



# OPEN-SOURCE TECHNOLOGY FOR SUSTAINABLE OPPORTUNITIES - OTSO

## Mission

**OTSO** exists to reduce planetary and infrastructure risk by ensuring that decisions concerning molecular hydrogen, energy systems, and climate-critical technologies are informed by the youngest available verifiable physical evidence. Its purpose is to improve decision quality by continuously exposing current scientific, engineering, OEM, and institutional knowledge as it emerges.

## The Problem

Many energy, climate, and technology decisions are made using information that is months or years out of date. Scientific understanding, industrial deployment, atmospheric measurements, and technology performance continue to evolve long after reports are published and policies are established. Delays between evidence generation and evidence adoption ([Keeling curve](#)) can introduce significant strategic, technical, environmental, and financial risk.

## What OTSO Does

**OTSO** operates as a continuously refreshed open-source evidence platform focused on molecular hydrogen and the broader energy transition. Pages are republished daily to identify, verify, and surface some of the youngest available external references from scientific institutions, OEMs, government agencies, standards bodies, universities, and industry sources.

**OTSO** does not manufacture consensus, advocacy, or opinion. Instead, it provides transparent visibility of evidence age, source provenance, publication timing, and update cadence, allowing users to assess developments using the most current information available.

## Why It Matters

Physical systems respond to reality, not narratives. Atmospheric chemistry, thermodynamics, emissions accumulation, energy conversion efficiencies, and infrastructure performance are governed by measurable physical laws. Decisions based on stale or incomplete information can create long-term consequences that are costly, difficult, or impossible to reverse.

By shortening the time between evidence publication and evidence awareness, **OTSO** helps improve the quality, timeliness, and accountability of strategic decision-making.

## Who It Serves

**OTSO** serves scientists, engineers, researchers, educators, regulators, policymakers, investors, infrastructure planners, industry leaders, and students seeking access to current, verifiable information relevant to hydrogen, energy systems, decarbonisation technologies, and climate resilience.

By maintaining a shared factual baseline, **OTSO** supports more informed discussion and evidence-based decision-making across disciplines.

## Guiding Principle

Earth's systems are governed by physics, chemistry, thermodynamics, and measurable observation. These laws remain unchanged regardless of political preferences, market sentiment, institutional assumptions, or public opinion.

**OTSO** is committed to ensuring that decisions affecting energy, climate, and infrastructure remain anchored to observable evidence and the most current information available.

## In a nutshell

**OTSO** reduces environmental, technological, and strategic risk by continuously exposing current evidence relevant to molecular hydrogen and energy-transition systems, helping decision-makers act on the freshest available information rather than historical assumptions.

- [Robert Cole Basford](#) (UNSW Alumni: School of Information Systems and Faculty of Military Studies)