prospectively-operating mechanism would address this underlying issue.

B. If an expedited cost recovery mechanism is proposed, should it replace the Commission's conventional regulatory cost recovery structure for all pipeline replacement projects, or should it be limited to certain circumstances? Examples of such circumstances include, but are not limited to, discretionary projects, capital spending in excess of a pre-determined amount, and special projects.

PSE believes that expedited cost recovery for all pipeline replacement projects should be provided. This could be done under a structured and approved replacement program that has input from regulatory and other interested parties as to scope, timing and overall costs. This type of program would not relieve the utility of its overall responsibility for providing a safe and reliable system but could enhance the decision making process.

C. What is an appropriate interim cost recovery mechanism, and how should it be structured? Please describe in detail how each of the following interim cost recovery alternatives could be implemented in a manner that would provide a financial incentive to accelerate pipeline replacement and would result in a rate that is fair, just, reasonable, and sufficient:

1. A deferred accounting mechanism, such as, but not limited to, one comparable to the mechanism authorized in RCW 80.80.060(6)

A deferred accounting mechanism might be a helpful first step. However, if the goal is to accelerate pipeline replacement at levels above and beyond minimum pipeline safety standards, more action is necessary. A deferral mechanism protects the short term earnings of a utility, however it does not create any cash availability until the deferral is included in

rates. As such a deferral mechanism for this type of capital expense could create multiple layers of regulatory assets that would increase the complexity of the mechanism. If a deferral mechanism is used, it should allow for annual deferral of capital investment and expense (including operating and maintenance costs, depreciation, taxes, and return on investment) related to a planned level of pipeline replacement for that year. At the end of the deferral year, the deferred capital investment and expense for the actual pipeline replacement prudently undertaken during that year should be included in rates.

2. A ratepayer surcharge/expense mechanism to be used exclusively for pipeline replacements

PSE supports a cost recovery mechanism such as that proposed in Docket UG-110723, that allows utilities to project the amount and timing of replacement of older plastic pipe and wrapped steel mains and services in the upcoming year and build this projected cost of pipeline replacement into rate base as the projected pipeline replacement occurs during the year, subject to a true-up at the end of the rate year depending on the amount of pipe actually replaced during the year. Such a mechanism would remove disincentives for accelerated pipeline replacement of higher risk pipe such as older plastic pipe and wrapped steel mains and services. The mechanism should provide a steady and certain source of funding for these important pipeline replacement projects to allow utilities to move forward with sustained proactive replacement of vulnerable pipe.

As described in more detail below, PSE may also support an attrition adjustment that is defined as to calculation methodology so that there is regulatory certainty as to quicker recovery of capital investments.

3. Some combination of 1 and 2 above

PSE believes that a properly constructed attrition surcharge/expense mechanism could be used independently or in combination with a properly constructed deferral mechanism. Only after examining the specific details of such mechanisms and their interaction, could PSE give an opinion on whether or not they would provide a financial incentive to accelerate pipeline replacement.

4. An attrition adjustment mechanism

PSE believes that a properly defined attrition adjustment mechanism may be an appropriate cost recovery mechanism for encouraging enhanced pipeline safety. By "properly defined" PSE means that the mechanism should have an accepted methodology for calculating the adjustment and that cost recovery would be allowed based on that accepted methodology. Only after examining the specific details of such a mechanism, could PSE give an opinion on whether or not it would provide a financial incentive to accelerate pipeline replacement.

5. Pilot program or permanent mechanism (if a pilot program is approved, how long would it need to be in effect to accomplish the

priority pipe replacements identified in response to question I.A.?)

Either a pilot program or permanent mechanism could be an appropriate cost recovery mechanism for encouraging enhanced pipeline safety. The term of a pilot program could be predefined or set for review over a defined period such as five years; however PSE believes that to achieve long-term accelerated pipeline replacement, any program adopted would need to be in effect for an extended term – in the range of 20+ years.

D. Process

1. What should the role of the Commission's pipeline safety staff be at stages in this process, including risk assessment methodology review, review of priority replacement, and budget review?

The Commission's pipeline safety staff should continue to be heavily involved in reviewing utilities' risk management programs and activities regardless of whether any separate cost recovery mechanism is adopted. The involvement of third parties and Commission Staff to discuss and identify which projects would be considered discretionary or which capital spending would be in excess of currently planned amounts was suggested by PSE in Docket UG-110723 as a means of providing interested parties with transparency and an opportunity for collaboration, as well as to eliminate any concerns that the process was being used to "gold plate" PSE's system. No "approval" by Commission pipeline safety staff or other party for safety projects should be required.

2. Does the Company envision any issues about the use of sharing of confidential information? What procedures should the Commission impose to protect any confidential information?

PSE does not anticipate concerns with confidential information as the pipeline safety projects at issue do not generally involve confidential information. The Commission's existing policies and procedures should be adequate to protect confidential information.

3. Depending on the type of mechanism, must the filing be synchronized with other filing dates, such as the PGA (purchased gas adjustment)?

PSE does not believe that filings associated with pipeline safety cost recovery mechanisms must be synchronized with other filing dates.

4. If the proposal is to include an annual budget for priority pipe replacement, when should it be submitted? How much time should Commission Staff be given to review the plan and budget?

PSE believes that a three month period is a reasonable timeframe between submitting an annual budget for priority placement and the approval of rates going into effect.

5. If the mechanism calls for an annual plan or budget and for Commission review of such plan or budget, by what process should the Commission undertake those function? Would an open meeting process suffice, or should the process be more formal?

Please see answers to 1 and 4 above. An Open Meeting process seems an appropriate way to approve the annual plan.

PSE appreciates the opportunity to present its viewpoint on these issues and looks forward to further discussions on this topic. Please direct any questions regarding these comments to Eric Englert at (425) 456-2312 or the undersigned at (425) 462-3495.

Sincerely,

/s/ Tom DeBoer

Tom DeBoer
Director – Federal & State Regulatory Affairs