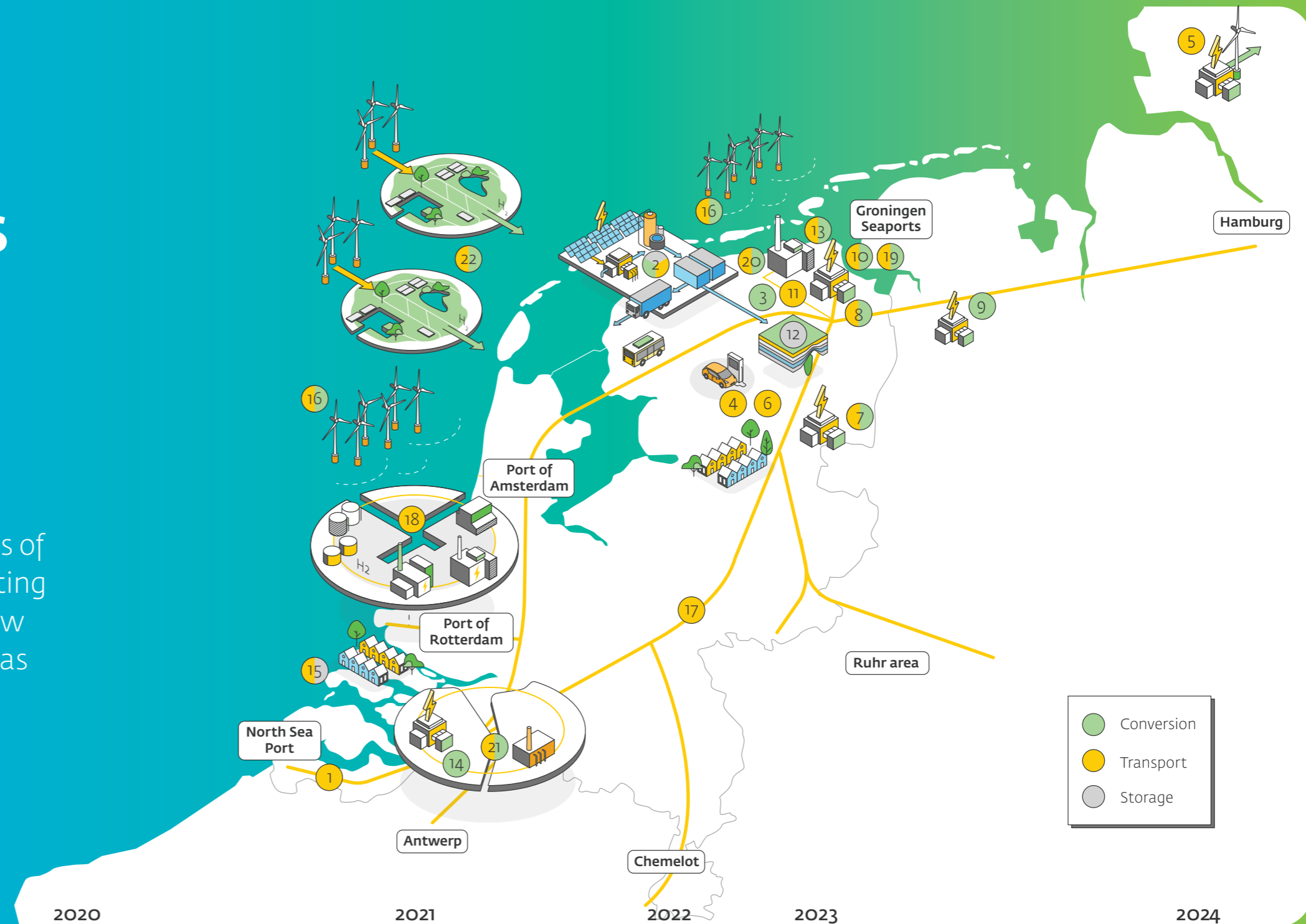


Moving towards 2030 and 2050 with hydrogen

The energy transition requires new forms of infrastructure and intelligent use of existing networks. Gasunie wants to invest in new infrastructure for renewable gases such as hydrogen.



Year	Project Name	Description
2016	2016 Paris Agreement:	Global warming set at a max. 2°C. This requires CO ₂ -reduction in the Netherlands of: • 40-50% in 2030 • 85-100% in 2050 Hydrogen as a fuel and as a raw material can help to achieve CO ₂ -reduction targets.
2018	1 Hydrogen pipeline	Retrofit former natural gas pipeline. Linking hydrogen industries in Zeeland and the Delta region (Nov. 2018 in operation).
2019	2 HyStock	Conversion of solar energy in hydrogen via 1 MW electrolysis (July 2019 in operation).
2020	3 Hydrohub	1 MW electrolysis test centre.
2020	4 Hydrogen refuelling stations and buses	Development mobility market in North of the Netherlands.
2021	5 H ₂ - projekt Haurup	Hydrogen from wind energy injected in the gas grid.
2021	6 Hydrogen district Hoogeveen	Construction of 80 new houses with a hydrogen boiler.
2022	7 GZI Next	2-4 MW hydrogen plant and fuelling station.
2022	8 Djewels	20-60 MW electrolyser, including transport.
2023	9 Element 1	100 MW power-to-gas pilot from offshore wind energy.
2023	10 HyNetherlands	100 MW electro-lyser, including transport.
2024	11 Northern H ₂ Infra	Start of Backbone in the Northern part of the Netherlands. Connecting Eemshaven, Delfzijl, Emmen and caverns.
2024	12 Hydrogen storage	Development of hydrogen salt caverns in Zuidwending.
2025	13 H ₂ M	Conversion of hydrogen and CCS, first turbine power plant on hydrogen.
2026	14 CUST	100 MW electrolyser.
2026	15 Hydrogen district Stad aan 't Haringvliet	Conversion of 600 houses with a hydrogen boiler.
2026	16 North Sea Wind Farm	Possible development of onshore electrolysis, including transport.
2027	17 Backbone	National hydrogen transport network connecting the main industrial clusters and other users and interconnections via existing infrastructure.
2027	18 H-vision	Large-scale switch to hydrogen for power plants, refinery and chemical industry including CCS.
2028	19 HyNetherlands	Upscaling electrolyser to 750 MW-1 GW, including transport.
2028	20 H ₂ M phase 2	All three turbines power plant on hydrogen and CCS: power for >2 million homes.
2029	21 CUST	Further deployment hydrogen and CO ₂ network in the Delta region.
2030	22 North Sea Wind Power Hub	Isles where power from offshore wind farms is partially converted into hydrogen connected to shore via pipelines.