

# Next Generation Hydrogen Station Composite Data Products: Retail Stations Hydrogen Quality Data

Selected from the National Renewable Energy Laboratory

<https://www.nrel.gov/hydrogen/hydrogen-infrastructure-analysis.html>

# NREL Composite Data Products (CDP) Background

## **Hydrogen Fueling Infrastructure Analysis**

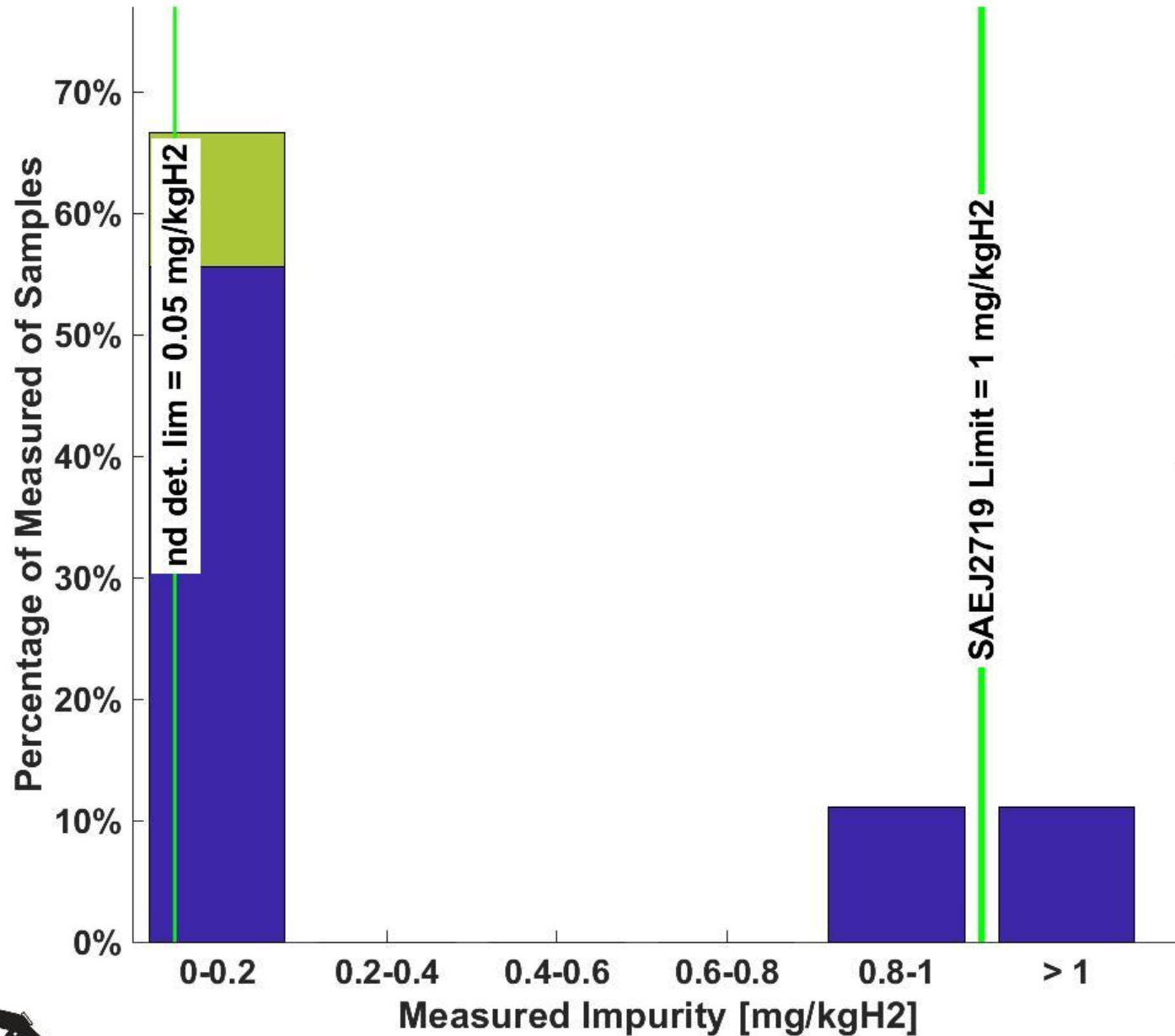
NREL's technology validation team is analyzing the availability and performance of existing hydrogen fueling stations, benchmarking the current status, and providing feedback related to capacity, utilization, station build time, maintenance, fueling, and geographic coverage.

As the market grows for hydrogen fuel cell electric vehicles, so does the need for a comprehensive hydrogen fueling infrastructure.

Participating partners from the U.S. hydrogen fueling station industry share raw data with NREL via the [National Fuel Cell Technology Evaluation Center](https://www.nrel.gov/hydrogen/hydrogen-infrastructure-analysis.html). NREL engineers perform uniform analyses on the detailed data and then report on their findings. While the raw data are secured by NREL to protect proprietary information, individualized data analysis results are provided as detailed data products to the partners who supplied the data. The analysis results are also aggregated into publicly available composite data products (CDPs) that show the status and progress of the technology, but don't identify individual companies.

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## Impurities (Retail Stations) - Particulate Concentration



- Delivered Compressed
- Delivered Liquid
- Delivered Pipeline
- Delivered Compressed; Onsite Electrolysis
- Onsite Electrolysis
- Onsite SMR
- Onsite SMR;Compressed Delivery
- Biogas

658 Total Samples; 9 Total Measured for Particulate Concentration

### --Not Detected Summary--

Delivered Compressed 1 Sample(s) 11.1%

Total Samples Not Detected 1 (11.1%)

### --Not Measured Summary--

Delivered Compressed 538 Sample(s)

Delivered Liquid 38 Sample(s)

Delivered Pipeline 2 Sample(s)

Delivered Compressed; Onsite Electrolysis 5 Sample(s)

Onsite Electrolysis 48 Sample(s)

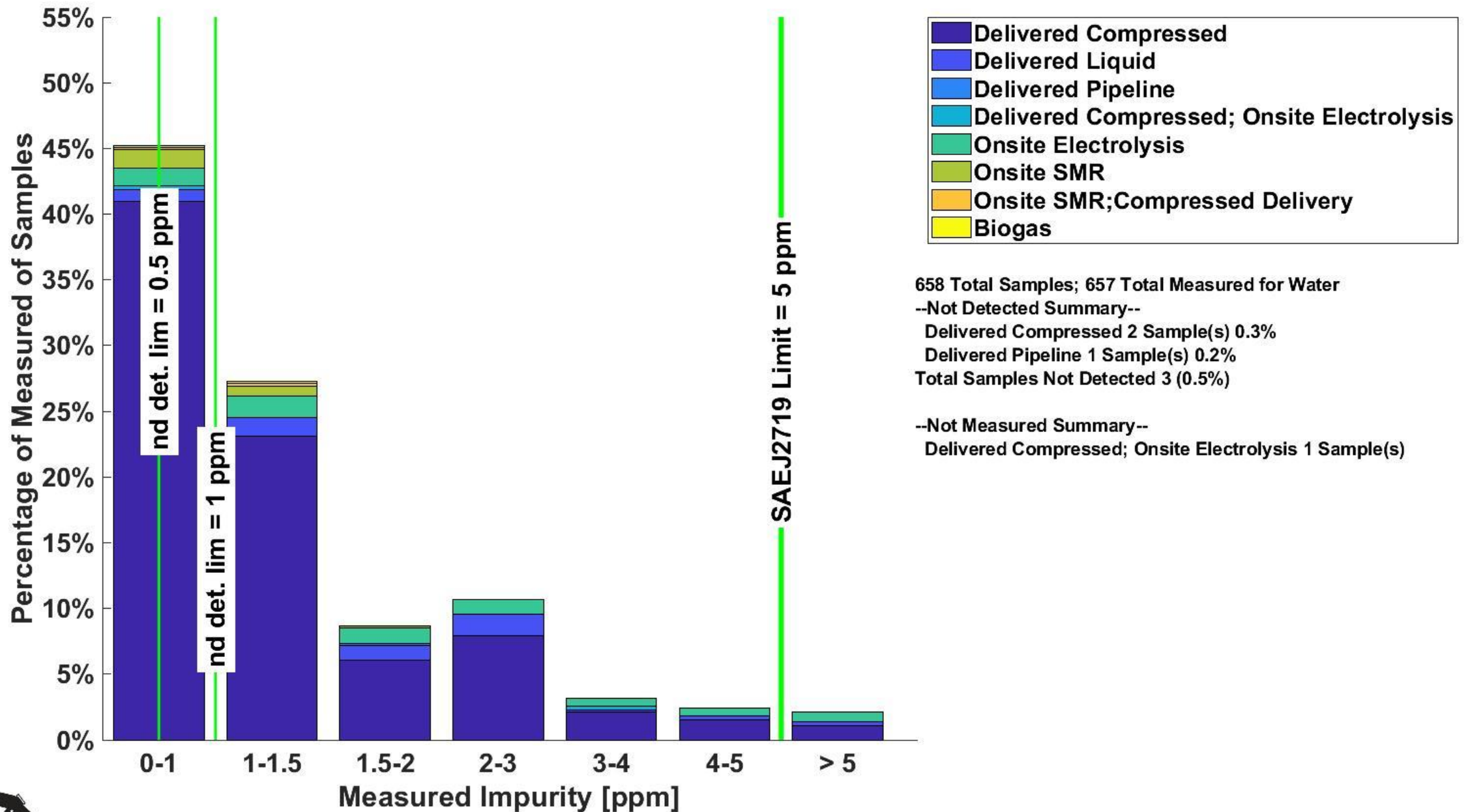
Onsite SMR 14 Sample(s)

Onsite SMR;Compressed Delivery 2 Sample(s)

Biogas 2 Sample(s)



## Impurities (Retail Stations) - Water



658 Total Samples; 657 Total Measured for Water

--Not Detected Summary--

Delivered Compressed 2 Sample(s) 0.3%

Delivered Pipeline 1 Sample(s) 0.2%

Total Samples Not Detected 3 (0.5%)

--Not Measured Summary--

Delivered Compressed; Onsite Electrolysis 1 Sample(s)



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<https://www.nrel.gov/hydrogen/infrastructure-cdps-retail.html>