Swedish National Hydrogen Strategy; fossil free hydrogen, electrofuels and ammonia

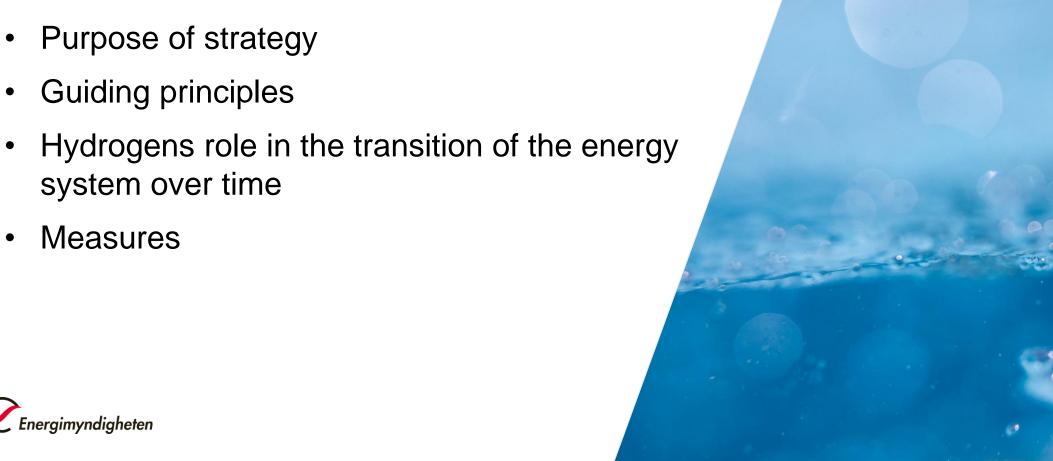
H2B webinar, 16th December

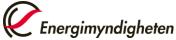


Content of the strategy

- Goals for 2030 & 2045

- system over time





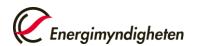
Goals for 2030 and 2045

Until 2030;

Create conditions for at least 5 GW electrolyze capacity. This
could reduce CO2 emissions with 1,5–3 million tonnes/year (3–6
percent of Sweden's emissions of greenhouse gases/year).

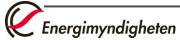
Until 2045;

Additional capacity corresponding to 10 GWel electrolyze capacity.
 This could reduce CO2 emissions with 7–15 million tonnes/year (15–30 percent of Sweden's emissions of greenhouse gases/year).



Electricity usage

Goals GW _{el}			
2030 5			
2045 1.	5		
Electrolyzer capacity factor	95%	70%	50%
Operating hours per year	8 400	6 189	4 421
TWh 2030 (5 GW)	42	31	22
TWh 2050 (15 GW)	126	93	66



Current production and use of hydrgogen

During 2019 global hydrogen production reached 120 million tonnes/year. Less than 0,1 percent (2019) were fossilfree hydrogen

Within EU27 10 million tonnes of hydrogen is used (6 million tonnes from hydrgogen production facilities)

In Sweden apprximately 180 000 tonnes hydrogen is used/year (corresponding to 6 TWh).



Guiding principles

- Usage of fossil free hydrogen should contribute to the transition to zero emissions of CO2 (2045)
- Fossil free hydrogen should be used in "hard to abate sectors"
- Sweden should strive to export climate friendly products and services that contributes to reduced CO2 emissions abroad



Measures

- Development of rules, regulations, standards and guidelines
- Support to research, innovation and supply of skills and knowhow

- Cooperation for a developed value chain
- Financial incentives



