

Promoting sustainable bioenergy production & use

Implementation of
sustainability criteria for
biofuels in Sweden

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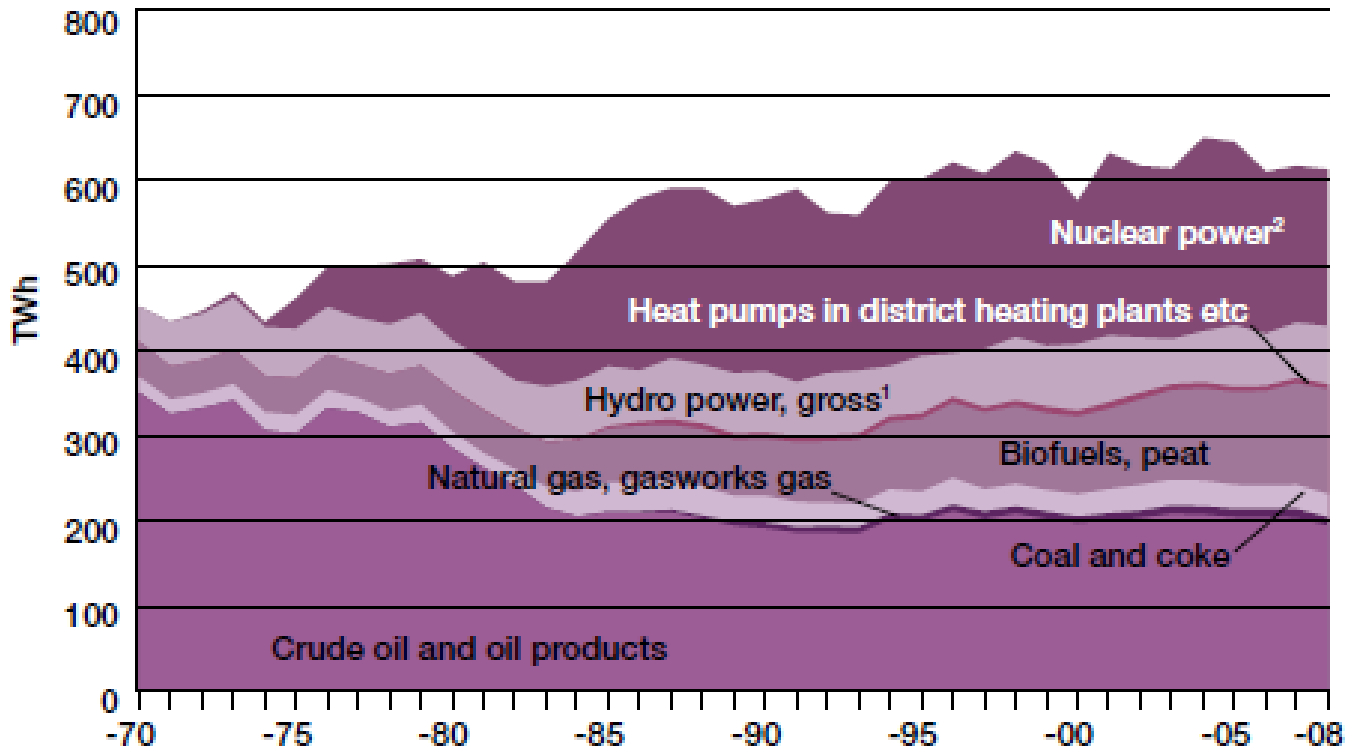
Aim and scope

- The aim of this presentation is to:
 - Give a brief overview of
 - Energy situation in Sweden
 - Current status of the implementation of sustainability criteria for biofuels and bioliquids in Sweden
 - Planned activities and time line
 - Supporting activities
 - Suggested regulations

Energy supply in Sweden

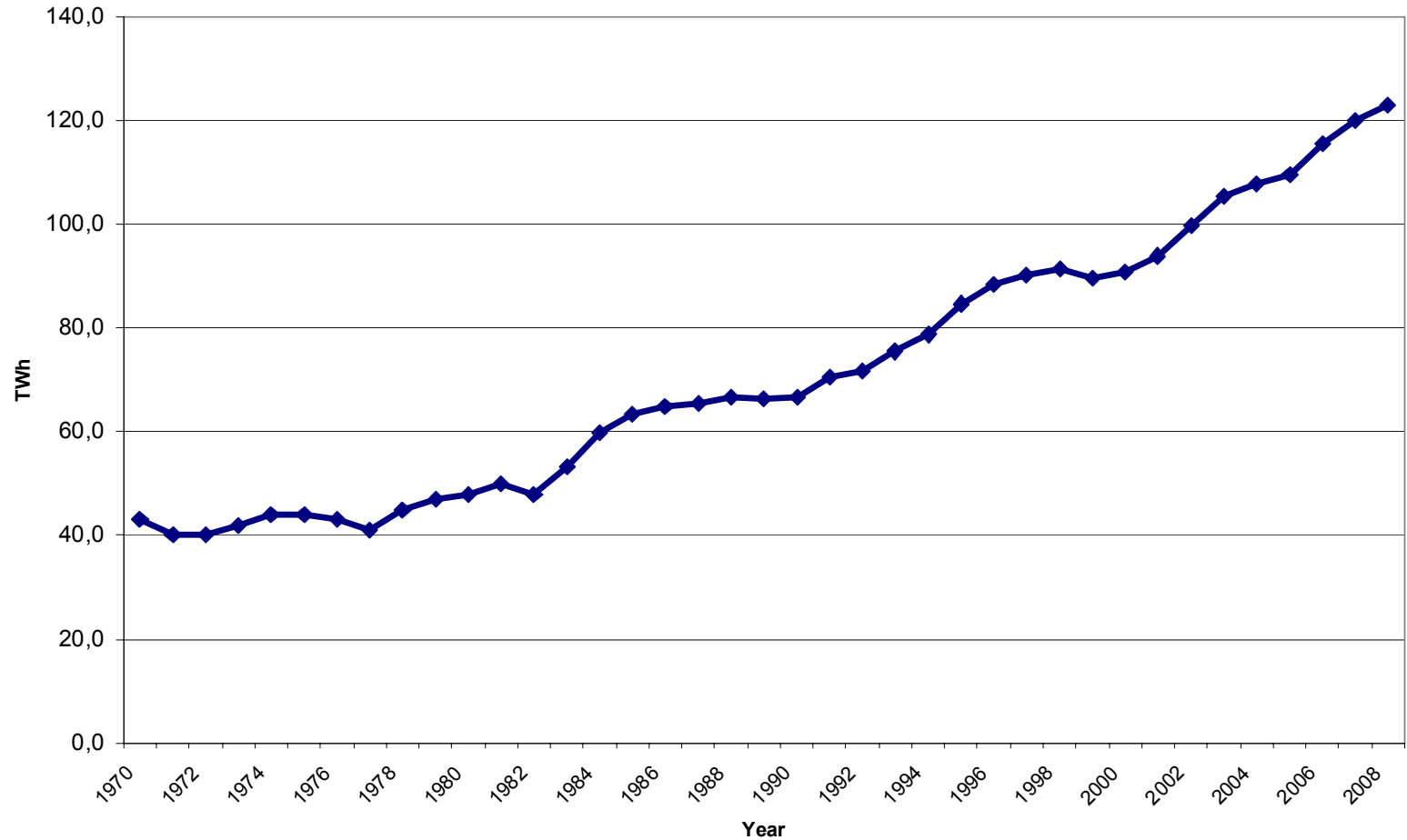
- The total energy supply was 612 TWh in 2008
- Biomass, especially woody biomass, already contributes substantially in covering energy demands in Sweden
 - The share of biofuels and peat has increased from 9% to 20 % (1970 – 2008)
 - This corresponds to 123 TWh (incl. 3 TWh peat)
 - With (solid) wood fuels incl. wood pellets being about 44%
- The share biofuels is now 34% of the total fuel quantity (351TWh)

Total energy supply in Sweden



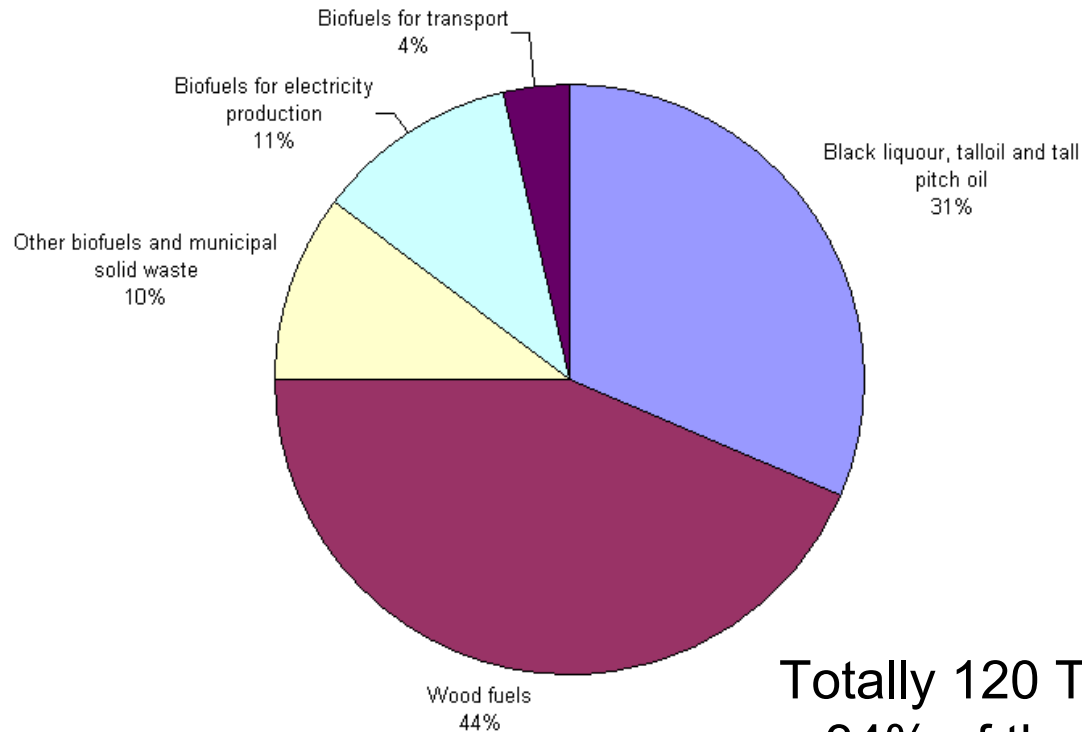
Source: Swedish Energy Agency

Use of biofuels and peat in Sweden



Source: Swedish Energy Agency

Share of different biofuels in Sweden

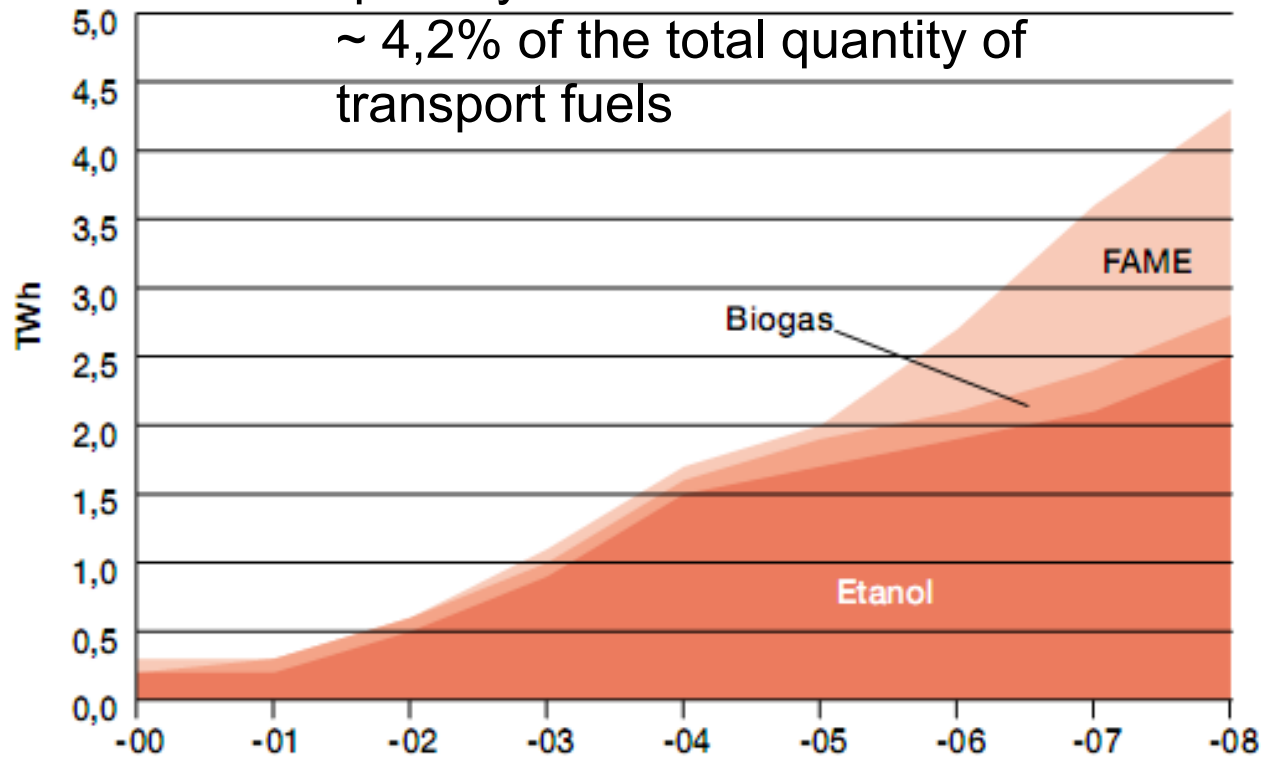


Totally 120 TWh
~ 34% of the total quantity of
fuels (351 TWh)

Use of liquid and gaseous biofuels

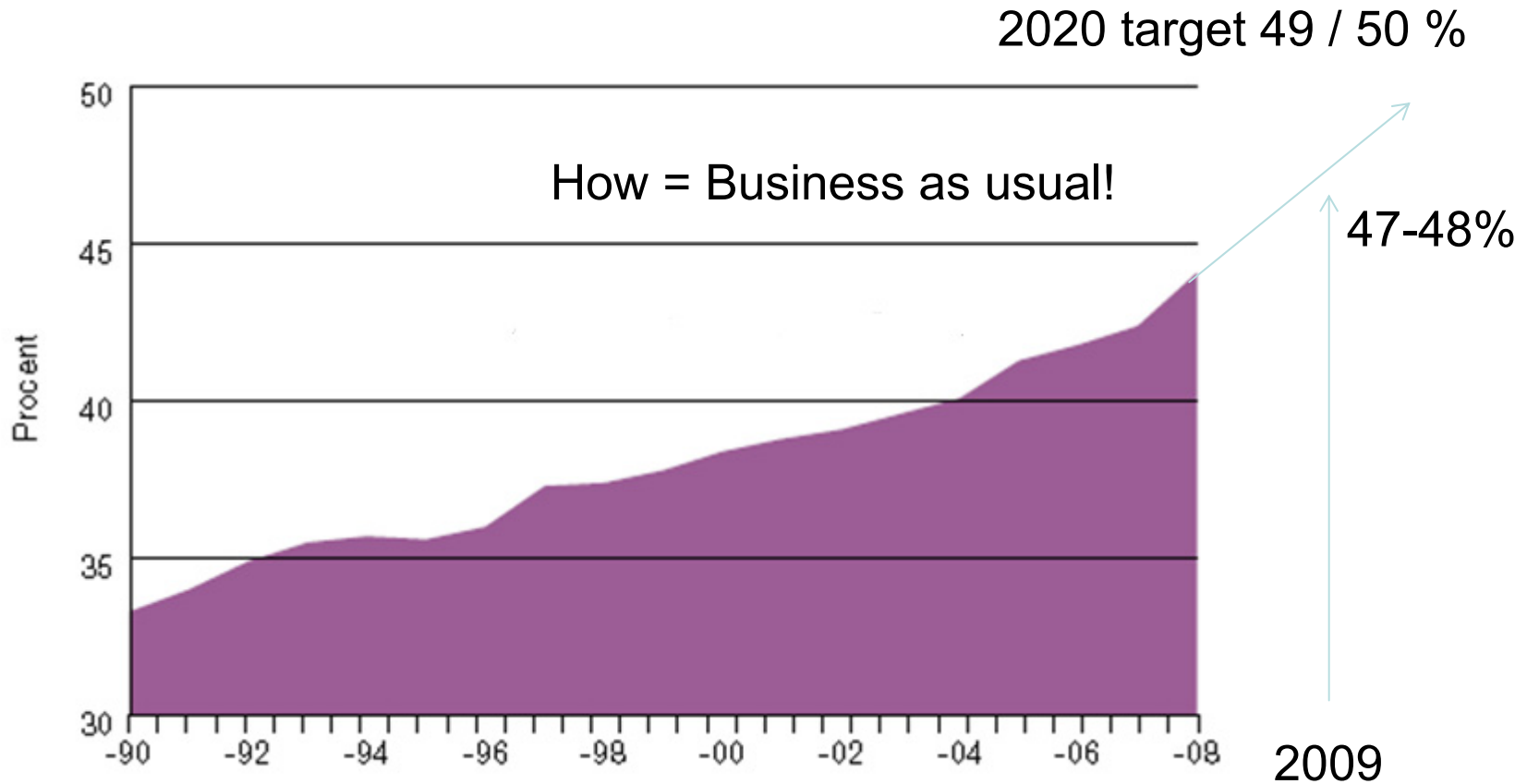
4,4 TWh ~ 3,7% of the total
quantity of biofuels

~ 4,2% of the total quantity of
transport fuels



Source: Swedish Energy Agency

Renewable energy share in Sweden



Source: Swedish Energy Agency

Incentives

- Renewable Energy Directive RED (2009/28/EC)
 - Sustainability criteria for biofuels (liquid and gaseous),
 - Implementation in progress in Sweden
 - According to the directive it should be implemented in 5 December 2010
 - National Renewable Energy Action Plans under Directive 2009/28/EC
 - Reported to the COM in June 2010, English version available
- Fuel Quality Directive FQD (2009/30/EC)

Renewable Energy Directive

- Target
 - EU target, at least 20% renewable energy in 2020
 - Binding national targets in 2020
 - Targets for Sweden are:
 - 49% renewable energy of the total final energy consumption (50% national target)
 - 10% renewable energy of the total final energy consumption in the transport sector

Sustainability criteria

Climate benefit Biodiversity	⇒	Adopted rules
Social sustainability and prices of food	⇒	COM follow up: -Land use rights -Work conditions (i.e. ILO convention)

Terms of the directive about sustainability criteria

- Detailed rules and regulations about the criteria, calculation methods, control and verification
 - Biofuels for the transport sector and bioliquids for other purposes
 - Ethanol, FAME/RME, biogas
 - Tall oil pitch, bio oils (MFA, palm oil, rape seed oil etc.)
 - Solid biofuels are excluded (Report from COM SEC(2010)65)
 - Binding criteria not suggested, monitoring and voluntary actions are recommended
- Should be incorporated 5 December 2010
- There are many detailed regulations / terms in the directive.
 - Additional consultative- and / or binding supplements from COM

Directive criteria (art. 17)

- Reduction of greenhouse gas emissions
 - 35% by time of introduction (60% 2018)
 - Calculation method according to the directive
 - Default values for the whole production chain
 - Calculations based on actual values
 - A combination of disaggregated values and actual values based on calculation for different parts of the production chain
- Protection of high biodiversity areas
 - Natural forests (Primary forest and other wooded land)
 - Protected areas (Reservs etc.)
 - Grasslands (Natural and non natural)
- Protection of high carbon stock areas
 - Wetlands
 - Peat lands
 - Continuously forested areas

Fulfilment of the criteria according to the directive - Why

- To be able to include fuels to the binding national targets
- To be able to use quotas for renewable energy – e.g. for the electricity certificate system and a possible biofuel quota obligation
- To be able to give subsidies / financial support – e.g. exemption from energy tax, direct support / subsidies

Directive's legitimate claim of a control system (art. 18)

- The economic actors should show that the criteria set out in art. 17.2-5 has been fulfilled
 - Presenting a chain of custody by e.g. using a “mass balance” system
 - Information should be verified by independent auditing
- An alternative to the above procedure is to use:
 - Voluntary certification system approved by COM
 - Bilateral agreement between COM and a third country

The implementation process in Sweden

- An investigation carried out by the Swedish Energy Agency about implementation of the sustainability criteria in Sweden (2009)
- Government proposal to the law (March 2010)
- Law of sustainability criteria (adopted May 2010)
- Several Swedish Energy Agency initiated actions during 2010:
 - Suggestions to solutions about “unsolved problems”. Reported to the Swedish government 3 September
 - Basis to government regulations. Reported 3 September
 - Authority regulations. Preliminary publication in December 2010

Decided regulations in Sweden

- A new law - Law of sustainability criteria
 - It is an overall law and includes regulations for e.g. :
 - Sustainability criteria
 - Reporting obligation / requirements
 - Requirements for independent auditing
 - The law came into force 1 August 2010
- Suggested changes
 - Law on tax on energy
 - Conditionality that the criteria should be fulfilled to be entitled to tax credits for biofuels for transport and taxable liquid biofuels
 - Law in force 1 January 2012
 - Law on electricity certificates
 - Conditionality that the criteria should be fulfilled for electricity certificate justified liquid biofuels, e.g. tall oil pitch
 - Law in force 1 January 2011

Law on sustainability criteria in Sweden

- Regulations coming in to force
 - (The law 1 August 2010)
 - Regulation on notification 1 October 2010
 - Regulation on reporting 1 January 2011
- Provisional regulation
 - Claim on green house gas reduction for biofuels which are produced in plants which were in operation January 2008. In force 1 April 2013

Law on sustainability criteria in Sweden

- Chapter 2 in the law
 - A) GHG reduction (35%)
 - B) Soil issues (biodiversity, high carbon storage)
- Exemption for wastes and residues (1 Chapter, paragraph 3)
 - Biofuels produced of waste and other residues that those from agriculture, aquaculture, fisheries, and forestry, need only meet the claim in A (above)

Law on sustainability criteria in Sweden

- Residues (Chapter 1, paragraph 2)
 - Definition:
 - Residue is a substance from processing
 - It is not an end product(s) which the production process direct aims to produce
 - It is not the main purpose of the production process
 - The production process has not purposely changed

Law on sustainability criteria in Sweden

- Residues – further explanation
 - “Waste.... And processing residues
The GHG emissions over a life cycle should be set to zero until this material is collected

Law on sustainability criteria in Sweden

– Claim of GHG emission reductions

A plant which is in operation / is going to be put in operation	Dec 2009	April 2013	Jan 2017	Dec 2018
Before Jan 2008		35%	50%	
Jan 2008 – Jan 2017	35%		50%	
After Jan 2017			50%	60%

Law on sustainability criteria in Sweden

- Actors which have a reporting obligation (Chapter 3, paragraph 1)
 - Supplier to a public “sales point” (i.e. point of duty)
 - User who is not getting biofuel from a “sales point”
- *NOTE: There is already a harmonisation procedure ongoing concerning the tax obligation and when the tax obligation comes in to force for taxable fuels*

Law on sustainability criteria in Sweden

- Reporting obligation (Chapter 3, paragraph 1)
 - Reporting on sustainable quantities
 - Proof that the criterias are fulfilled
 - By using:
 - Own control system
 - Approved certification
 - Statement from an independed auditing
- *NOTE: The regulator (in this case the Swedish Energy Agency) desides about the sustainable quantities*

Law on sustainability criteria in Sweden

- Reporting obligation notification (Chapter 3, paragraph 2)
 - Notification should be submitted not later than 1 October 2010
 - A form for notification is available from the webb site:
 - <http://www.energimyndigheten/hbk>

Unsolved problems

- Regulations about the sustainability criterias and the law on tax on energy
 - Financial risks due to authority desicion concerning the fuel volumes which have passed the point of duty
- Definition of “an actor” who has a reporting obligation

Suggested solutions and regulations

- The Swedish Energy Agency suggests the following changes on laws
 - The Swedish Energy Agency is given the right to issue time limited preliminary clearances based on information from the actor's control system
 - Actor = who has a reporting obligation
 - Complete harmonisation between the reporting obligation and the tax obligation for taxable fuel

Suggested authority regulation

- A clarification concerning specific criterias
- Requirement of a controll system
- Requirement of an independent auditing
 - Competence
 - Implementation
- Application of a preliminary clearance
- Reporting obligation
- Bases / authorisation for the Swedish Energy Agency to issue regulations within specific issues

Next steps in the implementation

- Swedish Government
 - To issue overall regulations
 - Prepare changes on laws
- Swedish Energy Agency
 - To issue authority regulations
 - GHG calculations
 - Control system and independent auditing
 - Reporting
 - Guidance, information, etc.
 - Verification issues, bases for judgements, etc.
 - Process descriptions, authority administrative routines, IT-support
 - Bases / authorisation for the Swedish Energy Agency to issue regulations within certain grounds
- International activities, EU comitology about the sustainability criteria, BioGrace, CA, REFUREC, ISO/CEN, etc.

More information

- **On webb:**
 - <http://www.energimyndigheten.se/hbk>
- You can subscribe an information letter by using the link above. Note: The letter is in Swedish
- **Mailbox:**
 - hbk@energimyndigheten.se
- **Persons directly involved into implementation:** Jonas Paulsson, Lina Engström, Emmi Jozsa, Erik Beckman, Per Wollin and Linus Hagberg

Many Thanks for Your Attention

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