Gas Station Pre-Rulemaking Stakeholder Engagement

Sharing Proposed Rule Updates & Collecting Feedback

November 5, 2025

PUGET SOUND
Clean Air Agency

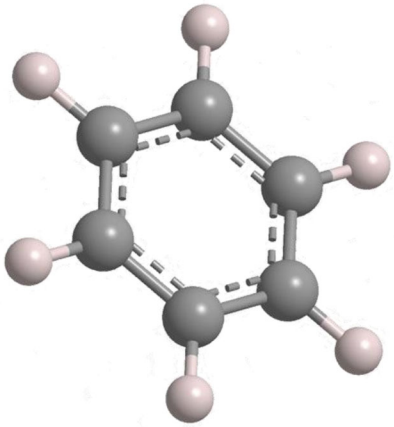
Meeting Schedule

1. PSCAA Background & Gas Station Background Information – 5 minutes
2. PSCAA Proposed Rule Updates – 40 minutes
    1. **Proposed Hardware Requirements**
    2. **Proposed Testing and Installation Requirements**
    3. **Feedback Received Through Surveys (so far)**
    4. **Questions from Stakeholders**
3. Questions for Stakeholders – 30 minutes
4. Overview of what's next in the rulemaking process – 10 minutes

About PSCAA

- Special purpose regional government agency chartered under Washington Clean Air Act
- Oversee outdoor air quality in four counties
- Monitor air quality across jurisdiction
- Provide air quality forecasts and education; declare air quality burn bans
- Regulatory role with industrial sources of air pollution (rulemaking, permitting + enforcement)
- Evaluate and address air impacts from transportation and wood/wildfire smoke
- Promote and advance environmental justice, equity, and engagement.

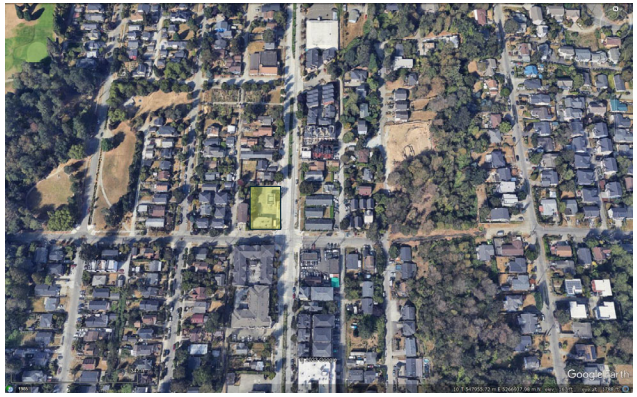
Why does PSCAA regulate gas stations?



Gas stations operations in our region are about 50% of the gasoline storage/transport/dispensing emissions in Washington state.

Gasoline dispensing releases volatile organic compounds (VOCs) and air toxics such as benzene.

Regulation can require installation and maintenance of control equipment to capture emissions from stationary tank fueling, tank storage and vehicle refueling

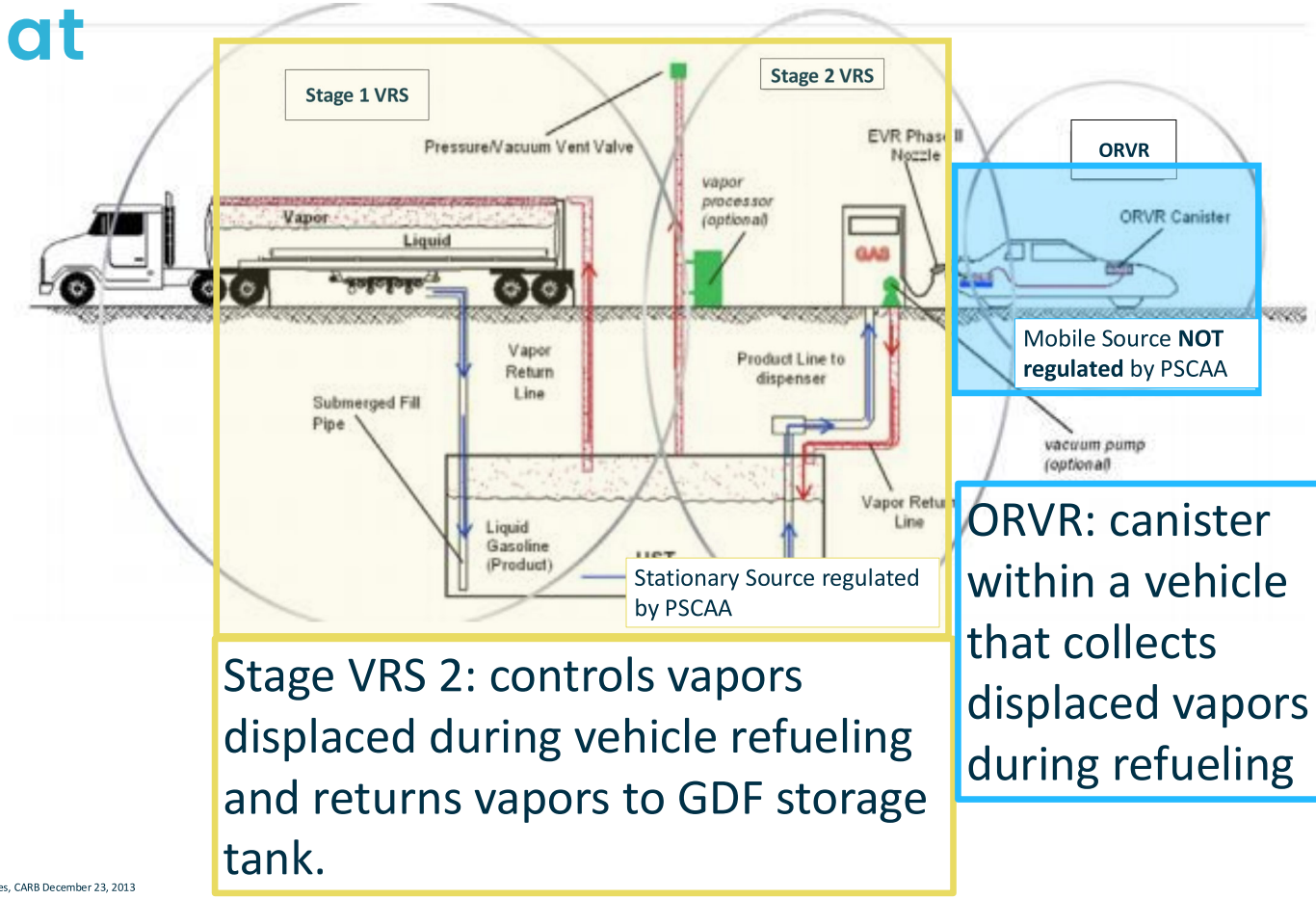


Benzene Ring Image Courtesy of American Chemical Society: Benzene - American Chemical Society

Air Emissions at Gas Stations

Stage 1 VRS: controls vapors displaced during fueling of GDF storage tank and return to tanker truck.

No changes to Stage 1 equipment are reviewed in the Staff Report analysis.



Stage VRS 2: controls vapors displaced during vehicle refueling and returns vapors to GDF storage tank.

ORVR: canister within a vehicle that collects displaced vapors during refueling

Image modified from Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities, CARB December 23, 2013

Gasoline Refueling Equipment

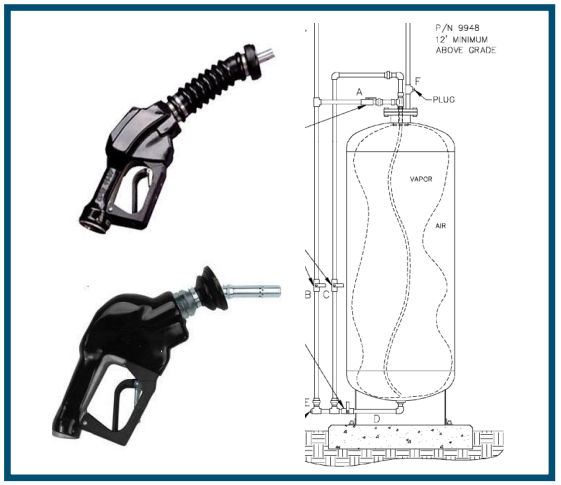
Less Vapor Control

More Vapor Control

Conventional

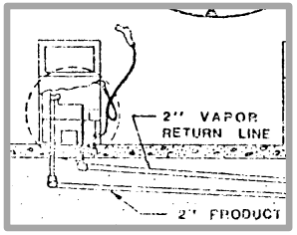
Enhanced Conventional

Enhanced Vapor Recovery (EVR) without Vapor Processor



Enhanced Vapor Recovery (EVR) including Vapor Processor

Pre-EVR Stage 2

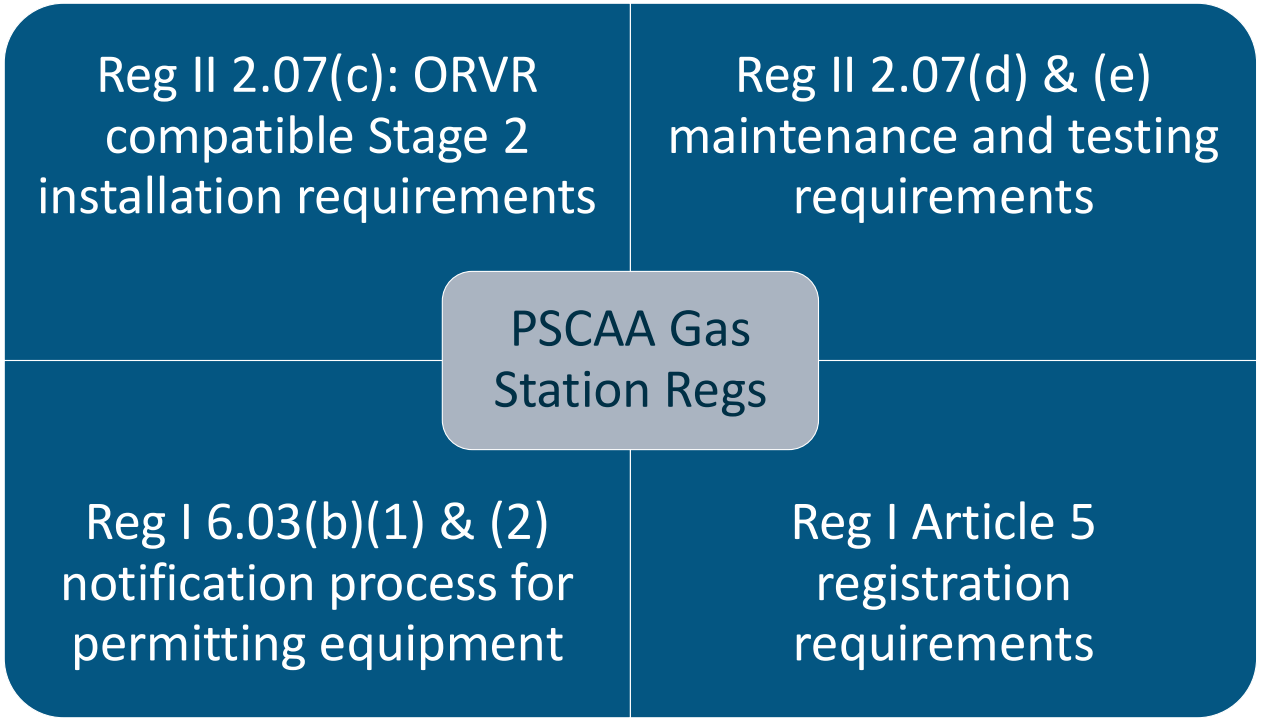


ORVR Incompatible Vacuum Assist

Existing Equipment Utilized in Current State Analyses; Not Included in Equipment Configurations Proposed for New Installations or Replacements

Conventional nozzle image courtesy of Grainger website: https://www.grainger.com/product/4FY19?gucid=N:N:PS:Paid:GGL:CSM2295:4P7A1P:20501231&gclid=CjwKCAjw8sym BhAqEiwAaTA__Hqy0aq7UlEpzho_uPZsY5Dvxl_p93q1cGFUHjrwR3VLpd02M_ISjxC2-MQAvD_BwE&gclsrc=aw.ds
Enhanced Conventional image courtesy of OPW Global Website: https://www.opwglobal.com/products/us/retail-fueling-products/standard-dispensing-equipment/automatic-nozzles-gas-station/14e nozzle
Vapor processor image courtesy of ARB Installation Operation and Maintenance Manual for CARB EO VR-201-U
Pre-EVR nozzle courtesy of Emco Wheaton Retail https://emcoretail.com/nozzles-accessories/a4005-a4015-vantage/
ORVR Incompatible Vacuum Assist image courtesy of Exhibit 1 of CARB EO G-70-14-AA

Current Regulations



PSCAA Proposed Refueling Hardware Requirements

Existing Hardware Requirements

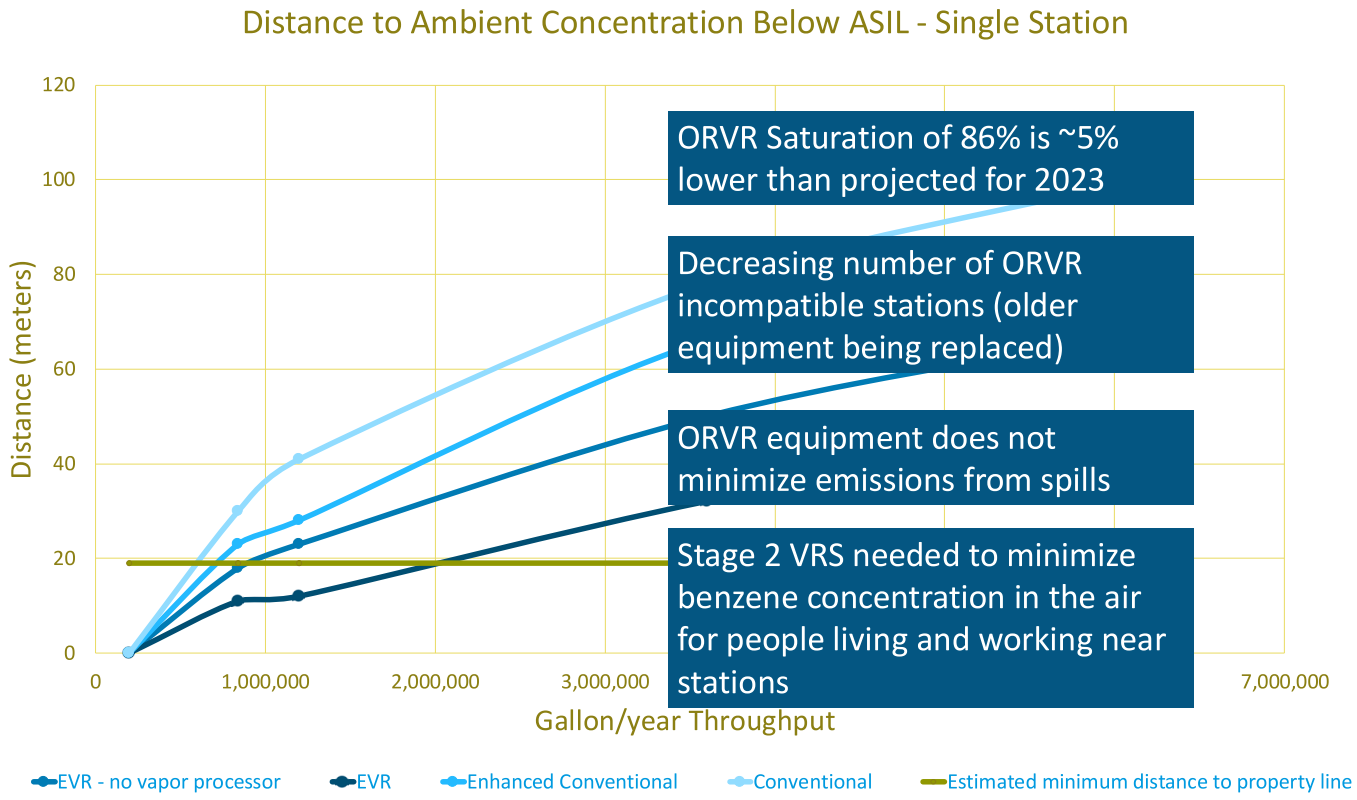
Equipment	Gasoline Throughput (gal/yr)
Conventional	0-200,000
EVR no Vapor Processor	200,000 – 6,000,000+
EVR with Vapor Processor	Case by case permitting 6,000,000+

Recommended Hardware Requirements

Equipment	Gasoline Throughput (gal/yr)
Conventional	0-500,000
Enhanced Conventional Nozzle	500,000 – 700,000
EVR no Vapor Processor	700,000 – 1,000,000
EVR including Vapor Processor	1,000,000 – 6,000,000+

PSCAA proposal allows for stations to choose to use more vapor recovery equipment than required by gasoline throughput.

Why is PSCAA Proposing to Continue to Require Stage 2 VRS for >700,000 gallons pumped per year?



When would gas stations need to make hardware changes?

If a gas station needed more vapor control…
PSCAA proposes completion of equipment installation within 3 years of when the rule is effective

If a gas station did not need as much vapor control as currently installed…
PSCAA proposes that stations could keep existing equipment in place until equipment is replaced.

PSCAA Proposed Ongoing Testing Requirements

Existing Ongoing Testing Requirements

Gallons of Gasoline/Year	Testing Required
0-200,000	No ongoing testing
> 200,000	Annual: Dynamic Back Pressure, Static Torque of Adaptors, Tank Tie (if tanks reconfigured) & Air to Liquid (for Vac assist only) Semiannual: Pressure Decay

Proposed Ongoing Testing Requirements

Gallons of Gasoline/Year	Testing Required
0-200,000	No ongoing Testing
>200,000 - ≤700,000	Annual: Static Torque of Adaptors Semiannual: Pressure Decay
>700,000	Annual: Dynamic Back Pressure, Static Torque of Adaptors, Tank Tie (if tanks reconfigured) & Air to Liquid (for Vac assist only) Semiannual: Pressure Decay

Proposed Installation Requirements

- Installed and tested by certified installers (no change)
- Installed per CARB Executive Order effective at time of installation OR from rule effective date
- Same notification process for changes to existing equipment and/or installation of new equipment (but with updated notification forms)

What are the anticipated impacts of the proposed rule changes?

Throughput Category (gallon/yr)	Change in VOC emissions (TPY)	Change in Benzene emissions (lb/yr)	Change in annualized cost for station ($/yr)	Estimated # of stations affected
0-≤500,000	Lower: 0 Upper: 0.5	Lower: 0 Upper: 7.7	-$7,034 - $0	0 – 522
>500,000 – ≤700,000	Lower: 0.31 Upper: 0.43	Lower: 1.0 Upper: 1.3	-$2,740	180 – 700
>700,000 – ≤1,000,000	No change	No change	No change	180 – 700
>1,000,000 – ≤36,000,000	Lower: -0.3 Upper: -10.9	Lower: -3.6 Upper: -131.4	$8,637*	265

*without gasoline recovery benefit

What have we heard from stakeholders so far?

58% request more than 3 years for equipment changes. 42% could make changes in 3 years.

84% of respondents have <50,000-gallon variability year to year

53% of respondents have <20,000-gallon variability

>60% respondents know where to find PSCAA regulations

>50% respondents have used PSCAA self-inspection logs

Most common repairs: nozzles and hoses

Primary concerns: cost for emission controls

What have we heard from stakeholders so far?

Majority of respondents (72%) make repairs between 2 and 12 times per year

46% respondents spend $2,500-$3,000 per year on repairs at their station

Annual test cost reported ranged from $500-$3000 for station owners (majority in $1,500-$2,500 range)

Majority of Single pressure decay test costs reported from $500-$2,000

What have we heard from stakeholders so far?

- Disagreement with maintaining Stage 2 VRS
- Challenges of working with multiple agencies
- Challenges of finding available certified testers and installers
- Existing rule is working well
- Desire to control pollution while minimizing cost burden
- Questions about gas station located on Tribal Land

Questions for PSCAA?

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Date

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Regarding proposed equipment requirements:

What do you think of allowing lower throughput stations to use less vapor recovery, and of requiring vapor processors for >1,000,000 gallon/yr stations?

What do you think of a 3 year implementation timeline for >1,000,000 gallon/yr stations who would need to install vapor processors?

For stations in the 500,000 – 700,000 gallon/yr category, what do you think of an option for enhanced conventional rather than EVR nozzles? Do enhanced conventional nozzles allow for cost savings as compared with EVR nozzles?

Do you have feedback on our cost estimates?

Regarding proposed testing and maintenance requirements:

What do you think of continued semiannual pressure decay testing and annual static torque of adaptors testing for stations 200,000 – 700,000 gallon/yr?

Do you think any testing is missing, or any included testing is no longer needed? Why?

Do you have feedback on our cost estimates for testing?

What are common equipment issues that occur at your station or the stations you service? How are those issues typically identified and corrected?

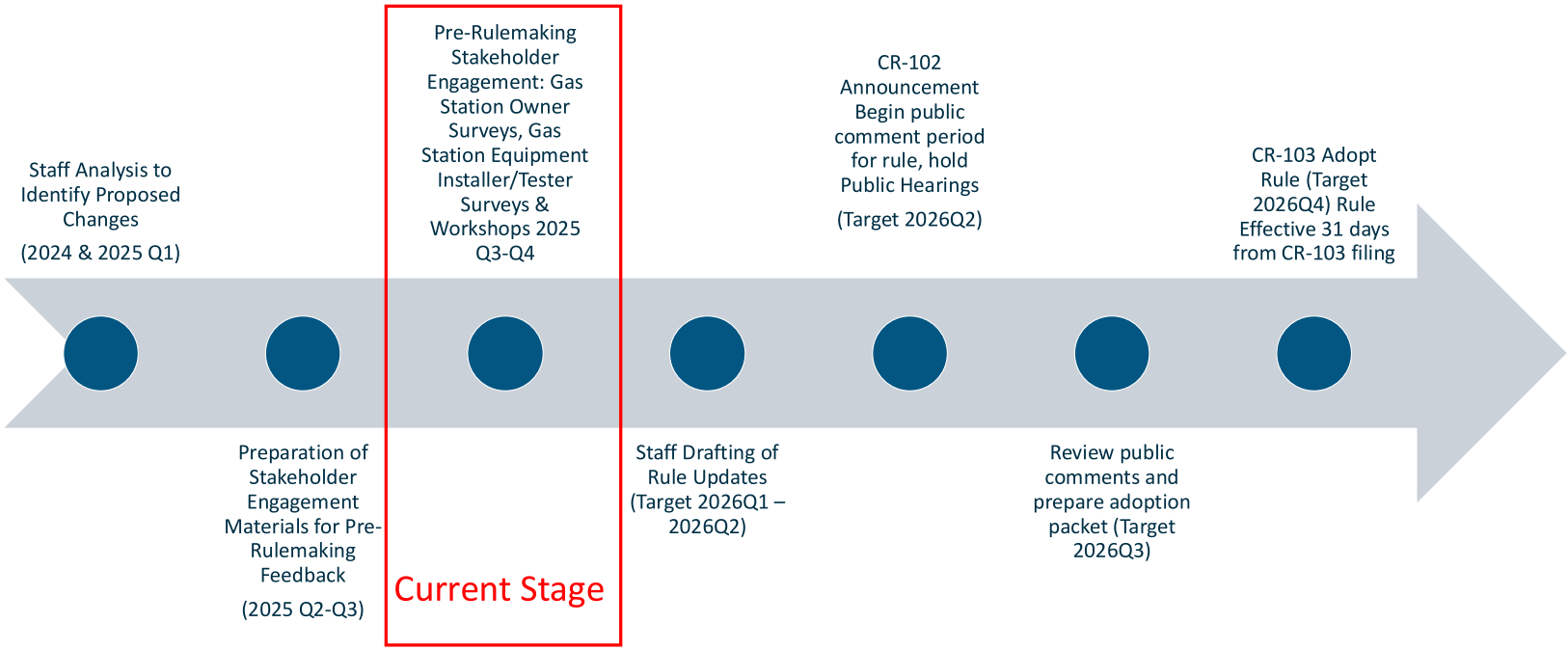
Regarding accessibility of information about gas stations and gas station regulation:

Do you have any feedback about experiences finding our regulations and which requirements apply to you?

Do you have any feedback about use of PSCAA forms or online resources?

Are there any online resources about PSCAA regulations that you would like PSCAA to add to our website?

What's Next?
Steps in Gas Station Refueling Rule Update



More Questions? More Feedback?

Contact Us!
Regupdates@pscleanair.gov

Visit the website:
Upcoming Rulemaking for Refueling Equipment at Gas Stations | Puget Sound Clean Air Agency, WA

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