

Docket Nos. UE-072300 and UG-072301

Puget Sound Energy
2010 SQ Program and Electric Service Reliability Filing

SQI No. 7 Benchmark Evaluation Report

For filing due on March 31, 2011

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Introduction

This report is prepared in accordance with the Partial Settlement Stipulation of Service Quality, Meter and Billing Performance, and Low-Income Bill Assistance (“Partial Settlement”) adopted by the Commission (Washington Utilities Transportation Commission or “UTC”) on October 8, 2008, in consolidated Docket Nos. UE-072300 and UG-072301 Order 12 (“Order”). In this Order, the Commission approved the continuance of Puget Sound Energy’s (“PSE’s” or “the Company’s”) Service Quality Program with revisions and new terms and conditions detailed in the Partial Settlement.

One of the new requirements is:

“In addition to SQI No. 7 concerning Gas Safety Response Time, the parties agree that starting with 2009 SQI performance year, the Company will report annually to the Commission on the percentage of responses to gas emergencies that are met within 60 minutes. The Parties further agree that this additional reporting metric will not be subject to SQI penalties. Additionally, with the SQI filing for the 2010 SQI performance year, the company will submit a report stating its position regarding whether the current SQI metric for Gas Response Time should be changed to a performance standard requiring PSE to respond to a minimum of 95 percent of gas emergencies within 60 minutes. The Company’s report will include an analysis of the costs, customer impacts and safety implications of making any change to the existing Gas Response Time performance standard (average response time within 55 minutes) and recommend whether the current standard should be changed, and if so, how. The Company will informally consult with the Parties on the analysis prior to the completion of the report.” (Page 8 of Partial Settlement, paragraph 23, section G. SQI No. 7, Gas Safety Response Time)

Puget Sound Energy’s Position

Puget Sound Energy is committed to responding to emergencies as quickly as possible. In 2009, PSE responded to approximately 23,000 emergency calls with an annual average gas safety response time performance of 33 minutes. PSE responded to 92% of emergencies within 60 minutes, with 95% of emergency calls responded to within 66 minutes. In the first 6 months of 2010, PSE responded to 9,465 emergency calls, 94% within 60 minutes.¹

PSE evaluated the resources required to maintain the service level described in the Partial Settlement i.e. a minimum of 95 percent of gas emergencies within 60 minutes. The analysis was based on the 57,125 gas emergencies PSE responded in January 2008 – June 2010, of which approximately 5,100 cases with response time exceeded 60 minutes. Primary causes of longer response times were determined to be weather and traffic conditions, road closures, customer’s location, season/time of day, and volume of concurrent emergency calls. Problems caused by road closures, weather and traffic conditions, and volume of concurrent emergencies are beyond PSE’s control, but the longer response times due to customer location or season/time of day can be mitigated by adding more GFR technicians in various locations. PSE estimates that it would cost approximately \$1 million per

¹ The January-June 2010 performance results are included in this study for analysis purposes only. These results were preliminary as of the time this report being prepared. They may be different slightly from the final results that will be filed with the Washington Utilities Transportation Commission in the first quarter of 2011.

year to add the additional GFR technicians necessary to raise and consistently sustain the percentage of response time within 60 minutes from the current January 2008-June 2010 average of 91% to the 95% target.

In 2009 PSE responded to 92 percent of gas emergencies within 60 minutes and the annual costs associated with providing this level of service were approximately \$18 million dollars. PSE has been consistently meeting its SQI No. 7 benchmark; customer satisfaction with PSE gas field services is at an all time high. There are no facts to support the idea that our customers would be safer or more satisfied should a benchmark level of 95% emergency responses within 60 minutes requirement.

Both metrics – average response time and percentage of gas emergencies responded to within 60 minutes – incent the Company to staff and respond to emergencies in a prompt manner. PSE’s position is that the additional \$1 million in annual cost (a 5% increase over the Gas First Response O&M budget) does not guarantee meaningful improvements in customer safety or customer satisfaction. PSE recommends maintaining the current SQI benchmark of an average of 55 minutes from customer call to arrival of field technician.

Benchmark Description

SQI No. 7, Gas Safety Response Time, is calculated from the time a customer calls to arrival of the Gas Field Response (“GFR”) technician. The customer’s call generates an order (i.e. the “create time” of the gas emergency) in the PSE customer information system, CLX, which is then electronically routed to the Gas Dispatch department. The “best available” GFR technician is identified, and a “task” is assigned through PSE’s mobile workforce dispatch system, PCAD. Upon arrival at the customer’s location, the GFR technician advances the status of the task to “on-site”. The emergency response time is calculated by subtracting the “create time” from the “on-site” time.

The Gas Safety Response Time calculation is demonstrated through the following formula:

$$\text{Gas Safety Response Time Annual Performance} = \frac{\text{Sum of all Gas Emergency Response Times}}{\text{Annual Number of Gas Emergency Calls Received}}$$

Background Information

The primary responsibility of the Gas First Response organization is to respond to and control natural gas emergencies. In 2009, PSE responded to approximately 23,000 calls concerning natural gas safety. In the first 6 months of 2010, PSE responded to approximately 9,500 emergency calls. These emergencies include reports of inside or outside odors, third-party damage to PSE’s system, leaks, and carbon monoxide concerns. GFR technicians also support community first response organizations, such as fire departments, in case of any emergencies with natural gas safety concerns. Response to all these emergencies is tracked and reported using CLX and PCAD as part of SQI No. 7, Gas Safety Response Time measurements.

In addition, the GFR organization performs various inspection and maintenance activities, including diagnostics and minor repairs on customer equipment, leak surveys and other compliance work performed on the gas delivery system, and monitoring excavation by third parties when it occurs near certain natural gas distribution facilities.

The following three service quality indices are in place to measure performance of the GFR organization:

- SQI No. 7, Gas Safety Response Time: The current benchmark is an average emergency response time of 55 minutes; PSE achieved 35 minutes in 2008, 33 minutes in 2009, and 32 minutes through June 2010.²
- SQI No. 8, Field Service Operations Transactions Customer Satisfaction: The current benchmark is 90% satisfied (rating of 5 or higher on a 7 point scale); PSE achieved 91% in 2008, 95% in 2009, and 96% through June 2010. The field service satisfaction survey asks customers “Thinking about the entire service, from the time you first made the call until the work was completed, how would you rate your satisfaction with Puget Sound Energy?” The question encompasses the customer’s experience with PSE’s customer call center and GFR performance.
- SQI No. 10, Kept Appointments: The current benchmark for the index is 92% of appointments kept; PSE met 99% in 2008, 2009, and again through June 2010. This index includes most non-emergency GFR service appointments and certain electric and natural gas new service and reconnection appointments as well.

Key Variables That Impact Natural Gas Emergency Response Time

Analysis of January 2008 through– June 2010 gas emergency response time data indicates that emergency response time depends on a number of factors, including:

- Time of year: October through March is the peak period for emergency calls. However, the use of seasonal employees is not a viable option due to mandatory training and operator qualification tests/requirements per Title 49 CFR Part 192 Subpart N, “Qualification of Pipeline Personnel’.
- Location of the incident and the location of nearest available PSE responder: PSE’s service territory covers approximately 25,000 square miles and approximately 770,000 customers in both urban and rural areas. PSE balances GFR workload with staffing at various locations intended to reduce emergency response time and control costs.
- Time of day: The majority of incidents where response times exceed 60 minutes fall between 8 am - 12 pm and 4 pm - 6 pm during the week. This is primarily due to heavy emergency call volumes in the morning hours, increased travel time during morning and afternoon peak traffic hours, and reduction in GFR staffing levels after 4 pm. Shifting staff to reduce the afternoon peak will result more emergency responses over 60 minutes in the morning and a minimal net reduction.
- Number of concurrent other gas safety calls or system wide emergencies: When multiple emergency calls occur in a geographic area within a short period of time, it becomes

² All 2010 Service Quality Index performance results are preliminary as of June 2010. The final results will be available as part of the annual SQI filing in the first quarter 2011 for PSE’s 2010 performance.

more difficult to find nearby resources and workers are brought in from their homes or other regional areas.

Analysis Overview

PSE analyzed 57,125 gas emergency responses from January 2008 through June 2010, of which PSE responded to approximately 52,000 or 91 percent within 60 minutes. The data was analyzed to determine how many additional natural gas emergencies PSE would have needed to respond to within 60 minutes to meet the metric under consideration. Using that information, PSE then estimated how many additional GFR technicians would be required to consistently achieve the 95% responses within 60 minutes threshold. Key factors considered the relationship between number of responses and response time, the number of concurrent other gas safety calls, and the time and day of the gas emergency response call.

Summary of Emergency Responses³

Of the 57,125 natural gas emergencies responded by GFR technicians from January 2008 - June 2010 83% were within 49 minutes, 91% were within 59 minutes, and 95% were within 69 minutes. The following chart shows the break down for all groups.

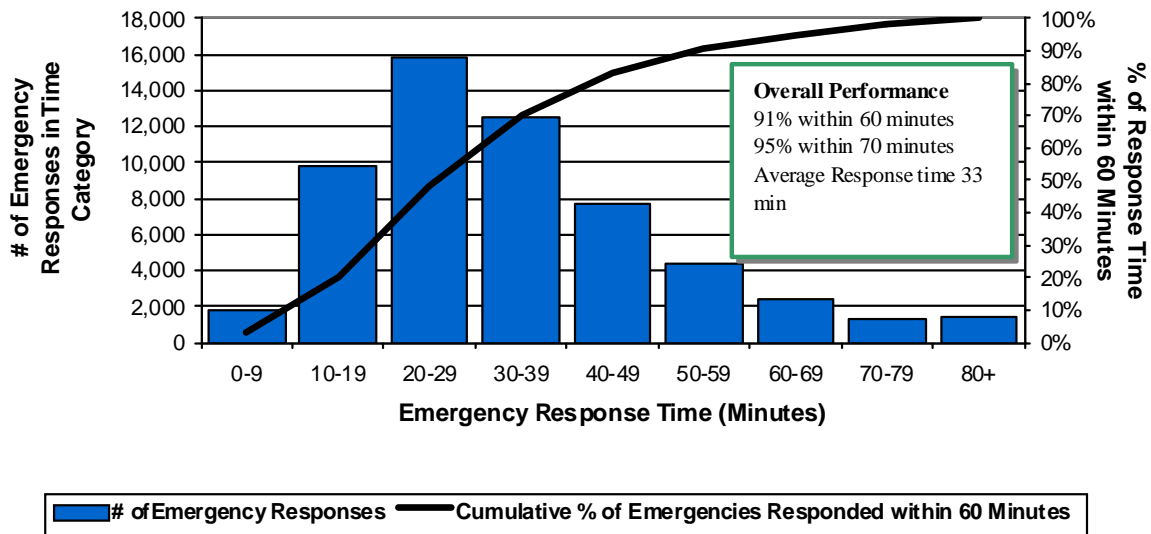


Figure 1: Distribution and Overall Performance of Natural Gas Emergency Responses for January 2008 through June 2010

³ Starting 2009, PSE has included the percentage of response times within 60 minutes in its SQI annual reports.

Correlation between Number of Emergencies and Response Times

PSE analyzed the relationship between the number of emergency responses and the percentage of emergency response times within 60 minutes. As shown in the graph below, as the number of emergencies increases, the ability for PSE to respond within 60 minutes decreases. This chart also illustrates the seasonal impact on the number of emergencies, with higher volumes from October through January.

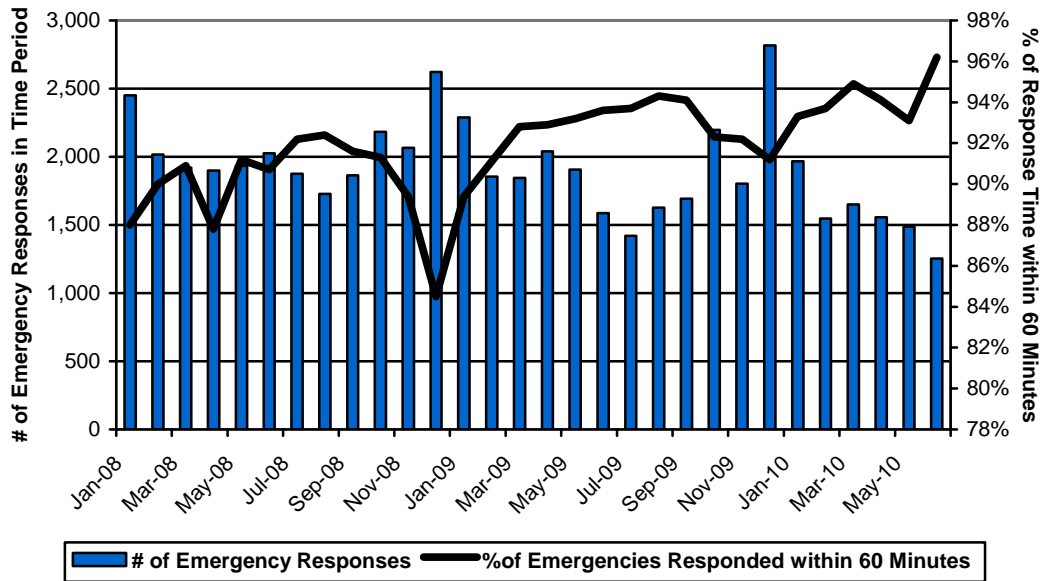


Figure 2: Number of Emergency Responses Compared to Percentage of Response Times within 60 Minutes

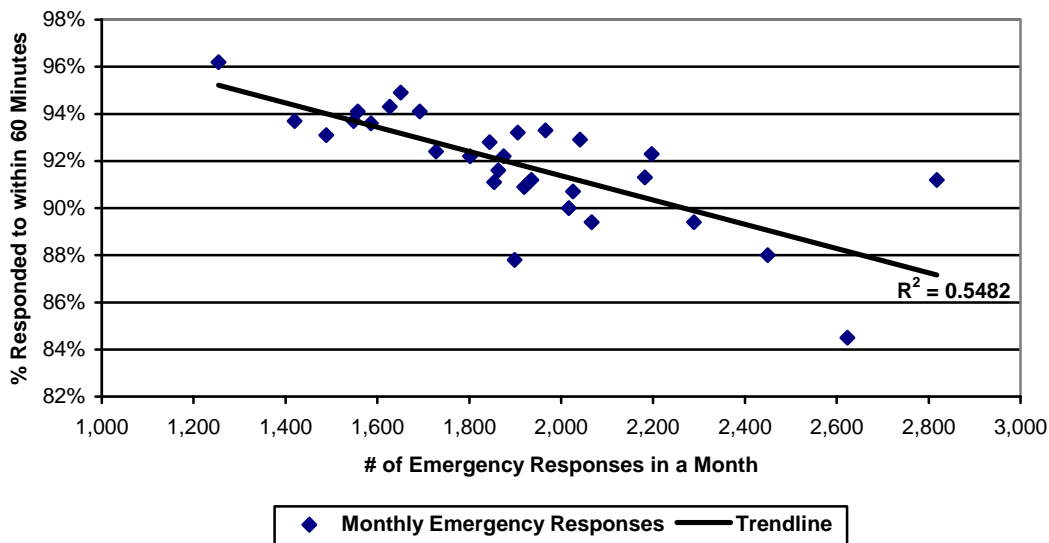


Figure 3 – Percentage of Emergency Response Times within 60 Minutes Compared to the Number of Emergency Responses

Number of Emergency Calls by Time of Day

Most of the emergency responses over 60 minutes occur from 8 am to 12 pm and from 4 pm to 6 pm as shown in the chart below. The number of emergencies over 60 minutes follows the same pattern as the volume of incoming emergency calls (Figure 4). from 12 am to 2 pm (hour 0 to 14) and 6 pm to midnight (hour 18 to 23). The calls over 60 minutes take on a new pattern from 3 pm (hour 15) to 6 pm; the primary causes for the change of pattern are increased traffic congestion and the reduced staffing levels for the evening shift.

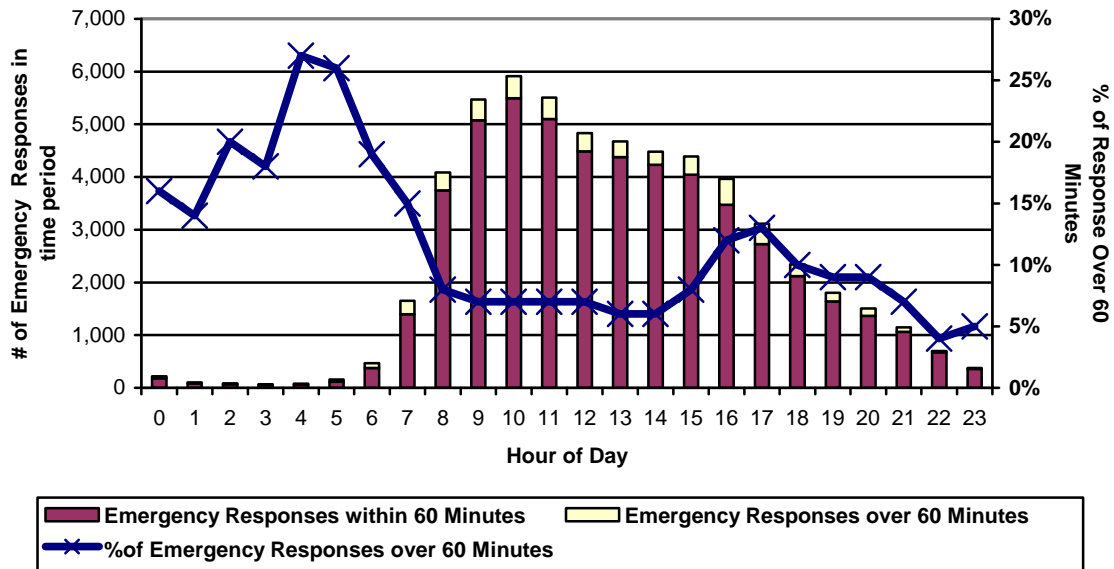


Figure 4 – Number of Emergency Responses at a Given Time of Day

Costs Impact

Based on the monthly average gas emergency response times and the monthly percentage of emergencies responded within 60 minutes for January 2008-June 2010, PSE estimated that improving the percentage of response times answered within 60 minutes to 95% would reduce the average response time by about two minutes at the additional costs of \$1 million dollars

As shown in Figure 5, as the average emergency response time increases, the ability for PSE to respond within 60 minutes decreases. Using the linear relationship between the two measures it can be estimated that an improvement to 95% responded to within 60 minutes would require PSE to reduce the average gas emergency response time by about two minutes, from 33 minutes to 31 minutes.

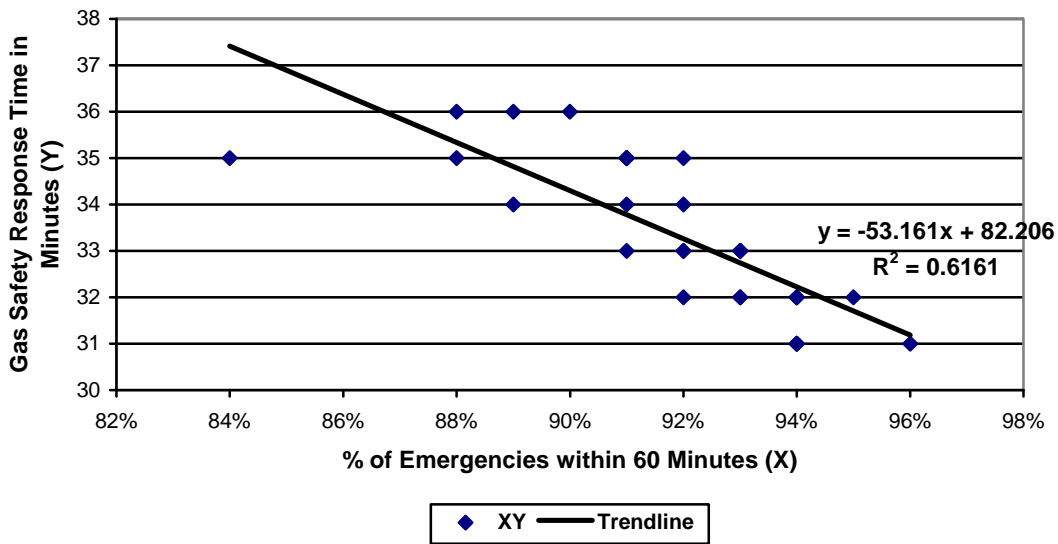


Figure 5 – Average Emergency Response Time compared to Percentage of emergency responses within 60 minutes

PSE estimated the cost of achieving the proposed metric as follows:

- Assumed 23,000 emergency calls in an average year
- Targeted responding to 22,100 (96%) of emergency calls in less than 60 minutes to ensure metric is met
- Targeted an average response time of 31 minutes over all
- Applied a rate of \$78/hour to estimate GFR technician costs, which covers wages, benefits, vehicles, training, and overheads.
- Assumed no overtime costs

In total, PSE estimated an additional 6 GFR technicians would be needed to meet the proposed metric; 4 on weekday shifts and 2 on weekend shifts. The cost of 6 additional GFR technicians would be approximately \$978k per year. The table below shows where additional GFR technicians could be located to optimize response times, based on an analysis of emergency events from January 2008 to June 2010

Table 1 – Estimated Additional GFR Costs to Achieve 95% of Responses within 60 Minutes

Estimated Additional		
Number of GFR technicians Needed to Maintain 95% Response Times Within 60 Minutes	No. of Emergency Responses within 60 Minutes	Direct Costs
Add 1 technician for 8-hour weekday shift in Tacoma region	220	\$163K
Add 1 technician for 8-hour weekday shift in Factoria region	135	\$163K
Add 1 technician for 8-hour weekday shift in west Seattle (GTO –S) region	130	\$163K

Add 1 technician for 8-hour weekday shift in Everett region	130	\$163K
Add 1 technician for 12-hour weekend shift in Tacoma region	130	\$163K
Add 1 technician for 12-hour weekend shift in Factoria region	135	\$163K
Total	880	\$978K

Customer Impact

In assessing the potential customer impact of changing the gas emergency response time performance measurement, PSE examined the relationship between the gas safety response time performance results and each of the following considerations: safety, customer satisfaction (SQI No. 8), and customer UTC complaints. Safety considerations are addressed in the Safety Impact section below.

The comparison of SQI No. 8 Field Service Operations Transactions Customer Satisfaction Survey against the percentage of emergency response times within 60 minutes showed some correlation. (See Figure 6 below.) The monthly customer satisfaction survey used to measure SQI No. 8 performance includes a random sample of customers who requested a service work or a safety related investigation. Selected customers are contacted by a representative from the Gilmore Research Group the week following their GFR technician's visit. These customers are asked a series of questions about their experience with both call center representatives and GFR technicians. However, because the mix of customer requests varies through the months and seasons, and the survey questions relate to both call center representatives and the GFR technician, the changes in SQI No. 8 cannot be attributed solely to the changes in the percentage of the emergency response time within 60 minutes despite the apparent correlation.

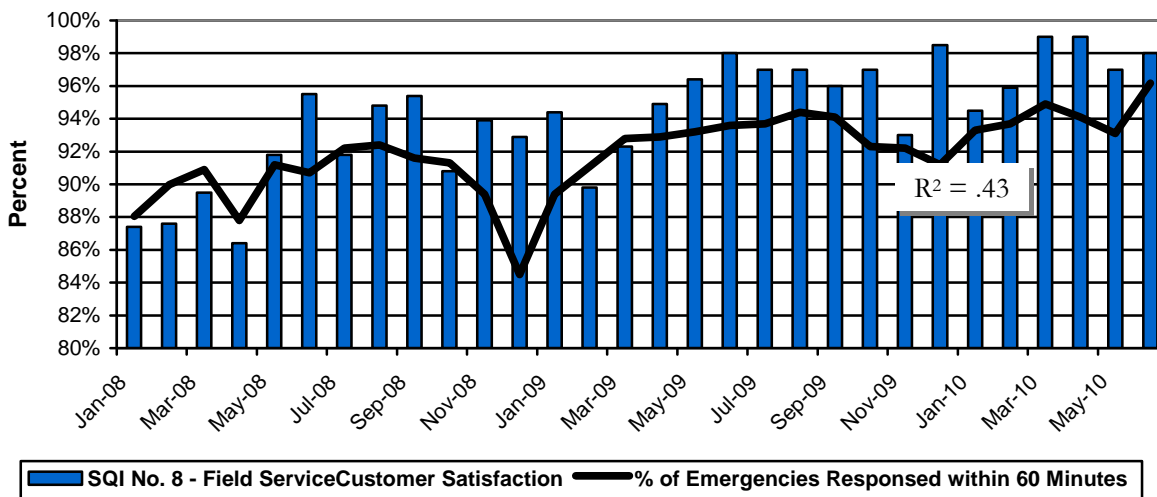


Figure 6 - Field Service Customer Satisfaction (SQI No. 8)

All GFR related customer complaints filed with UTC or with PSE from January 2008 through June 2010 were reviewed for emergency response time implications. There were 568 UTC natural gas complaints and 269 GFR related PSE complaints for the analysis period, none of the 837 (568+269) complaints involved the time it took for a responder to arrive on-site.

The minimum number of customer complaints related to emergency response time and the consistent high level of customer satisfaction scores through the years and individual months suggest that customers do not have significant concern about the current SQI No. 7 benchmark and PSE's gas safety emergency response time performance. PSE does not see a significant benefit to customers that would justify any changes to the existing SQI No. 7 mechanics.

Safety Impact

There are many steps required to remediate a natural gas emergency. PSE acknowledges the importance of responding to emergencies as quickly as possible and our consistent record of exceeding the existing SQI reflects our understanding and commitment to this activity. PSE asserts that response to 95% of emergencies in 60 minutes alone will not result in a safer environment for customers. The Company believes that qualified technicians take control and assess the conditions and impacts of an emergency, that they take the proper safety actions (e.g., initiate evacuations, call for additional assistance and resources) as well as initiate temporary/permanent repairs. In terms of public safety, these actions are as critical as timely on-site reporting.

The Washington state Utilities and Transportation Commission and Department of Transportation identify certain gas incidents that must be reported per WAC 480-93-200. From 2006 to 2009 PSE reported 345 of these incidents. On only two of the 345 reported incidents was GFR response time greater than 60 minutes; however the reason for both reportable incidents was due to the time required to control the gas leak after the responder arrived onsite and was not adversely impacted by the GFR response time.

When approaching any emergency, the safety of people and property is first and foremost on the minds of the Gas First Responders. All actions taken are focused on this premise. To ensure consistent application of this objective, PSE actively works to improve the safety associated with natural gas system through a series of actions which include the following:

- 1) Providing extensive training and certification programs for PSE GFR technicians,
- 2) Promoting customer and contractor safety awareness and educational programs to reduce number of natural gas emergency incidents due to excavation,
- 3) Implementing natural gas leak assessment and monitoring compliance programs,
- 4) Replacing aging natural gas plant (e.g. bare steel pipes), and
- 5) Training the municipal emergency responders (which include fire and police personnel) in PSE's service area on the appropriate practices for identifying, responding to, and managing natural gas emergencies. The training includes the proper method to turn off the natural gas to a building and evacuate occupants as well as an overview of PSE's response coordination and procedures. Annually, more than 1,000 municipal first responders participate in PSE's natural gas and electric safety training programs.

Conclusion

PSE recommends keeping the current benchmark of 55 minutes for SQI No. 7, Gas Safety Response Time. There is no data to show that the additional cost required to meet the metric of 95% of emergencies responded within 60 minutes improves customer safety or customer

satisfaction. PSE's SQI No. 7 performance history demonstrates the Company's commitment to responding to gas emergencies quickly.

PSE will continue to focus on meeting existing SQI levels and will continue to examine ways to improve its gas emergency response and restoration times. Continuous improvement actions include the following:

- Utilizing PCAD functionality for computer-aided dispatching, which enables PSE to determine the closest and available GFR technicians,
- Using response time data to monitor and revise staffing levels and shifts to better balance staffing with workload,
- Continuing GFR technician training efforts, and
- Reviewing gas emergency events with response times greater than 60 minutes to determine root cause to be addressed in future in similar situations.