

Emission permit “accounts” concerning GHG

some experiences from Statistics Norway

London Group Meeting, Stockholm, 2011-09-14

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Outline

- Treatment of emission permit accounts in SEEA so far
- Existing accounting recommendations for emission permit accounts.
- Emission permit “accounts” in Norway
 - user needs
 - sources
 - results
 - further work
- What to be included in SEEA???

Treatment of emission permit accounts in SEEA

Mainly in chapter 4 on monetary flow accounts in relation to the right to use the atmosphere as a sink for emissions from economic activity and in relation to environmental related taxes.

...since economic ownership is not possible to establish for the atmosphere following the principles of SNA, the payment for the permit should be treated as a tax...

...the complete accounting treatment for tradable emission permits is not concluded upon, due to discussions in ISWGNA on treatment in SNA...

→ Whatever treatment might be adopted for the recording of emission permits in the SNA and SEEA, it would be useful to compile physical stocks and flows of emission permits and the values of these.

Existing accounting recommendations for emission permit accounts.

- Found in SEEA issue/outcome–papers: Introducing the SEEA framework as a means to organising data on emission permits
- Supply and use tables in both physical and monetary terms
 - stocks + following the emission permit's flow through the economy
 - developed to be in line with energy- and emissions accounts
 - by national account industries, NPIs, govt. institutions
 - Supply table = shows the origin of the permits (ex: free vs. non free)
 - Use table = what happens to the permits (ex. surrendered, sold, losses)

Balance sheet. Denmark, 2005.

Industries	Opening stock								Closing stock
		Allocated	Purchased	CDM credits	J credits	Sold	Surrendered allowances	Surrendered (fines, etc)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(= 1+...+5-6-7-8)
1 000 allowances / 1 000 tonnes CO ₂									
Total	0	37 371	NA	NA	NA	NA	26 471	0	10 901
Households	0	0	NA	NA	NA	NA	0	0	0
Total industries	0	37 371	NA	NA	NA	NA	26 471	0	10 901
1 Agriculture, fishing and quarrying	0	3 056	NA	NA	NA	NA	2 328	0	728
2 Manufacturing	0	7 525	NA	NA	NA	NA	5 438	0	2 087
3 Electricity, gas and water supply	0	26 790	NA	NA	NA	NA	18 704	0	8 086
4 Construction	0	0	NA	NA	NA	NA	0	0	0
5 Wholesale and retail trade; hotels, rest.	0	0	NA	NA	NA	NA	0	0	0
6 Transport, storage and communication	0	0	NA	NA	NA	NA	0	0	0
7 Financial intermediation, business active.	0	0	NA	NA	NA	NA	0	0	0
8 Public and personal services	0	0	NA	NA	NA	NA	0	0	0

Want to answer questions like:

- What are the origin of the emission permits?
- Who is trading with the emission permits?
- From where have the industries received the permits?
- What type of emission permits are traded?
- Who owns the permits
- Number and value of permits issued/traded/surrendered

Work with emission permit “accounts” in Norway

- Ongoing project. Started in 2010.
- Mapping user needs
 - linking emission permits with emissions of GHG by NACE industries.
 - the economic projection models and for policy analysis
 - differences in the emission patterns for those included in the EU-ETS and those who are not?
 - valuation (how much money is spent by the enterprises, the government?)
 - balances
 - link b/w emission permits and NA (taxes & subsidies)
 - requirements according to SEEA
- Did this kind of information already exist? NO
- Started with physical account

Main data source: The Norwegian Emission Trading Registry

- The Climate and Pollution Agency is the administrator
- All transactions with "approved" emission permits is included, but no monetary information.
- Any organisation or private individual can apply for an account in the registry – but national enterprises included in the EU-ETS are obliged to have an account.
- Not all information about transactions are accessible

Some enterprises need permits to emit GHG

Norwegian legislation on emission permits states which Norwegian enterprises that need a right/permission to emit greenhouse gasses.

• Mining and quarrying	37
– 35 oil and gas offshore fields,	
– 6 oil and gas onshore fields	
– 1 mining	
• Manufacturing industries	52
• Energy supply and waste management	<u>26</u>
	115

These enterprises must every year give/surrender to the government emission permits that corresponds to their actual greenhouse gas emissions.

Challenges in meeting user needs..

- Access to the Norwegian Emission Trading Registry
- Valuation issues
 - methods?
 - prices?
 - other sources?
- Annual data
- Whom to include? Only those included in EU-ETS?
- Transactions with the rest of the world
- The level of detail of the proposed tables in issue/outcome papers

Emissions from enterprises incl. in EU-ETS vs. total emissions in 2008 and 2009

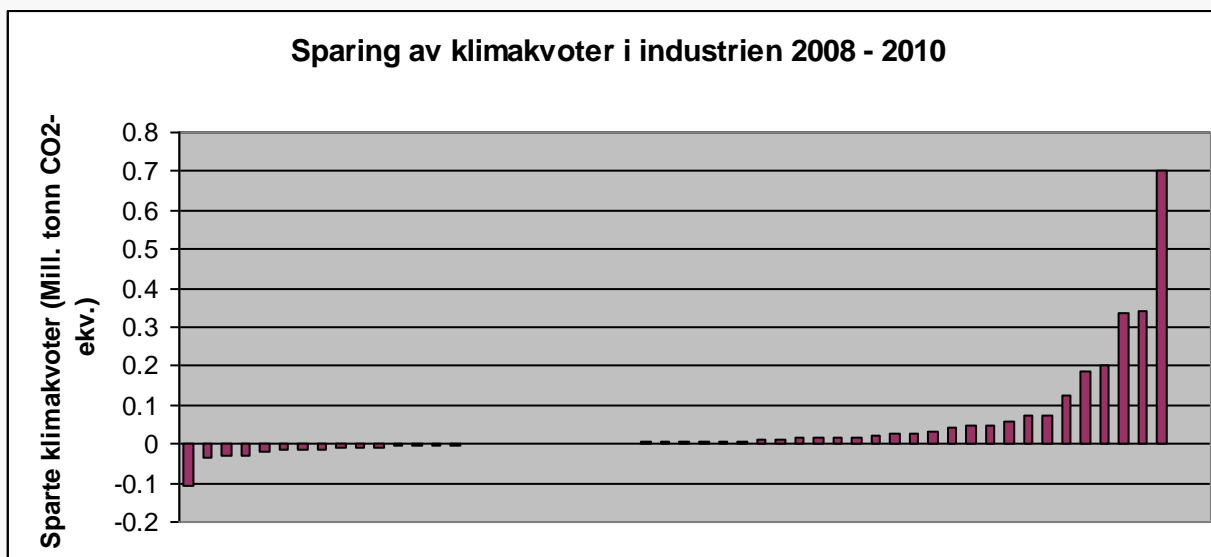
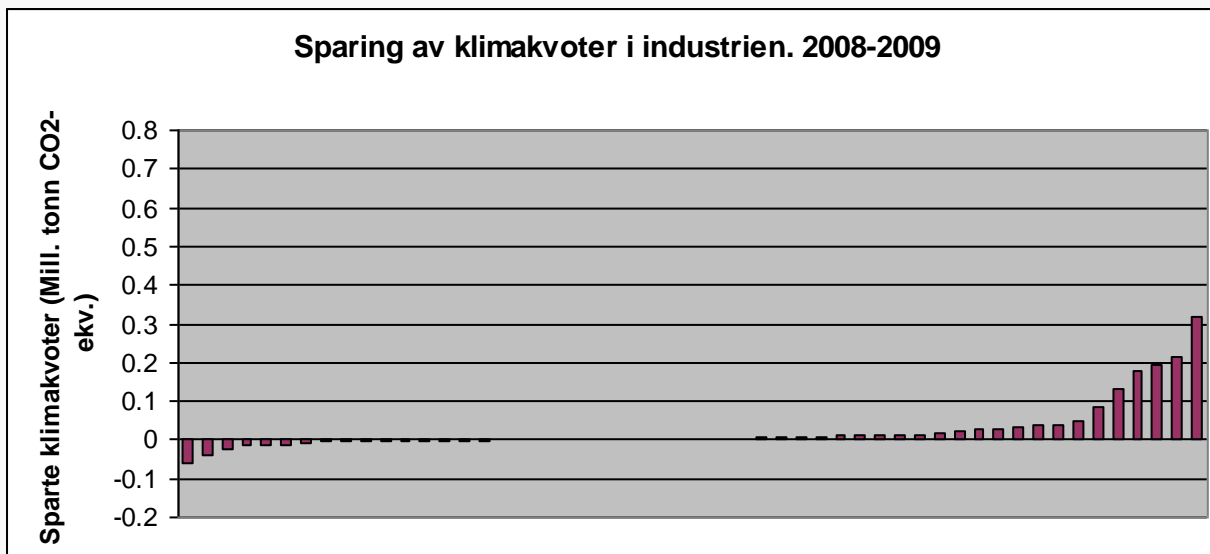
	Total Emission (mill. tonne CO ₂ -ekv)	Emissions from enterprises incl. in EU-ETS (mill. tonne CO ₂ -ekv)	Free permits (mill. tonne CO ₂ -ekv)	Acquired (mill. tonne CO ₂ -ekv)	Number of enterprises in EU-ETS
Total Norway*	105	39	16	23	115
Total industries	94	39	16	23	115
Agriculture, forestry and fishing	12	0	0	0	0
Mining and quarrying	29	27	3	24	37
Manufacturing	26	11	12	-1	52
Education, health and social work	2	0	0	0	0
Public administration	1	0	0	0	0
Other industries*	25	1	1	0	26
Households	11	0	0	0	0

* Ocean transport and international air transport not incl.

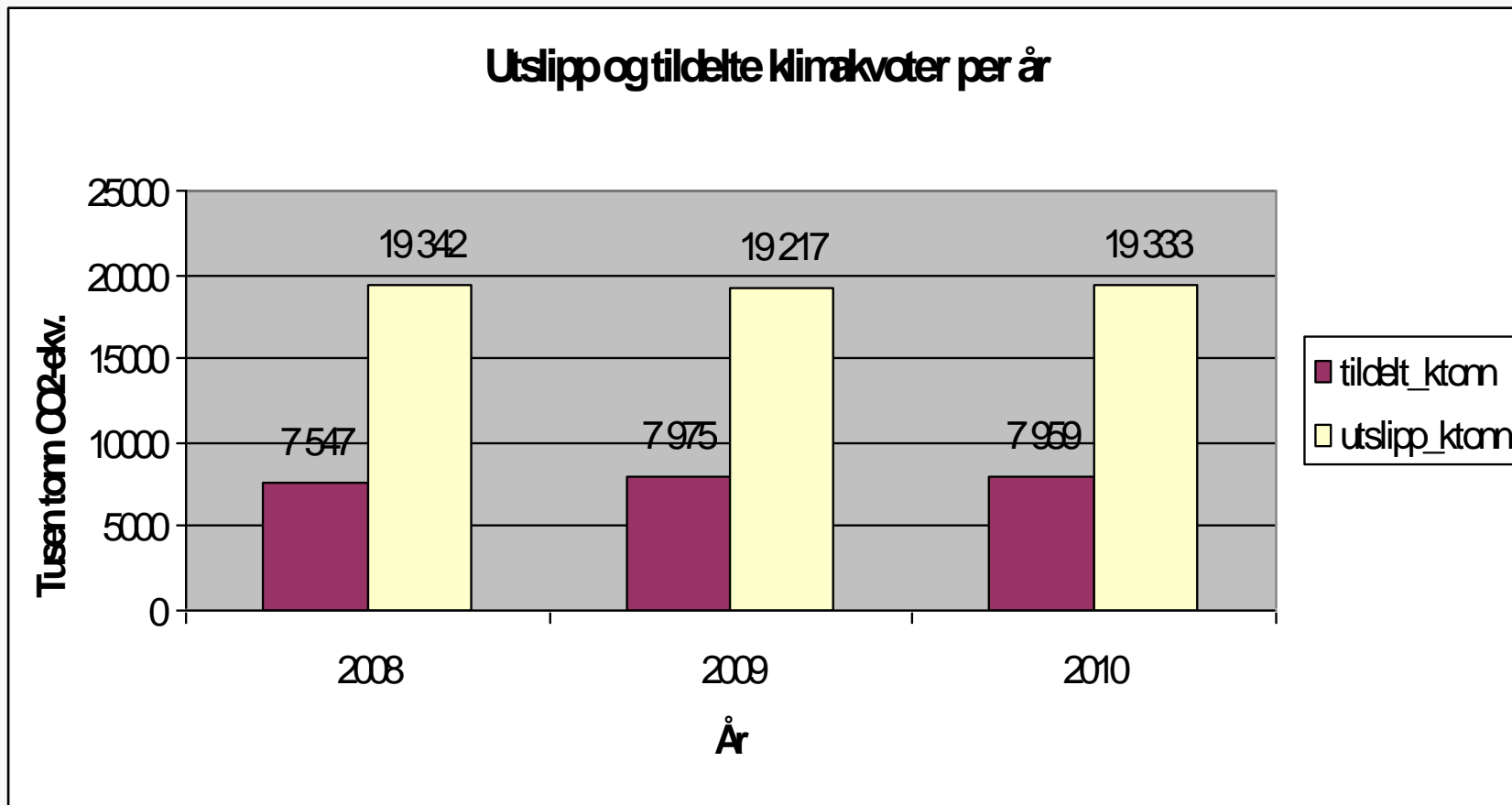
Permits are good business for some enterprises..

Næring	2008 and 2009	Total emissions	Free permits	Acquired	Acquired	Number of enterprises
		(mill. Tonne CO ₂ -ekv)	(mill. Tonne CO ₂ -ekv)	(mill. Tonne CO ₂ -ekv)	(percent)	
Total enterprises incl. In EU-ETS		38.6	15.5	23.0	60	115
Enterprises in EU-ETS with no free permits		23.8	0.0	23.8	100	36
Enterprises in EU-ETS with free permits		14.7	15.5	-0.8	-5	79
Mining and quarrying with free permits		2.8	2.6	0.1	5	6
Manufacturing industries with free permits		10.7	12.0	-1.3	-12	52
Manufacture of food products and beverages		0.2	0.2	-0.1	-28	9
Manufacture of pulp, paper and paper products		0.8	1.0	-0.2	-19	19
Oil refinery, Manufacture of chemicals and chemical products , Manufacture of basic metals		9.7	10.8	-1.1	-11	24
Electricity, gas, steam and hot water supply, waste management with free permits		1.3	0.9	0.4	30	21

Increased savings in the manufacturing industries



Emissions vs. free permits 2008 – 2010



Further work...

- Important to work towards compiling emission permit statistics/accounts which provides value added beyond what is already published by the Norwegian Climate and Pollution Agency
- Combining information about emission permits with data from energy accounts and national accounts
- Balance accounts incl. stocks and flows
- **Valuation**
- ...and treatment of emission permits in SEEA has to be decided upon!

Thank you!

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Further reading (only in Norwegian)

<http://www.ssb.no/magasinet/miljo/art-2011-04-12-01.html>

<http://www.ssb.no/vis/magasinet/miljo/art-2011-06-01-01.html>