



Facts about KCEC's Hydrogen Project

Since 1944, Kit Carson Electric Cooperative has worked every day to earn the trust of the community – serving your grandparents, your parents, and now you. Through reliable service, responsible leadership, and transparent decision-making, we have helped improve lives across our region, generation after generation. That commitment remains unchanged today.

The community is concerned about hydrogen leaks. Will this cause smog or pollute our skies?

Hydrogen releases will not affect clear skies in northern Taos County because hydrogen (H₂) is not a component of photochemical smog, which is made up of ground-level ozone and particulate matter, which are both regulated under the U.S. Clean Air Act. Hydrogen is neither a criteria pollutant under EPA National Ambient Air Quality Standards nor a listed hazardous air pollutant under federal air toxics regulations, and while it is colorless, odorless, non-toxic, and non-poisonous (though it can act as a simple asphyxiant in confined spaces), it disperses rapidly outdoors and does not contribute to haze or reduced visibility of the skies.

Hydrogen is the lightest and smallest molecule therefore it explodes. How will you ensure this plant is safe?

Safety is the number one priority of KCEC and it has been since 1944. That commitment does not change now. The physical size and weight of a given gas' molecules do not determine its use as a combustible fuel, but rather its chemical properties. The engineering and design of the hydrogen plant will utilize established codes and standards, along with compatible materials.

The engineering and design team are active contributors to evolving industry-accepted hydrogen codes and standards and will implement the most up-to-date information wherever applicable. This plant will use active safety measures throughout the plant.

Here are ways we plan to monitor and prevent leaks at the plant:

- ✓ **Prevention and Detection**
We use equipment and materials designed for hydrogen service, with sealed connections, proper gaskets, high-quality valves, and regular inspection and maintenance. Hydrogen systems are built and tested to strict engineering codes. Leak detection technology will be wrapped around the joints and fittings for low-level leaks which could otherwise go undetected.
- ✓ **Flame Detection Sensors**
We will have flame detection sensors installed so that in the event there is a leak and it subsequently ignites, we will have optical sensors for both IR and UV that are capable of detecting this and automatically shutting down the system.
- ✓ **Active Monitoring**
Operators will conduct periodic walkdowns along the pipeline using a handheld hydrogen detector ("hydrogen sniffer"). During these inspections, the instrument is placed around fittings, joints, and other connection points to check for any detectable hydrogen leaks.
- ✓ **Pressure Sensors**
The system will be continuously monitored using SCADA (Supervisory Control and Data Acquisition) pressure sensors. These sensors track system pressure in real time and immediately alert operators to any sudden or unexpected pressure drops. If such a change occurs, the system can be automatically shut in while trained operators investigate the cause and respond appropriately.

Bottom line: hydrogen can be handled safely when facilities are designed with leak prevention, continuous detection, rapid automatic shutdown, strong ventilation, and ignition control—and those protections will be standard practice in this green hydrogen facility.

What kind of oversight will the project have on the state or federal level?

This project will be subject to and comply with all applicable federal, state, and local fire codes, ordinances, and municipal requirements, including all inspection and reporting regulations and requirements.

Will this water affect the aquifer beneath us and the surface water flows?

Protecting water resources is central to the project's design and permitting process. KCEC is evaluating responsible options, including working with Chevron to utilize existing water rights historically used by the mine. As mine reclamation concludes, these rights could become inactive; using them for this project would help ensure they remain in beneficial use, avoid potential forfeiture by the State Engineer, and keep those water resources tied to the Questa community. In addition, the Office of the State Engineer's impairment analysis for Chevron's approved additional point of diversion (RG-14117-POD-18) found that diverting up to 250 acre-feet per year would not adversely affect the local aquifer, nearby wells, or surface water flows, as confirmed through NMOSE hydrologic modeling and approval.

How reliable are the leak detection sniffers? Have they been deemed reliable in real-world conditions?

Hydrogen leak detectors, often called "hydrogen sniffers" or combustible gas indicators, have been used safely and effectively around the world for decades to locate hydrogen leaks. Portable hydrogen detection technology has been available since the late 1930s, and it has improved significantly over the past 25 years with advances in microelectronics. Modern electrochemical sensors can quickly detect very small amounts of hydrogen—typically in less than 60 seconds and at concentrations below 100 parts per million (ppm)—allowing operators to identify and address leaks promptly.

What would happen if there was a wildfire? How is the plant going to be protected to ensure it doesn't explode?

Before the facility is installed, combustible materials will be removed from the plant area to minimize wildfire risk. In addition, each hydrogen storage tank bank will be equipped with pressure relief devices that are piped to dedicated vent stacks located in safe areas. These pressure relief systems are designed to prevent overpressure events and, if triggered during an external thermal event, to direct hydrogen through controlled releases to safe locations.

We've read reports that green hydrogen is not green. Why is the Cooperative saying it is?

Not all hydrogen is produced the same way. This project involves green hydrogen, which is made using renewable energy to split water into hydrogen and oxygen through a process called electrolysis. Because no fossil fuels are used, the production process is designed to be zero-emission at the point of generation. When green hydrogen is used in a fuel cell, it produces electricity and emits only water vapor – with no carbon emissions and no combustion involved. This is different from hydrogen produced from natural gas, which can generate carbon emissions and other byproducts; that is not the process being proposed here. By utilizing green hydrogen, this effort would position Questa at the forefront of emerging clean energy technology while supporting a zero-emission energy solution at both production and use.

Why did KCEC expedite the NEPA process to exclude public comment?

KCEC did not expedite the NEPA process. It followed the process as written and required under federal guidelines. In early 2025, a series of executive orders issued by the Trump administration resulted in a Federal Register notice limiting the role of public comment in certain federal decisions. Although KCEC may not agree with this approach, the cooperative is obligated to comply with the federal requirements governing this grant.

KCEC has long believed that public engagement and stakeholder feedback are essential to responsible decision-making. Even when not required under NEPA, the Cooperative has made a proactive effort to host public listening sessions and community meetings to gather input from our members.

Our goal is to ensure our members feel heard and respected, and that their questions, comments, and concerns are thoughtfully considered and addressed.

Caltech Science Exchange:
What causes smog:



DOE: Does hydrogen
produce air pollutants:



H2Tools: Hydrogen
compared to other fuels:



American Society of
Mechanical Engineers:
hydrogen piping and pipelines



OSE Water Rights Application
Transfers Site



Sources: