



Introduction to and first experiences of Green Electricity Certificates in Sweden

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Workshop on 'National or international systems for White Certificates – What can we learn from Tradeable Green Certificates?'

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Outline

- Background
- Purpose
- How does it work?
- Market development
- First experiences



Why a green electricity certificate system?

- Fulfillment of RES-e
- Replacement of different investment schemes
- A robust system independent of the state budget
- Potentially cost effective and neutral to different technologies



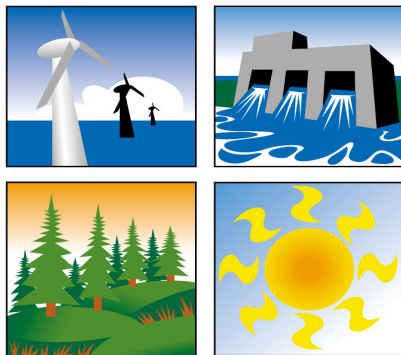
The overall objective is to generate new green electricity

- The target/ambition: 10 TWh new green electricity by 2010 (compared to the level of 2002)
- Underlying objectives:
 - creating stable trading conditions
 - making it possible to internationalize
 - prevent disturbances in the electricity market
 - encourage technical development and cost efficiency
 - encourage construction of new production facilities

How does the system work?

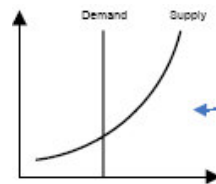
Supply

Producers of green electricity



Market

Market place



Brokers/
Traders



Demand

Suppliers of electricity



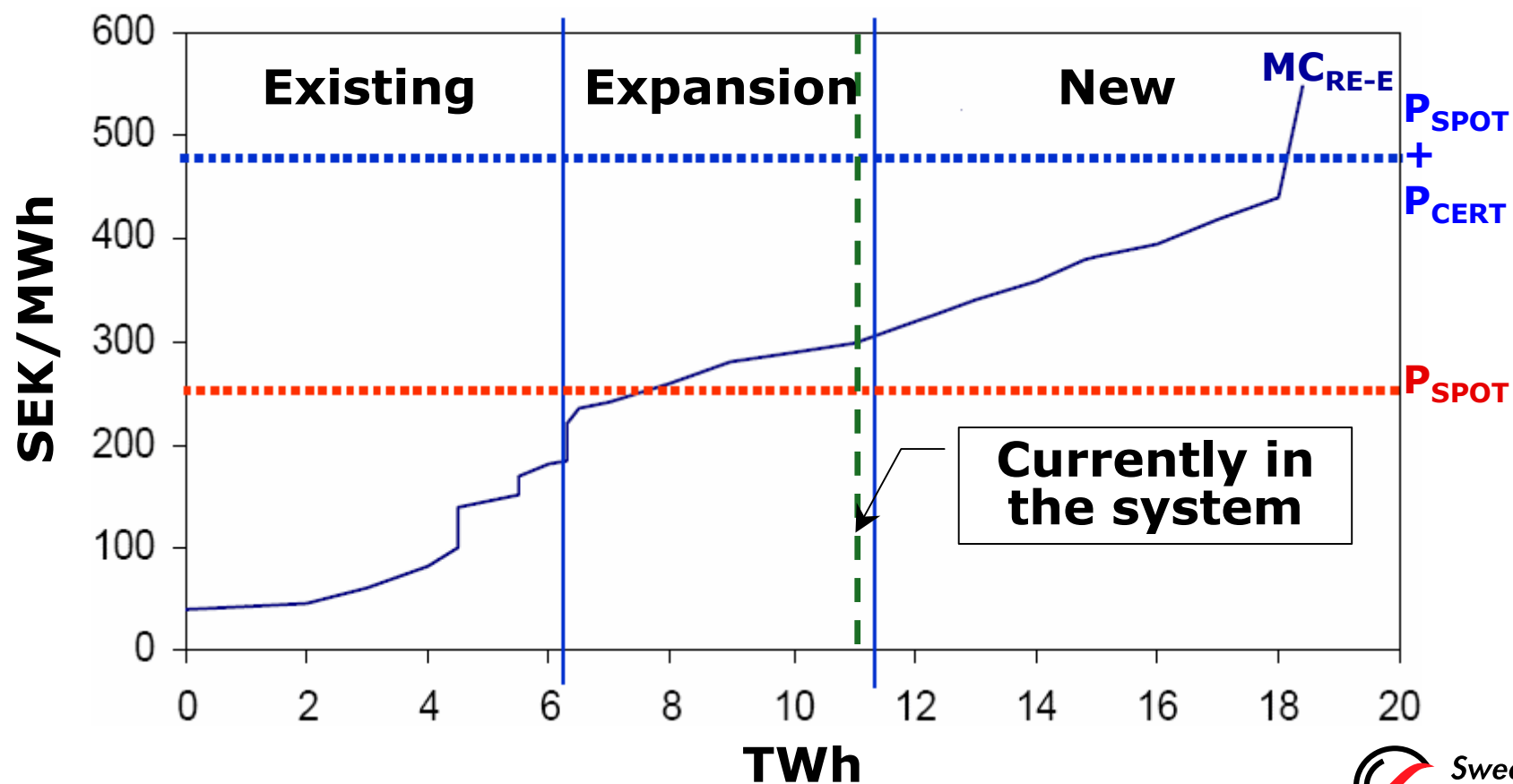
End-users with quota obligation



Support & Control

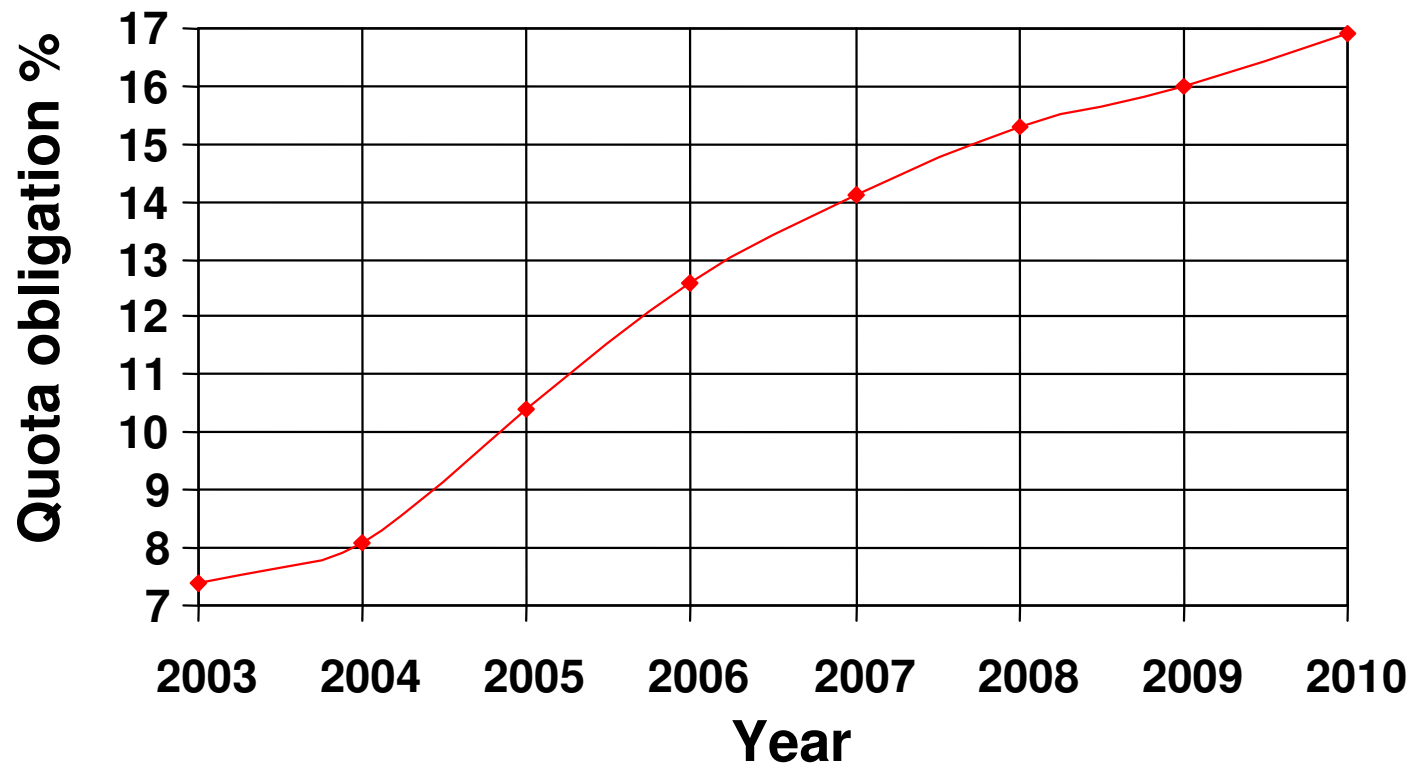


Supply of renewable electricity





Quota obligation



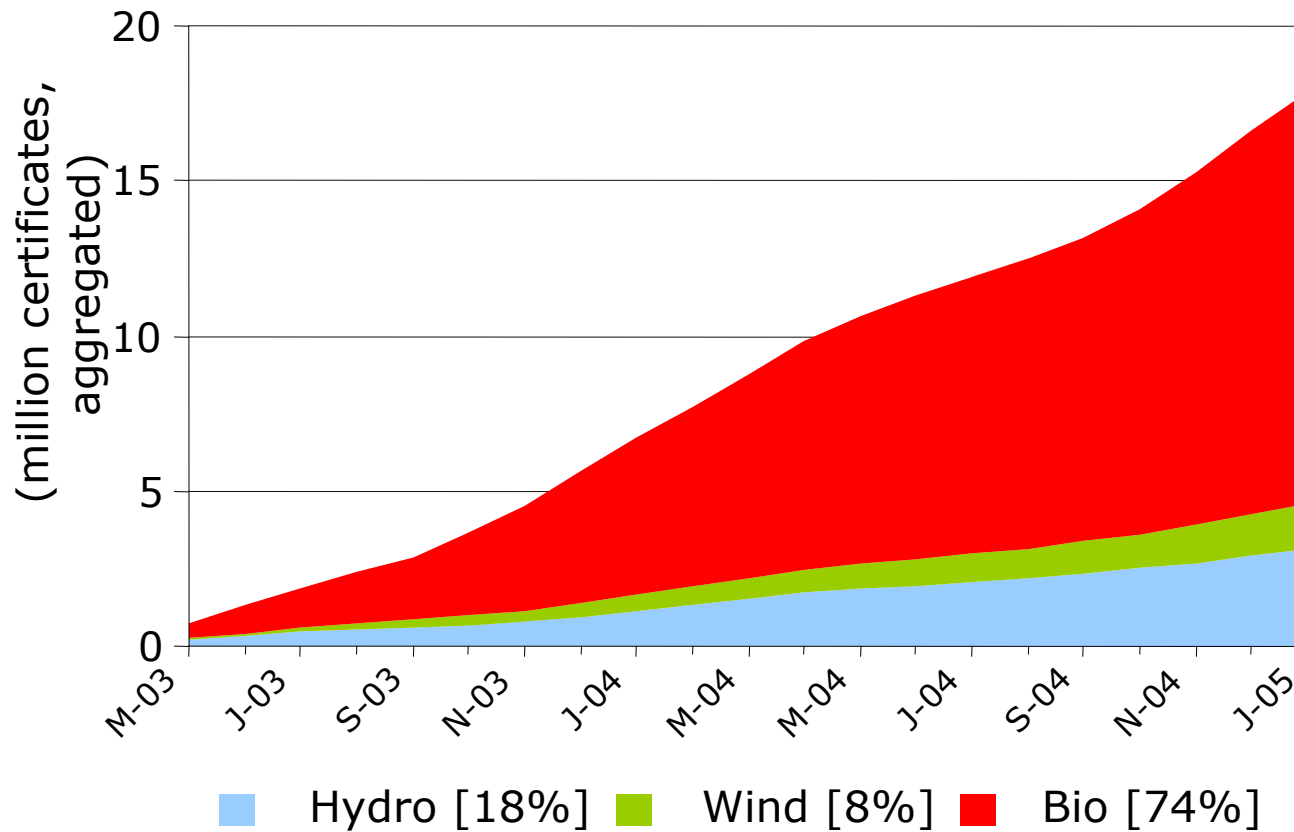


The system has in fact generated new renewable electricity ...

- Production of green electricity 11,5 TWh (March 2005)
- Increased production, switch to renewable fuels, smaller investments in existing plants
- Cheapest/easiest measures = cost effective



Certificates issued

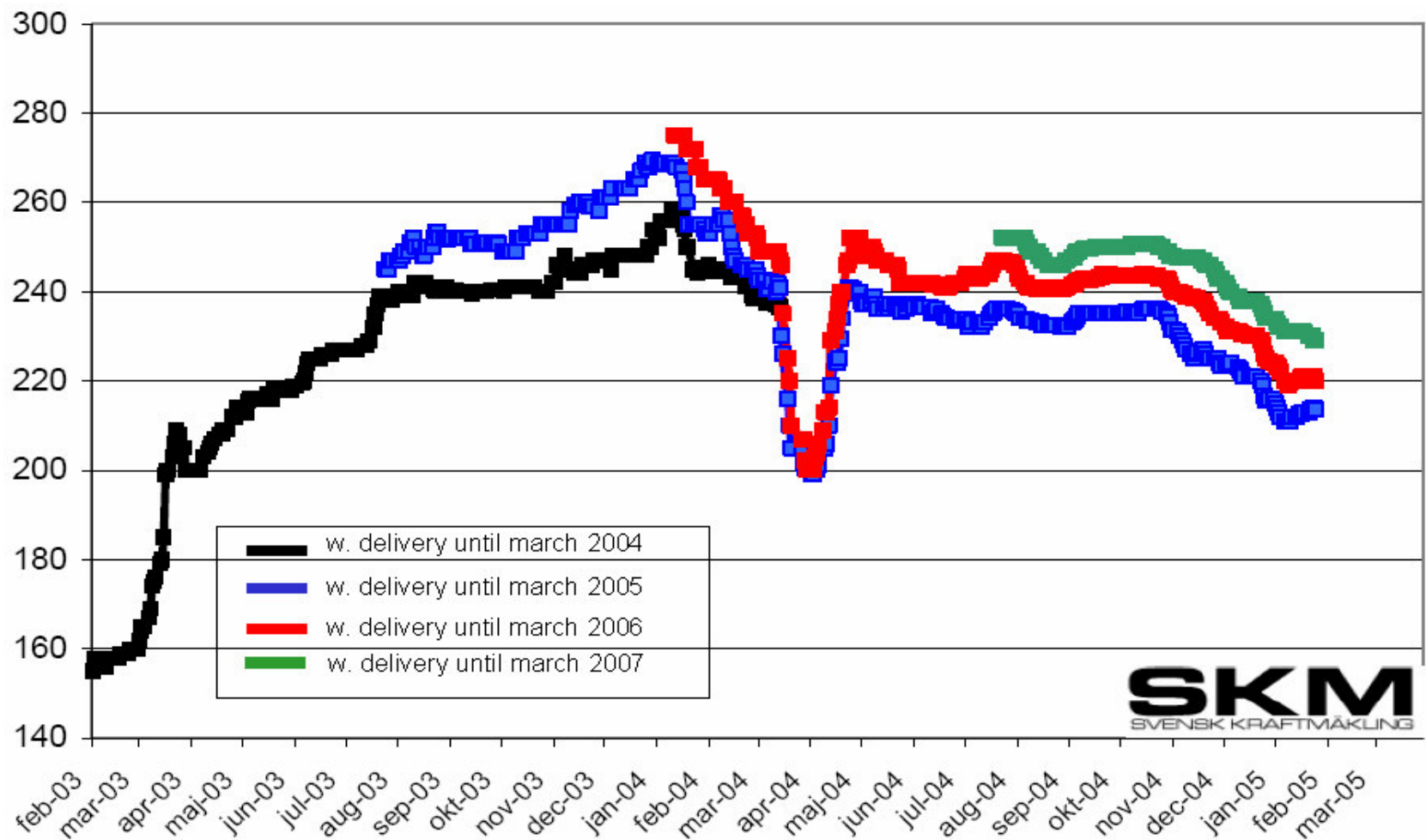




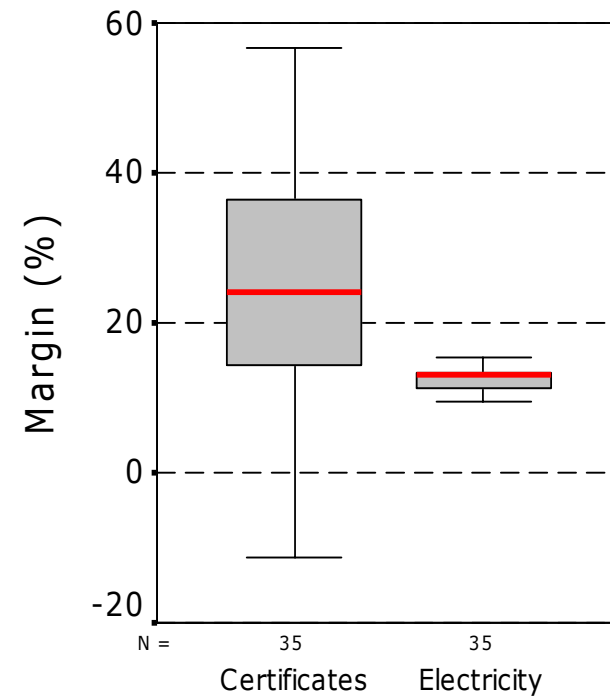
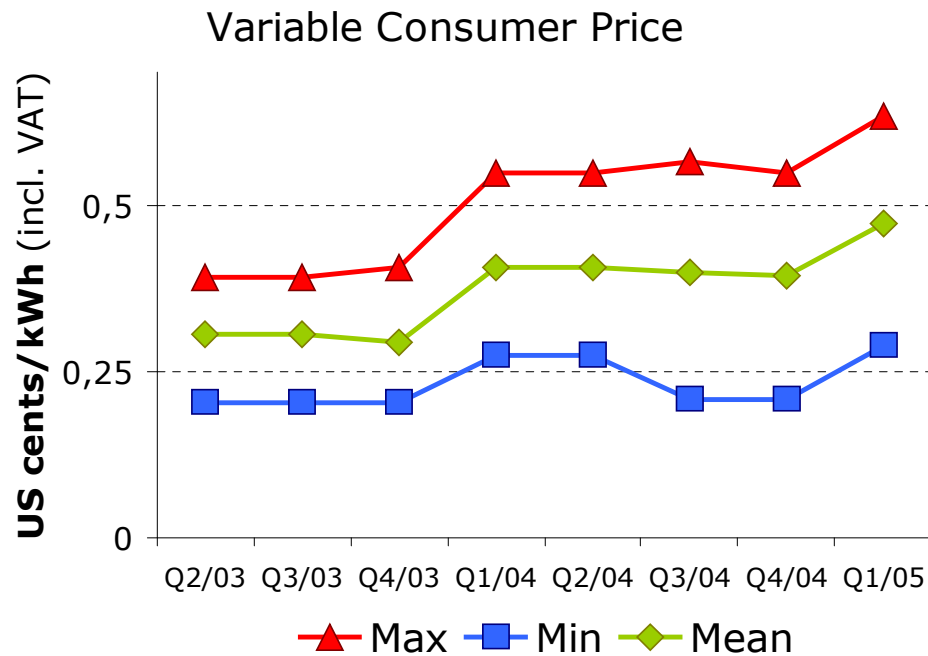
...but limited investments in new production capacity

- The life-span of the system to short (quotas until 2010)
- Government is expected to announce longer life-span and higher ambition (quotas until 2030?)
- Some large investments has been announced (off-shore wind, pulp&paper)

Certificate prices



End-user prices and supplier margins





Summary

– lessons learnt (1/2)

- The system has worked technically well
- The market players have adapted to the new system – a market has been developed
- Increase of RES-E in existing plants (bio)
- Surplus of certificates
- Few new investments
- Life-span of the system too short (quotas until 2010)



Summary

– lessons learnt (2/2)

- Quota obligation fee has set the certificate price
– not the margin-price for RES-E
- High transactional costs
- Situation of the consumer weak
- Situation for non-commercial RE-E
→ technological development?



Thanks !

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