

## Q&A Around Installing Seismic Gas Shut-off Valves (SGSVs)

### 1. Why were Seismic Gas Shut-off Valves invented?

To mitigate the 20%-50% risk of fire, explosions, loss of life, and property damage from 1964-95 from natural gas after 5.9+ earthquakes, as analyzed by the American Society of Civil Engineers.

### 2. When are SGSVs designed to activate?

SGSVs are designed to activate from motion at various points on the Richter scale greater than 5.0.

### 3. What is the danger of falsely tripping the valves?

In response to the California Northridge earthquake, there were reports of false trips by trains and trucks. “In 1997, the American Society of Civil Engineers issued a design guideline that has been periodically reviewed and is still in place (ASCE 25-97) increasing the minimum operating points to address false trips. Reported cases of inadvertent operation have virtually vanished for valves designed and installed to meet this standard.” [“Understanding the Hazard” 2015.](#)

### 4. How does the installation process support the ASCE 25 standard?

Puget Sound Energy (PSE) has a Contractor Referral Service and on request, provides a vetted list of contractors by service area who install seismic valves. Ask the contractors whether the valves they install meet the ASCE 25-97 standard. Doing your own due diligence by verifying a contractor’s standing in the [WA State Labor & Industry database](#) is a good practice.

### 5. How do I turn the gas back on?

Restoring service *must be done* by a qualified professional. Call PSE at 1-888-225-5773.

### 6. What other factors besides gas leaks contribute to potential for rapid fire spread after a quake?

- The amount of flammable material in the natural environment, such as the tree canopy of North Capitol Hill and Volunteer Park in particular.
- The prevalence of older buildings constructed of flammable materials.
- Whether residents work at home or away, and how often and for how long they travel.
- Unreliable water pressure for firefighting purposes.
- Distance from and factors contributing to long response times from fire stations.

### 7. How reliable will [Seattle’s water pressure be after a 7+ Seattle Fault or 9+ Cascadia quake?](#)

- In 2018 SPU’s direct-service water system was projected to lose pressure in 16 to 24 hours.
- The SPU 2018 study identified 1,400 and 2,000 projected water pipeline breaks (regarded by UW scientists as a low estimate). These, combined with potential problems at SPU pump stations, reservoirs, and elevated tanks would result in loss of pressure.

### 8. What about Volunteer Park Reservoir as a water source for residential firefighting?

- “The reservoir at ... Volunteer Park can provide 20 million gallons [to an area that includes hospitals on First Hill.](#)” Hospitals and other community resources will be prioritized sites.

### 9. If I choose to have a seismic gas shut-off valve installed, how do I start to go about it?

Call PSE’s Energy Advisor department directly (1-800-562-1482) or email them for a list of vetted contractors in the Seattle area who do SGSV installation ([Energy.Advisor@pse.com](mailto:Energy.Advisor@pse.com)).

### 10. Where can I [read more about SGSVs and post-quake fire mitigation?](#)

### 11. If I don’t install an SGSV, what do I need to do?

Know where your gas meter is, keep a clear path to it, purchase a wrench that fits the valve, train all family in what gas smells like, where the wrench is kept, and how and when to close the valve.

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North Capitol Hill Emergency Communication Hub  
1300 E Aloha St, Seattle, 98112  
[ncaphillhub@gmail.com](mailto:ncaphillhub@gmail.com)