

# Strategies for alternative fuels infrastructure in Sweden

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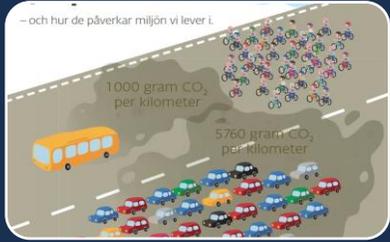


# Swedish climate targets

	Historical emissions	Climate target	Climate targets in the Climate Policy Framework	
Swedish emissions in total	- 35 % 1990-2020		Net zero by 2045 Max 15 % supplementary measures	
Emissions from sectors outside the EU ETS	- 36 % 1990-2020	-40 % by 2020 Max 13 % supplementary measures	-63 % by 2030 Max 8 % supplementary measures	-75 % by 2040 Max 2 % supplementary measures
Emissions from domestic transportation Excl. domestic aviation	-27 % 2010-2020		-70 % by 2030 Compared to 2010	



# Areas of action for fossil free transport



## Transport efficient society



## Energy efficiency



## Sustainable renewable fuels

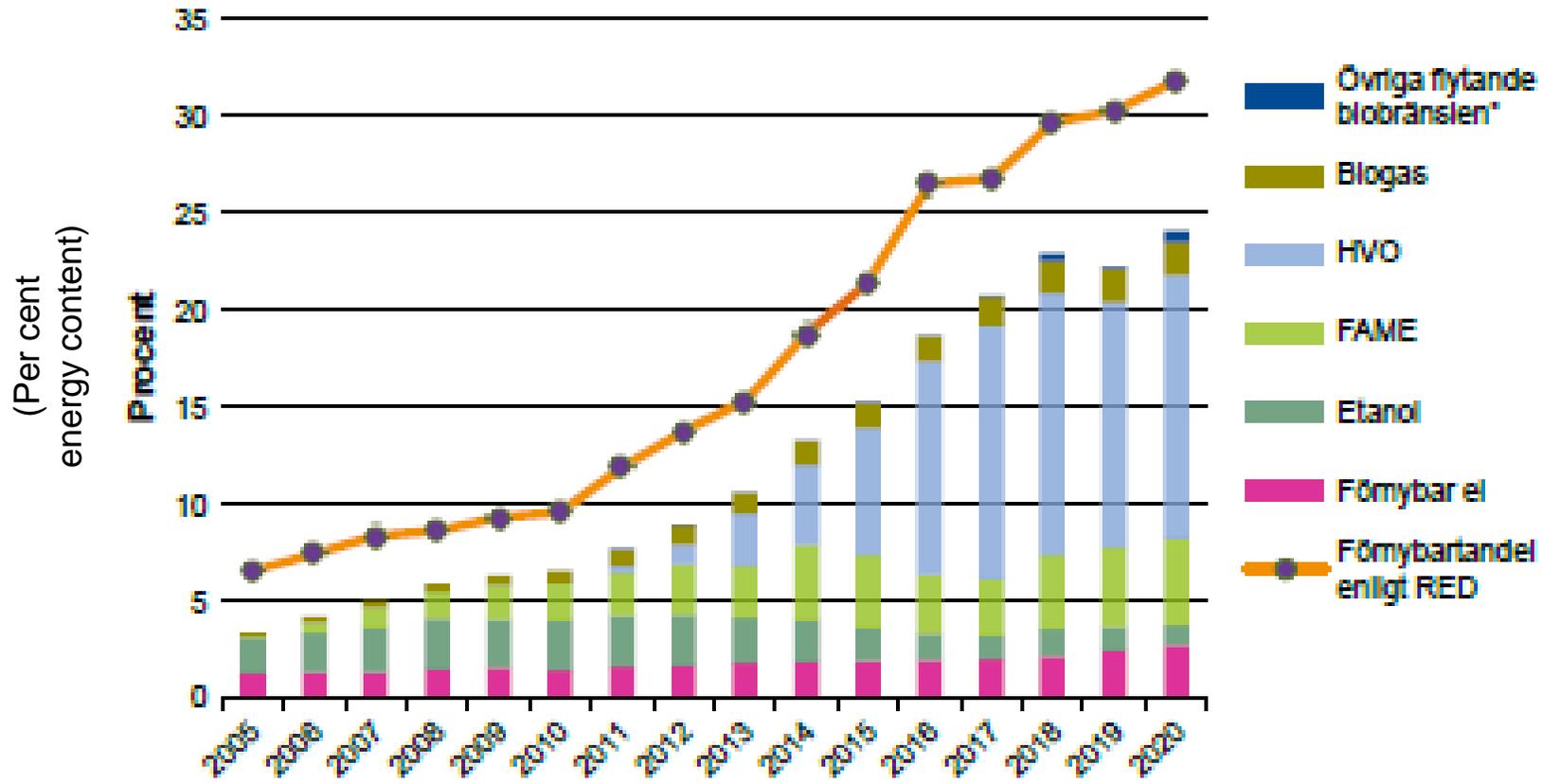


# Policy framework for fossil free transport

- Put a price on emissions (Energy tax, CO2-tax)
- Economic incentives for climate friendly alternatives
- Funding of Research, Development and Demonstration (FFI)
- Legal requirements
- Investments in the railway system
- Green procurement



# Increasing share of renewable energy in the Swedish transport sector

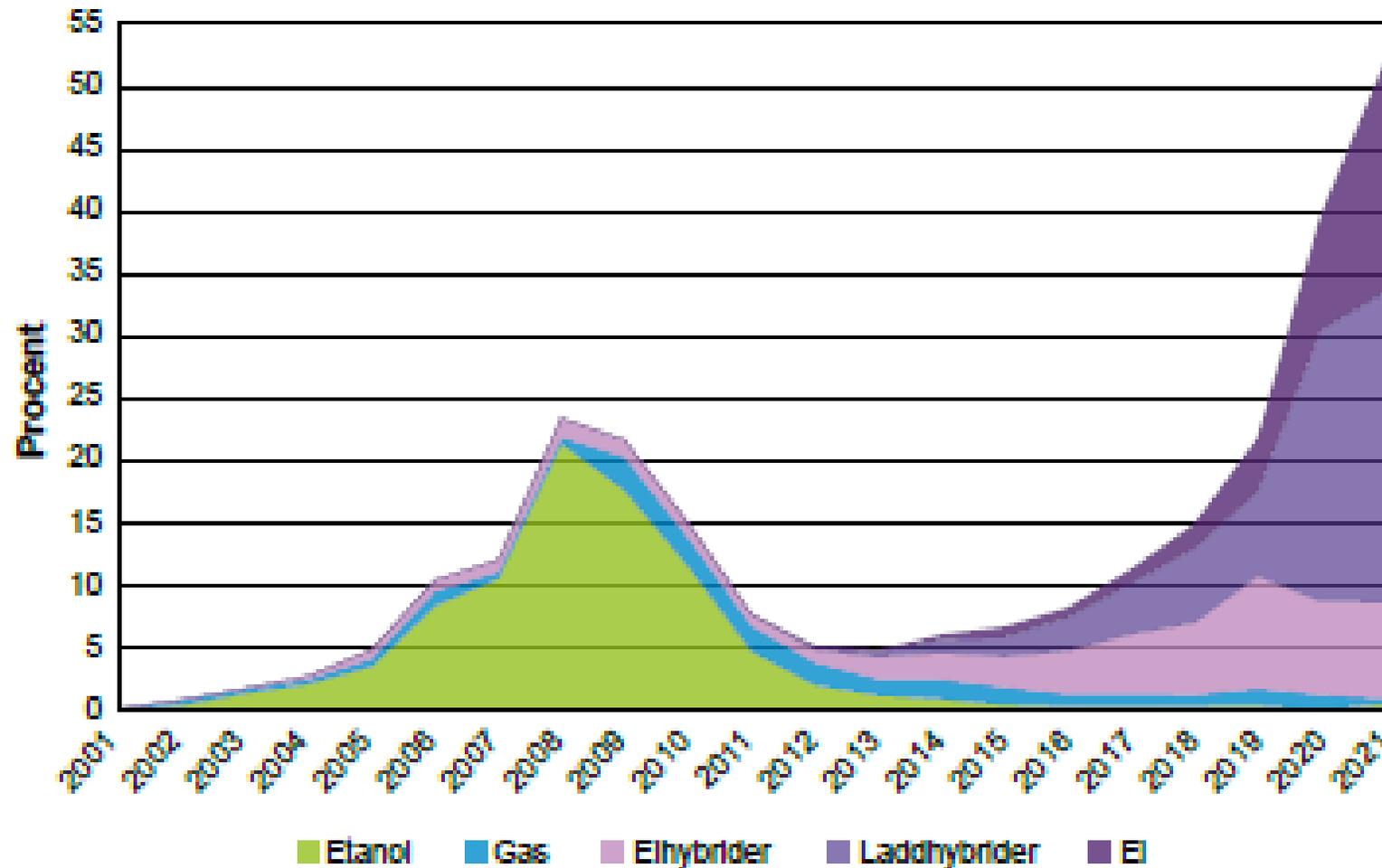


**For liquefied biofuels:  
Emission reduction  
obligation scheme for  
suppliers of petrol and  
diesel**

\* BioETBE, biobensin, bioolja etc.



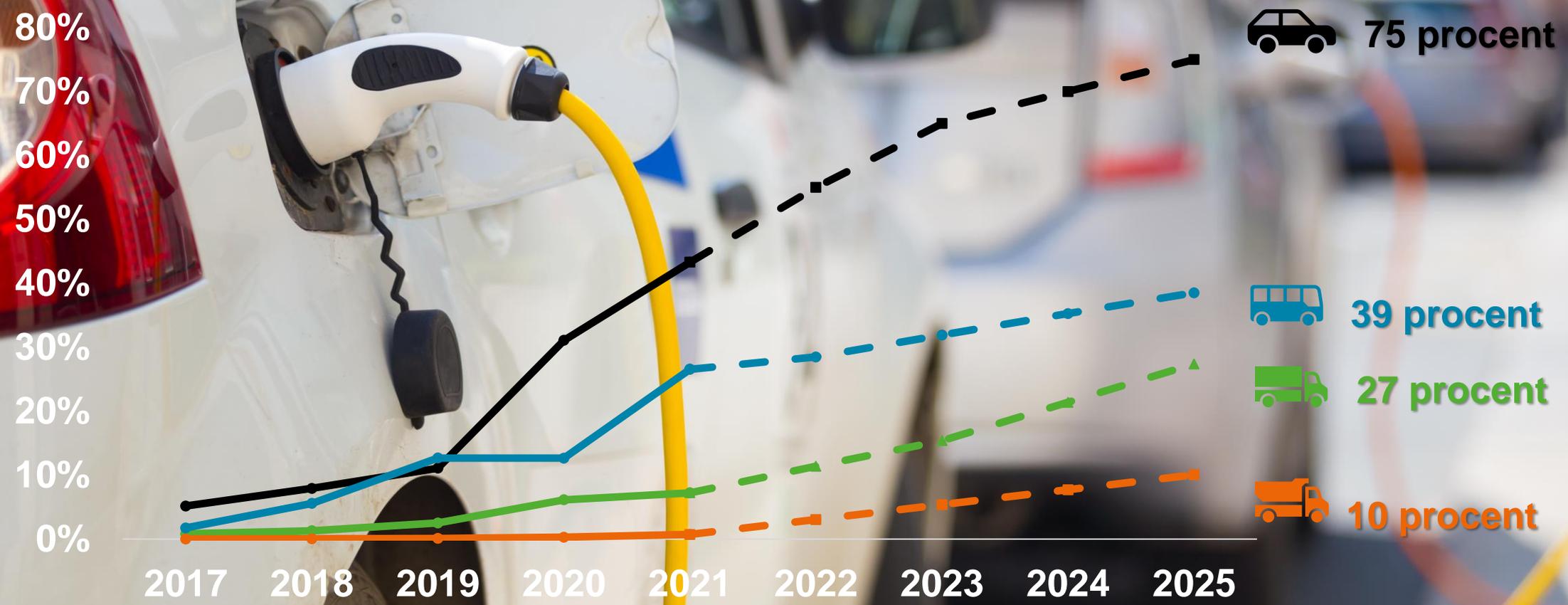
# Share of alternatively fuelled vehicles in new registrations 2001-2021.



**2022, 01-07**  
**EV: 27 %**  
**PHEV: 23 %**



# Share of chargeable vehicles in new registrations - forecast



# Bonus Malus

- Covers purchases of new passenger cars and vans
- **Bonus:** CO<sub>2</sub> < 50 g/km; Maximum 70 000 SEK (7000 €) for ZEV:s, As from 1 Jan 2023; CO<sub>2</sub> < 30 g/km, max. 50 000 SEK
- **Malus:** CO<sub>2</sub> > 90 g/km; increased annual vehicle tax 3 years after registration



“The charging infrastructure should not be a barrier for the electrification of the road sector”

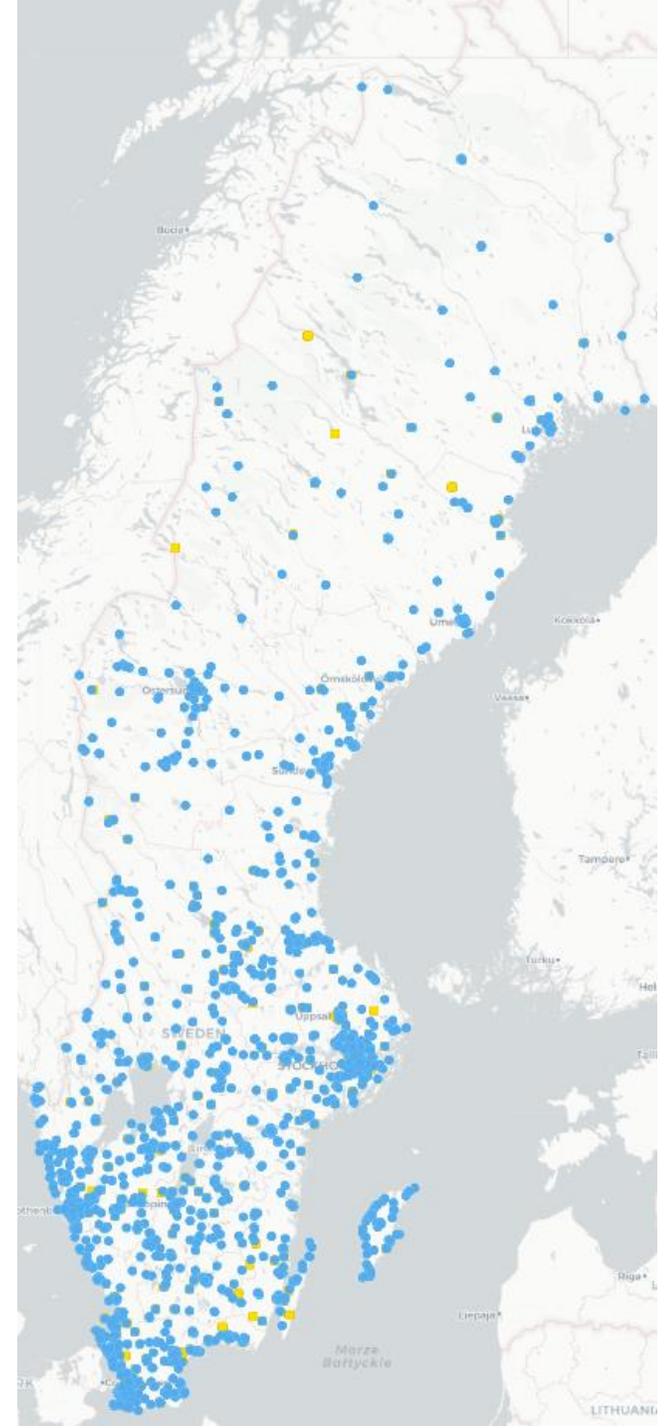
- No specific quantitative target
- Charging when the vehicle is parked at home, office etc, the basis
- Public charging also important
- Economic incentives
- Simplified rules



# Public destination charging AC



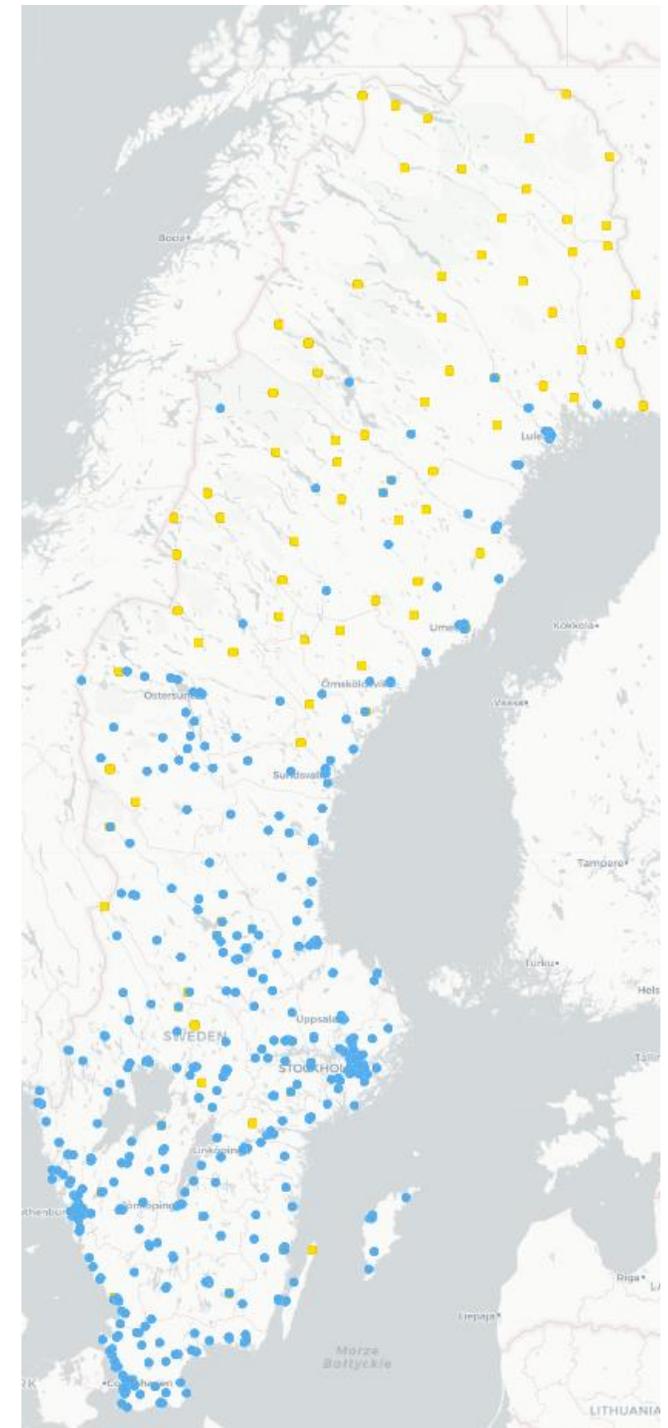
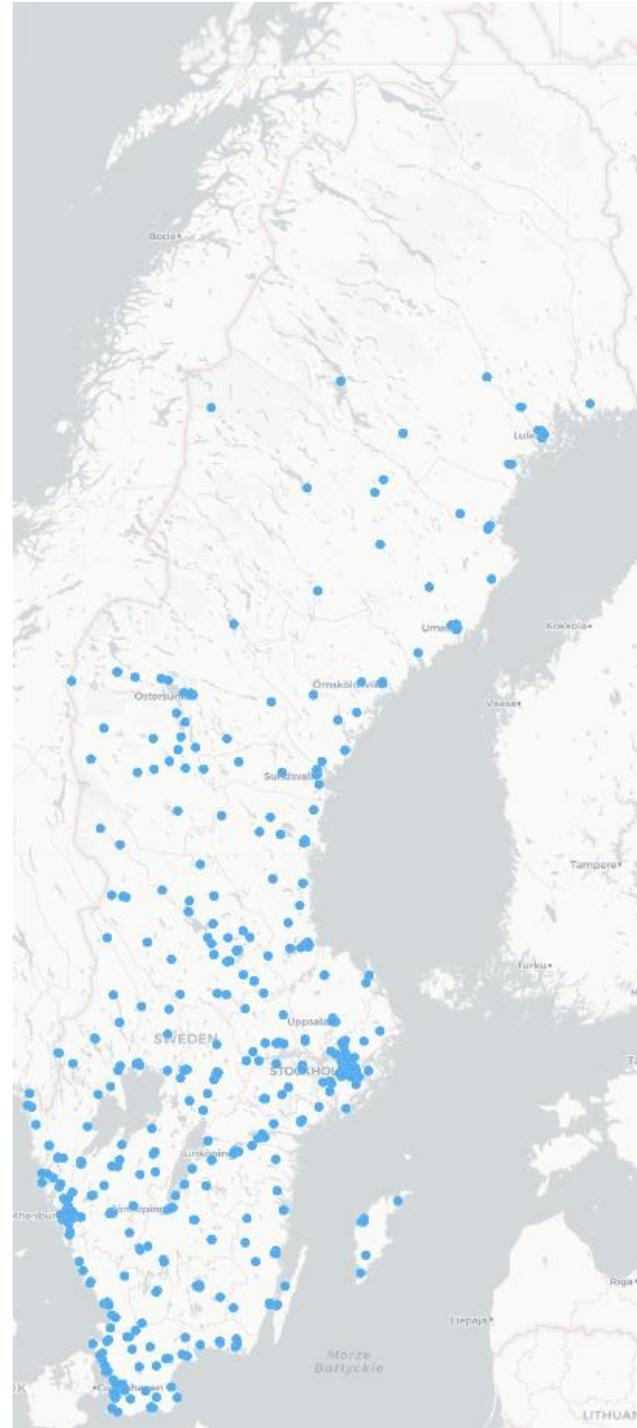
- Befintliga laddstationer
- Ännu icke-realiserade laddstationer inom Klimatklivet



# Public fast charging DC



- Befintliga laddstationer
- Ännu icke-realiserade laddstationer inom Klimatklivet



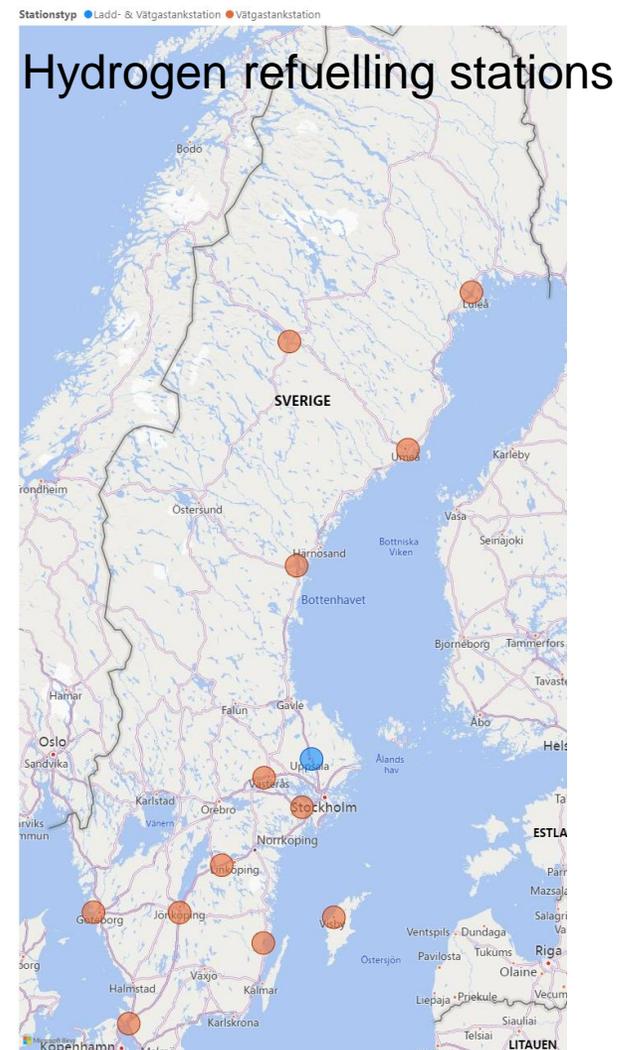
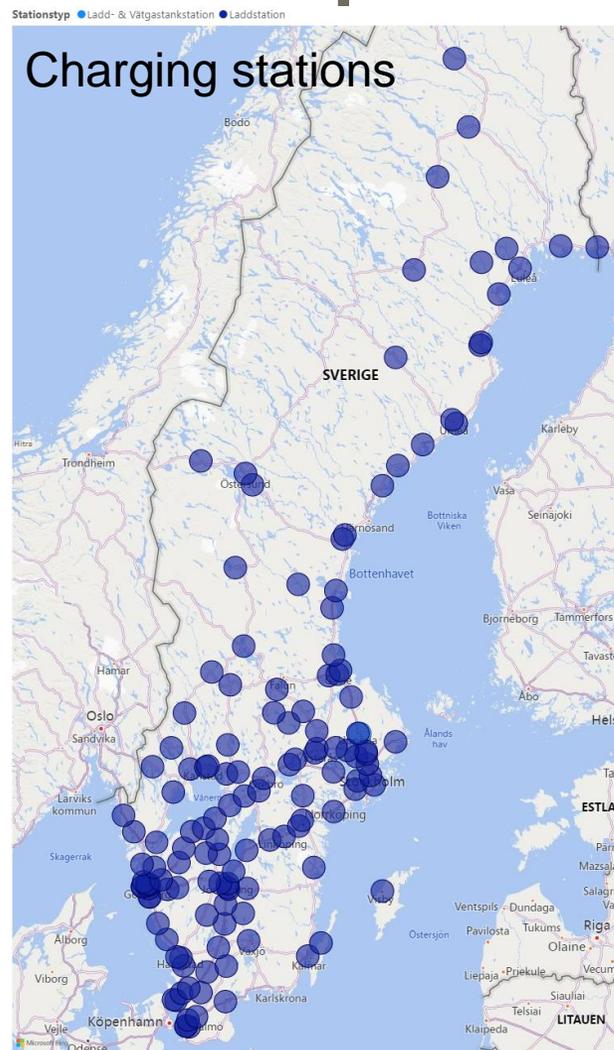
# The Climate Leap (Klimatklivet)

- Cross-sectoral programme for support of local climate investments
- In the transport sector, **89 000 public charging points financed since 2015**, biogas plants and refuelling stations
- Typically, a subsidy up to 50 % of total investment costs
- As from 2022, tenders instead of applications due to changed state aid rules



# Regional electrification pilots

- Aim: facilitate electrification of short haul freight transport + learning
- In July 2022: Decision on grants on totally 1,4 billion SEK to build 139 charging stations, 12 hydrogen refueling stations, 1 combined, throughout Sweden
- Possible to get up to 100 % of investment cost
- Must be publicly available and in service in autumn 2023



# Get rid of “white spots” for charging along major roads

- The aid from the Climate leap is not sufficient everywhere, typically in sparse populated areas
- A dedicated governmental programme to ensure basic access to publicly available charging infrastructure for fast charging of electric vehicles throughout the country
- National Road Administration responsible, difficulties to attract private applicants despite a subsidy up to 100 % of investment costs.



# Grants to private charging points

- A grant to associations, e.g. housing cooperative, for investment in recharging stations
- Tax deduction for green investments, including recharging stations, 50 % of the costs (labour cost+material)
- National Energy Agency tasked to propose better access to charging, despite housing type. Report in 2021



# Thank you for your attention!

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