

Commercial scale hydrogen production: A practical approach

Sivert Eliassen, 19.03.2025

ENERGI

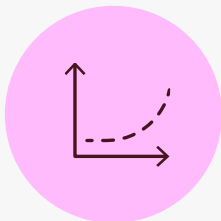
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Hydropower

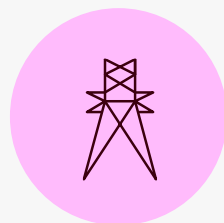
11.3 TWh

73 power stations



Renewable Management

50 TWh



Transmission & Distribution

320,000

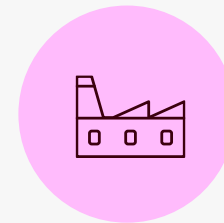
Customers



Domestic Market

320,000

Customers



Business Market

25 TWh

Annual turnover

36 bn. NOK

Reported in 2023

Credit rating

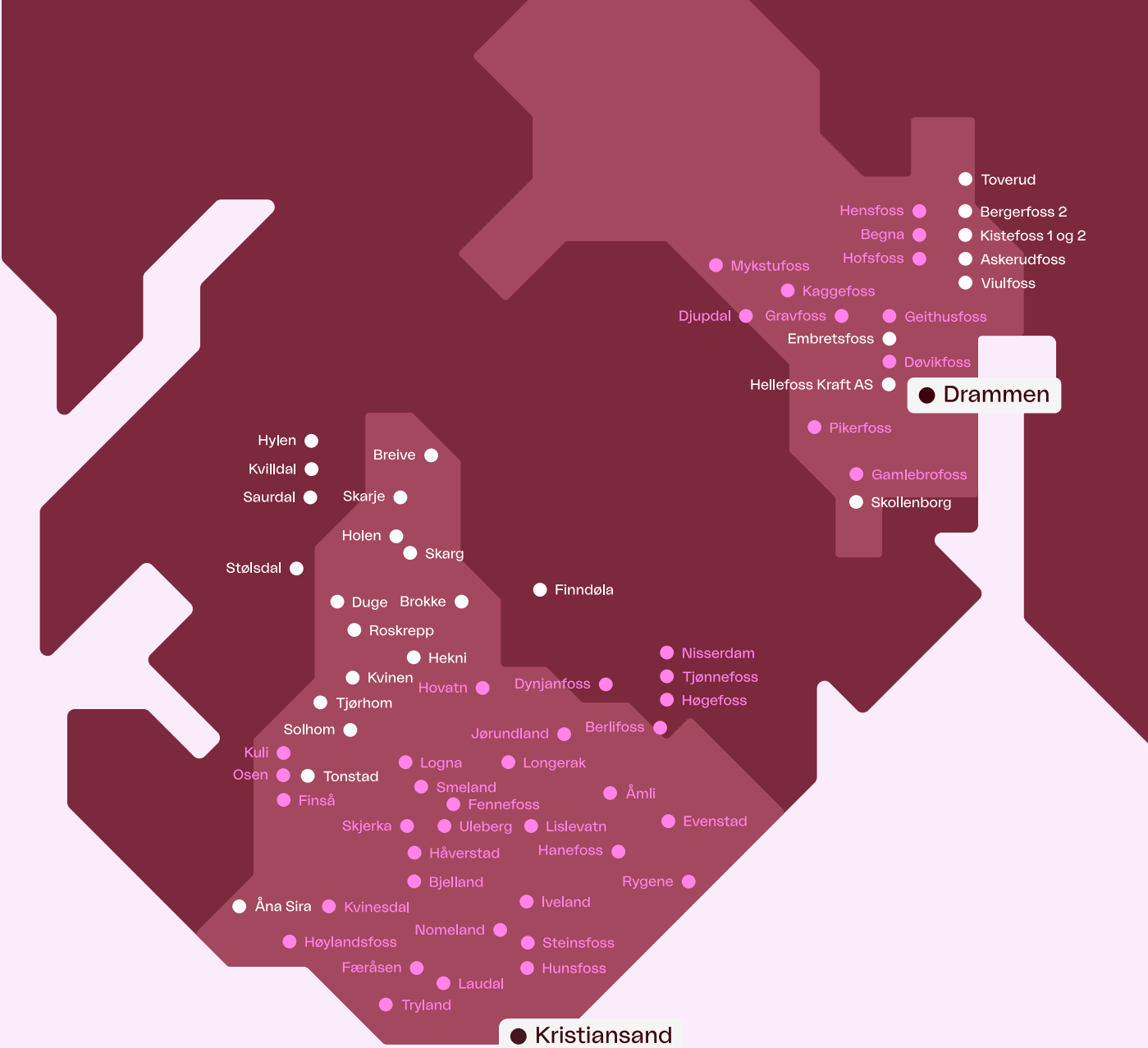
A -

Employees

2,000

Our hydropower stations

- Part-owned
- Wholly owned



HENSFOSS KRAFTVERK





Empowering a Renewable Future

*«The green transition moves too slow for the climate,
but too fast for the power system»*



Hurdles

Location

Electrolysis technology

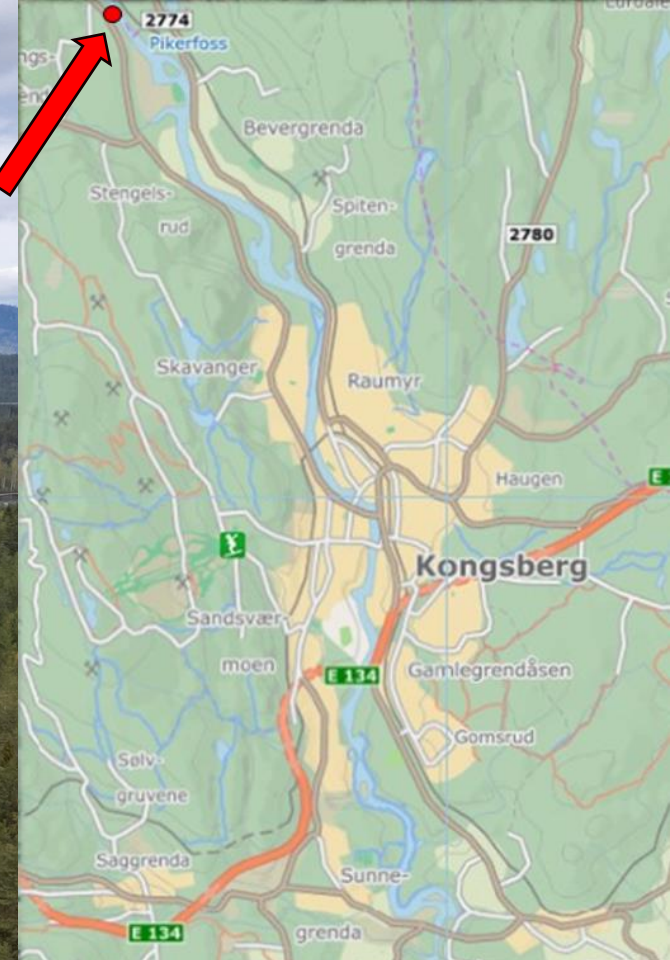
Regulation

Offtake

Suppliers

Final investment decision





Pikerfoss Hydrogen Pilot



7 km north of Kongsberg



50 % Offtake



2 MW electrolysis

280 tons hydrogen / year

Compressed H₂ - 350 bar



Excess capacity to be traded in the market

Motivation

- Learn how to build, operate, maintain, and trade hydrogen production.
- Explore the value of sector coupling between hydropower, hydrogen, and solar power.

Status

- Turnkey contract with Hydri (SWE) signed in May 2024.
- Ongoing detailed engineering.
- Groundworks starts in spring 2025.
- Hydrogen production spring 2026

Production

Transport

Filling
stations

End use

Key takeaways

Low maturity level across sectors:

- Public authorities
- Consultants
- Market

There are a lot of «firsts»

The technology is available, but market penetration is low – keeping costs high and slowing further growth.

→ Public tenders with zero-emission requirements

→ Co-operation over competition

→ Carrot & stick

→ Don't wait for the egg, be the chicken!



Questions?

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