

Bio-CCS as a policy measure to achieve climate goals – the pioneering support scheme in Sweden

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CCS in Sweden foundation

- In June 2017, Sweden's parliament introduced a climate policy framework with a climate act for Sweden.
 - 85 % reduction target by 2045, baseline 1990
 - By 2045, Sweden is to have zero net emissions of greenhouse gases into the atmosphere, and thereafter negative emissions
 - About 11 millions CO₂-eqv. 2045

CCS strategy

No formal strategy

Inquiry on
supplementary
measures

- Main part on bio-CCS (and CCS)
- Pointed out the way to reach climate goals with CCS as one tool

Government
assignments to the
Swedish Energy Agency,
all finalized 2021

- Propose a support scheme for bio-CCS – reverse auctions
- Prepare a proposal for a treaty with Norway – London protocol
- Create a national centre for CCS as a part of the agency

National centre for CCS

- We
 - monitor the technical, economic and political developments in the field of CCS, both nationally and internationally.
 - identify, analyze and, if necessary, investigate and deliver proposals for actions to overcome any technical, economic, and legal obstacles to the facilitation of CCS-technology.
 - investigate issues related to accounting and reporting of carbon dioxide
 - Investigate and analyze how the entire CCS chain can be made as climate and energy efficient as possible.

Support scheme for bio-CCS

- Benefits of reverse auctions
 - Cost efficient / Minimize risk of over compensation
 - Comply with state aid rules
 - (Most) Stakeholders in favour of reverse auctions
- Reverse auctions:
 - In the first stage about 2 millions of tons per year from 2030 (i.e. roughly 3-5 plants)
 - First auction 2023, storage from 2026, support period 15 years. Volume 600 000 ton CO₂/year
 - Two more auctions
- Long term commitment, involve stakeholders

Priorities – issues to be treated

Reporting and accounting to UNFCCC

- and Monitoring, reporting and verification (MRV)

Two revenue streams – trade negative emission rights/certificates

- Important issues:
 - Supplementary measure
 - State aid rules
 - Cost efficiency
 - Facilitate the emergence of a market
 - Is it possible to avoid double claim - Two different systems: countries and companies

Priorities – issues to be treated



EU COM certification of CDR and revision of ETS



The UN Convention on Biological Diversity and its moratorium on geoengineering