

# Peter Fritz EME Analys

## MARKET BASED SUPPORT SCHEMES

-do they work as  
intended?



## Price logic in other markets

### Electricity market:

Price = Short run marginal cost, normally fuel costs in the most expensive fossil fuel plant running

(Short run marginal cost for green certificates is 0)

### District heat

Price = Average cost or the customers alternative heating cost.

### Natural gas

Price = The customers alternative cost



## The general view of the price logic in EU ETS and Green Certificate market

### EU ETS

- Price is equal to long run marginal abatement costs

### Green certificates

- Price is equal investments cost for new "green" generation minus the market price for electricity

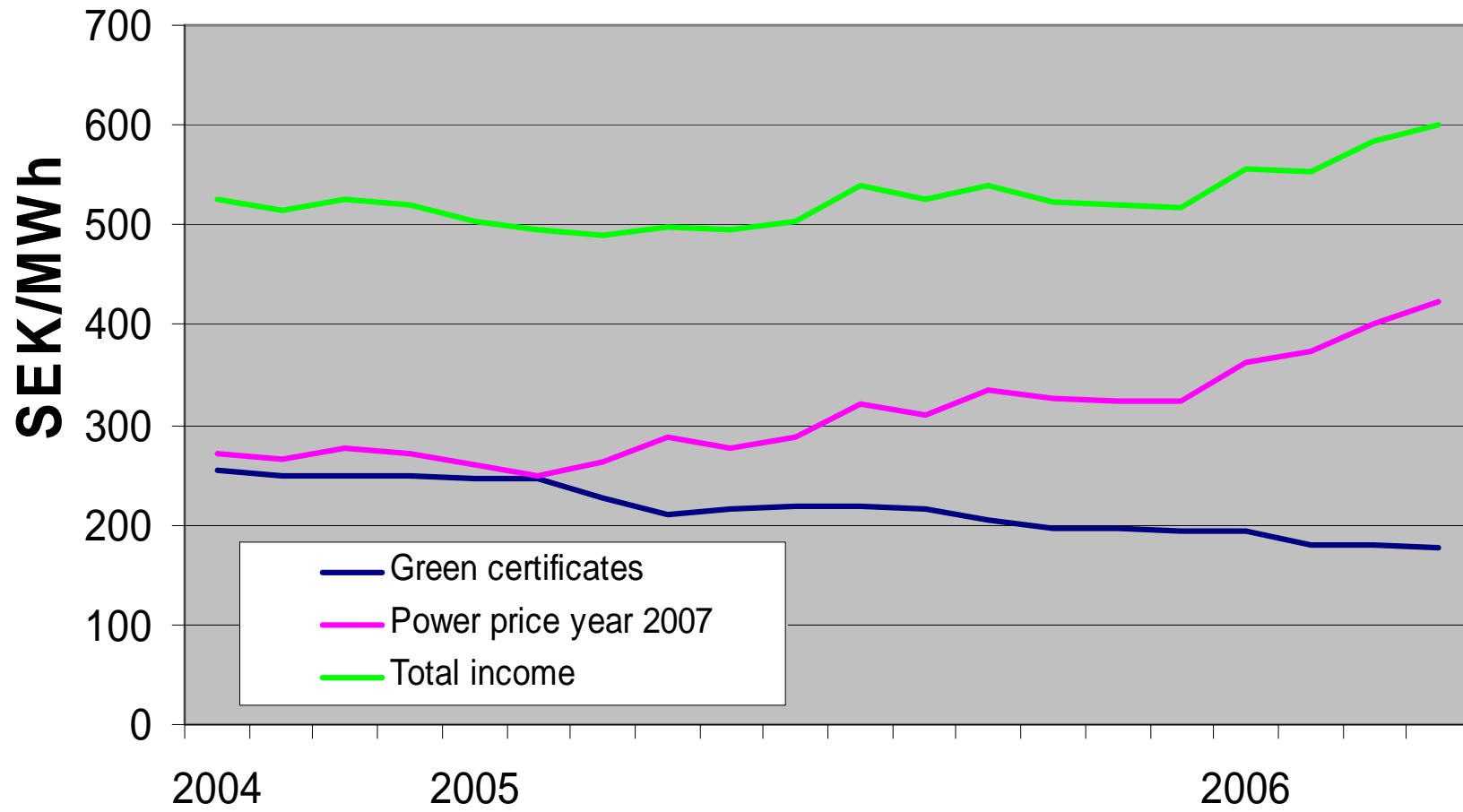
We argue that the price depend on a sensitive and hard-to-grasp balance between supply and demand and that is not what the politicians intended

## Background

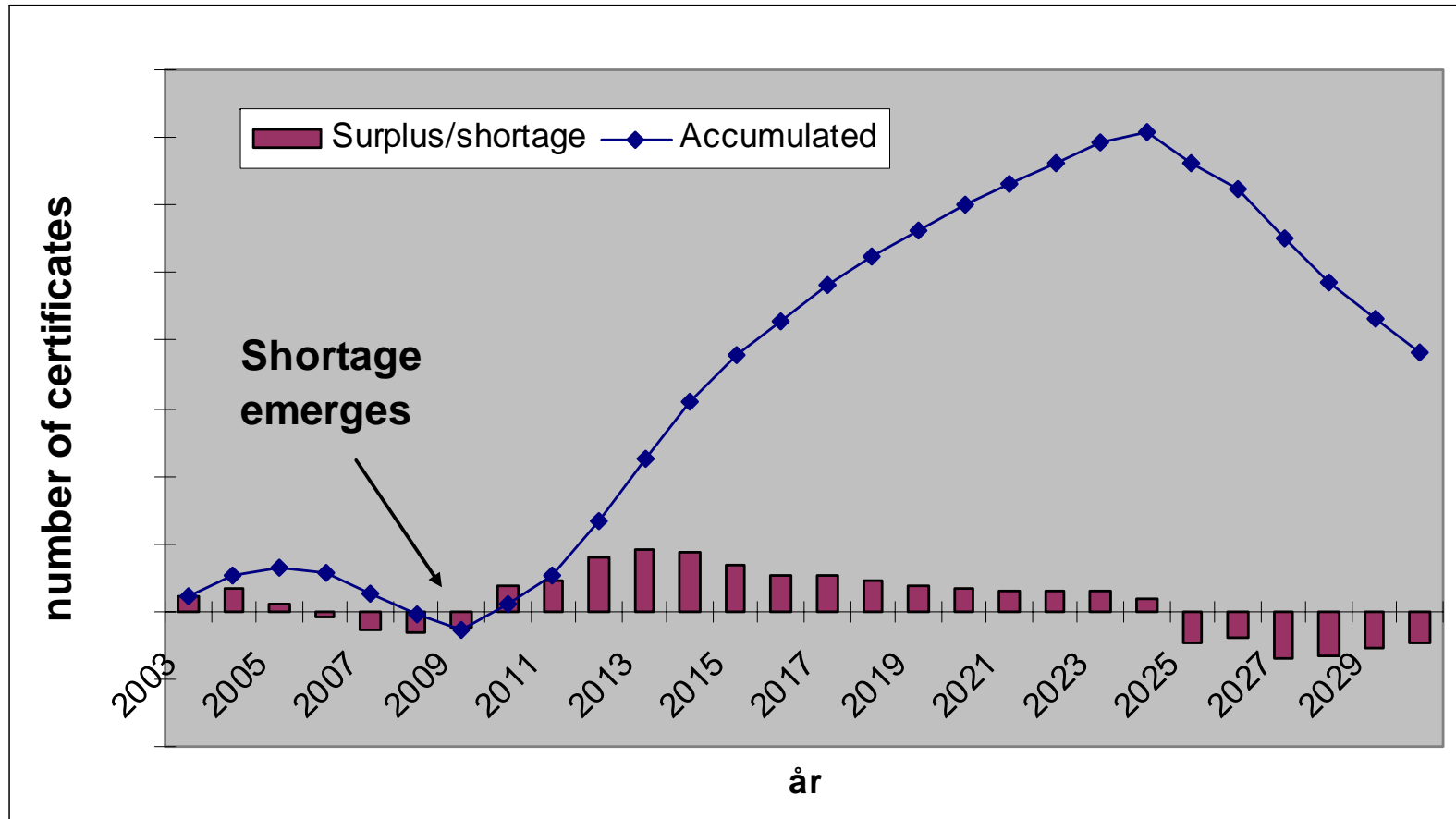
### - green certificate market in Sweden

- Introduced in may 2003
- Demand : Obligation to purchase certificates placed on consumers/suppliers. Quota level set for the whole period (7,4 % to start with)
- Supply: Generation of green power “creates” certificates.
- Target 10 TWh green generation by year 2010
- System recently extended to 2030
- Target extended to 17 TWh by 2016
- Started out with safety valves
  - Buy-out-price 174 SEK/MWh at the beginning
  - Today buy-out price is 150 % of average price previous period

## Correlation between price of Green Certificates and the Power Price



The Swedish green certificate market may face a deficit in a few years and after that a permanent surplus



## Conclusions regarding the Swedish green certificate market

- The connection between certificate prices and the producers' need for financial support might prove to be rather thin.
- The fundamental problem is that politicians in advance have decided exact minimum levels for renewable generation while short term possibilities for adjustments are close to non-existing.



## Conclusions regarding EU ETS

- Short run balance between supply and demand set the price, not the long run marginal cost to reduce the CO<sub>2</sub> emissions.
- There must be enough information available for the participants to make reasonable assessments of this balance.
- Hopefully there will be enough short run adjustment possibilities through CDM (Clean Development Mechanisms) and JI (Joint Implementation)