

The CertiQ logo is positioned at the top center. Below it is a large, semi-circular collage of images. From left to right, the collage includes: a close-up of electrical power lines, a field of yellow flowers, a row of blue solar panels, a field of sheep, and a wind farm with several turbines. The background of the entire slide is a light blue gradient with faint, large-scale images of power lines and a wind turbine.

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How to design a Feed-in Scheme without Market Distortions

Jan Vorrink, Head CertiQ

REALISE-Forum, Maribor, May 10, 2006



Content

- **Who is CertiQ**
- **The E-Certificate System**
- **Combination of GO and RECS**
- **Subsidy system and market in The Netherlands**
- **Potential of future international trading systems**



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Who is CertiQ ?



Who is CertiQ

- A 100% daughter of TenneT, the Transmission System Operator (TSO) of the Netherlands
- Shares of TenneT are owned by the Ministry of Financial Affairs
- Executing Electricity Law and accompanying Ministerial Regulations on certificates for renewable- and CHP-electricity
- Issuing Body of the Netherlands, officially appointed by the Ministry of Economic Affairs for 10 years and Issuing body for RECS
- CertiQ has 14 employees

The logo for certiq, featuring the word "certiq" in a lowercase, sans-serif font. The letters "c", "e", "r", "t", and "i" are black, while the "q" is blue. The logo is positioned at the top center of the slide, overlaid on a circular collage of images.

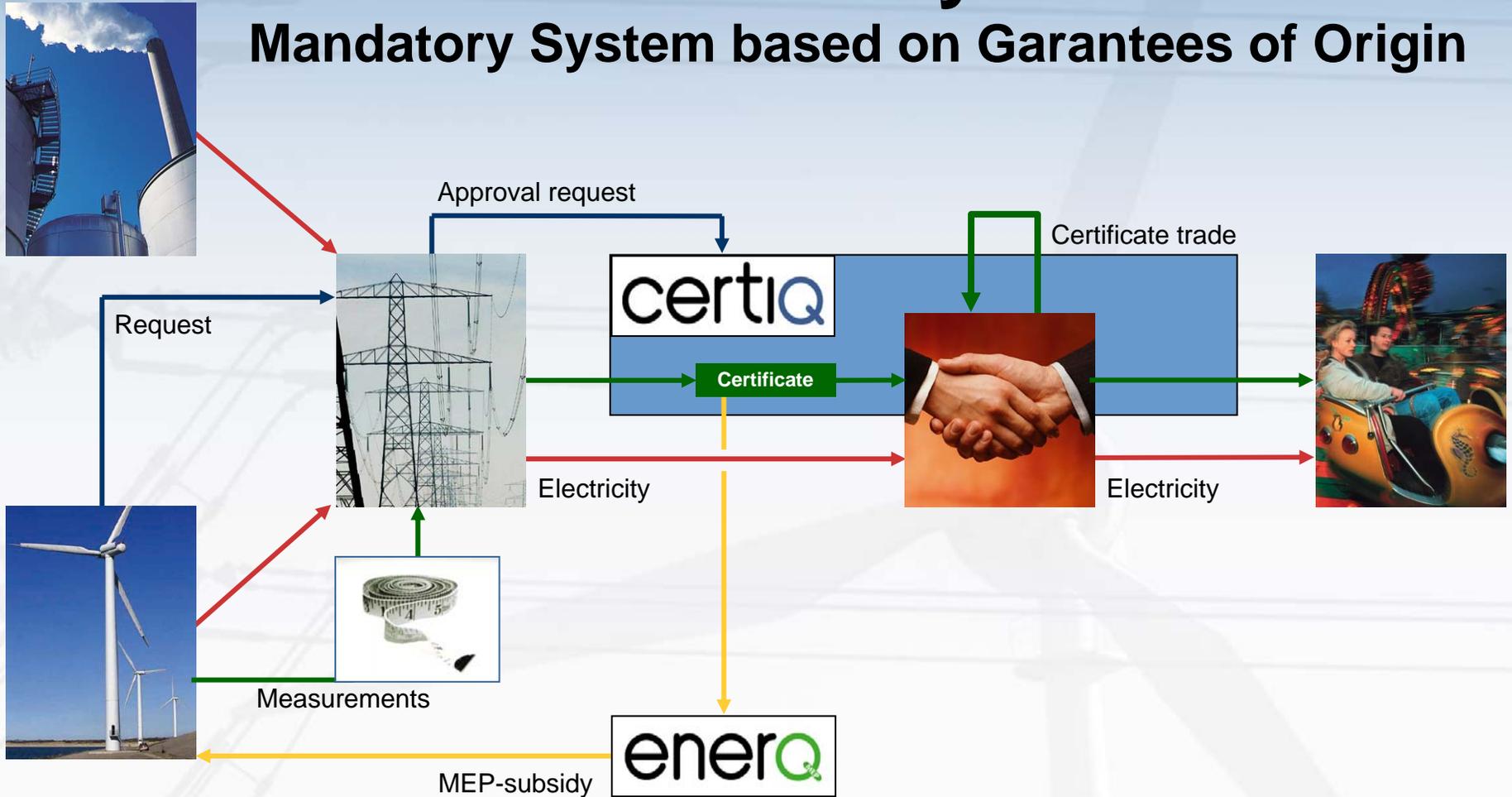
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The text "The E- Certificate system" is centered on the slide in a bold, black, sans-serif font. The background of the slide is a light blue gradient with a faint, large-scale image of a wind turbine and power lines. A circular collage of images is positioned at the top, containing scenes of solar panels, yellow flowers, a wind farm, and sheep in a field.

The E- Certificate system

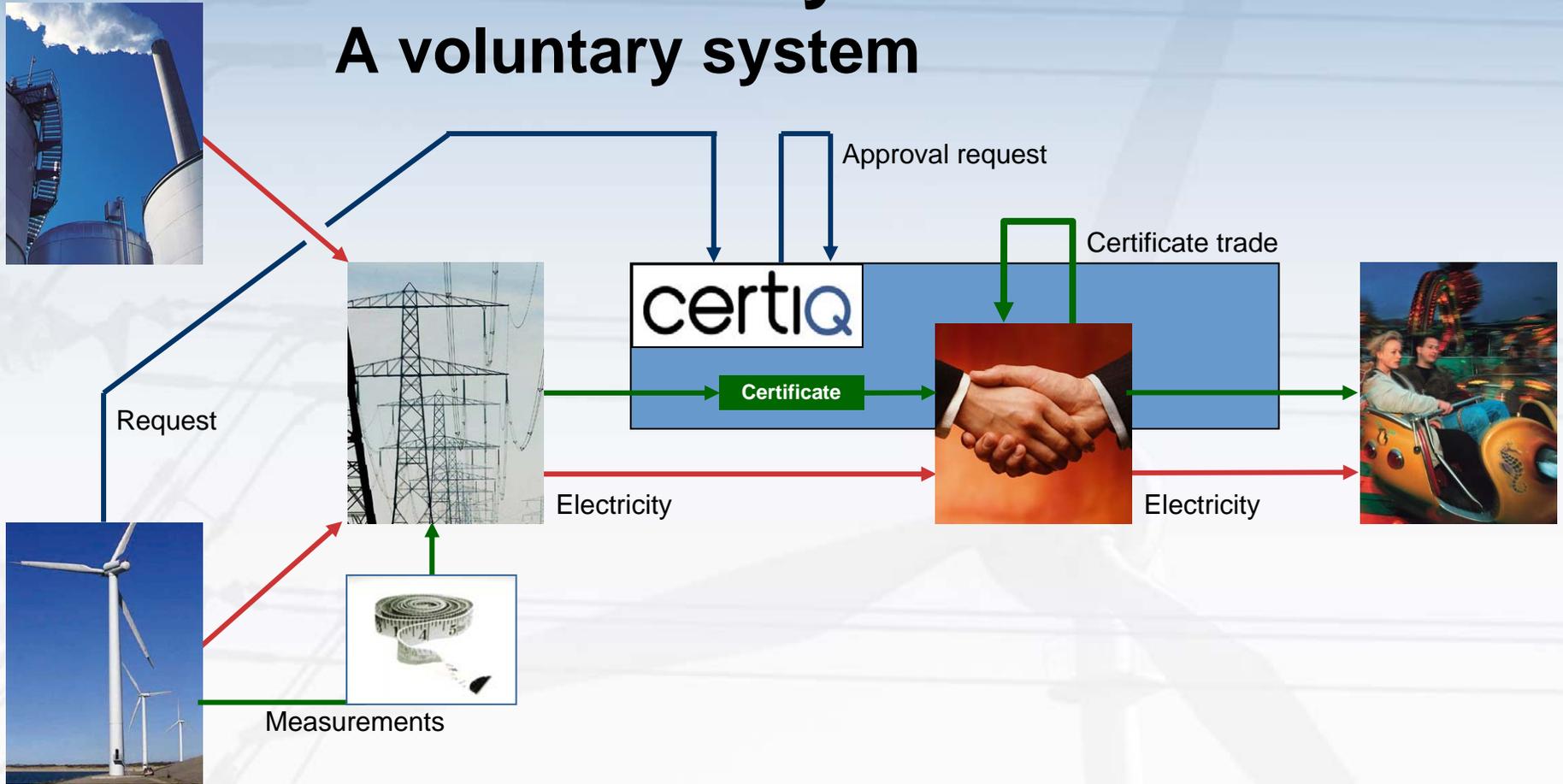
The E-certificate System

Mandatory System based on Guarantees of Origin

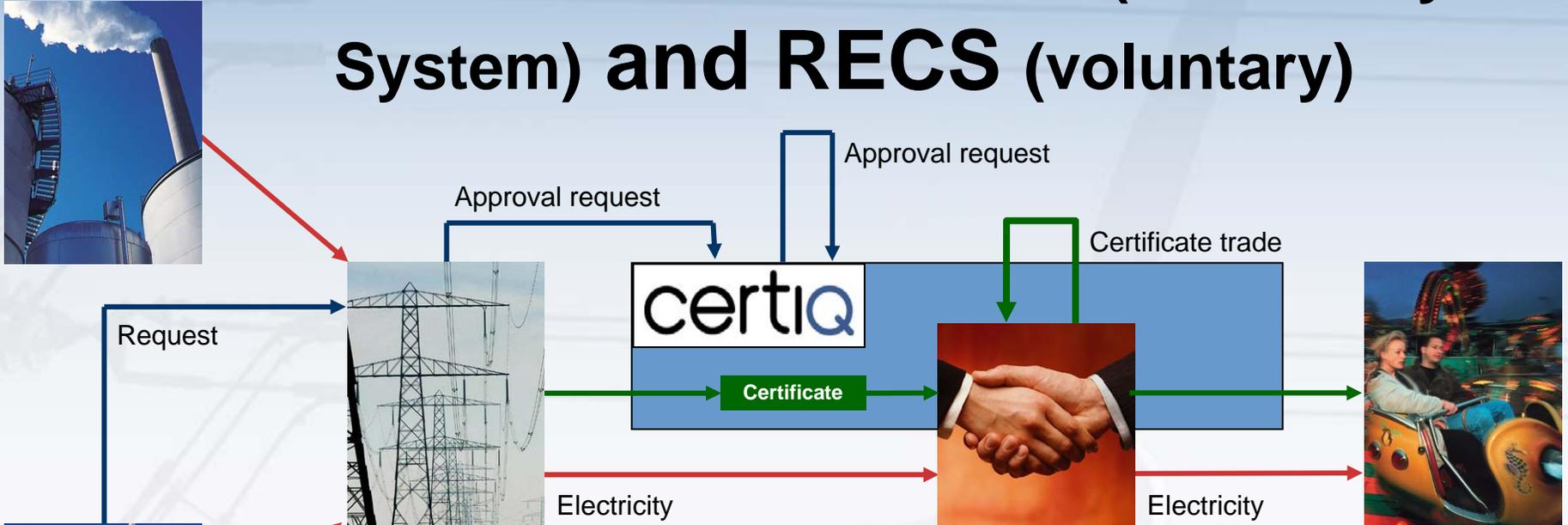


The RECS-system

A voluntary system



Combination of GO (Mandatory System) and RECS (voluntary)



Certificate

- GO
- RECS

Certificate

- GO
- RECS

Certificate

- GO
- RECS



Which parties participate?

Producers

- - Renewable; Wind, Hydro, Solar, Biomass
- CHP
- A producer is responsible for the production of renewable/ CHP electricity. They have to register with CertiQ.



Which parties participate?

Traders

- Buys renewable electricity from the producers
- They have a secured entrance to the CertiQ system
 - For trading certificates
 - For redeeming of certificates
- They have to register with CertiQ



Which parties participate?

Grid administrators

- Independent body, regional situated
- Have to give their approval for the registration of producers with CertiQ.
- Responsible for sending metered data to the CertiQ system.



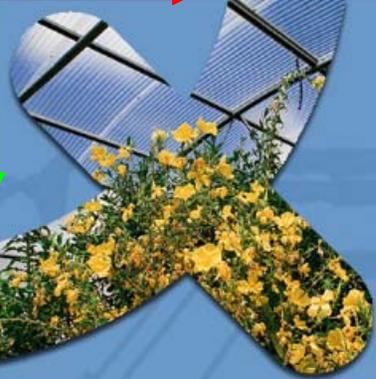
Statistics

Number of participants

Participants		Per 1-5-2006
Number of producers (grid connections)	Total	1.601
	Hydro	14
	Biomass	105
	Wind	926
	Solar	556
Number of traders		55
Number of aggregators		5
Number of trade platforms		0

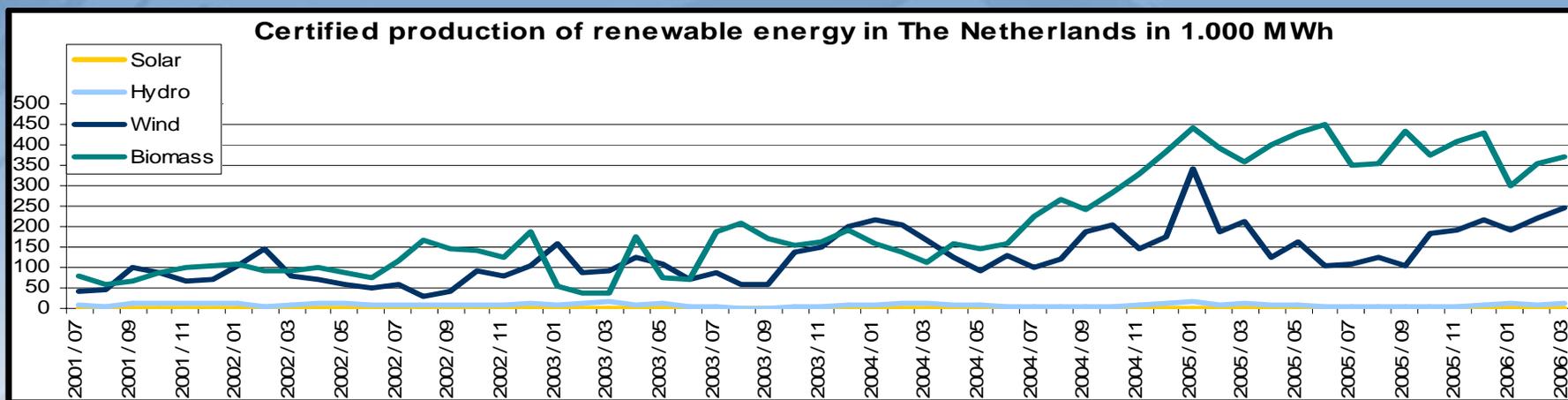
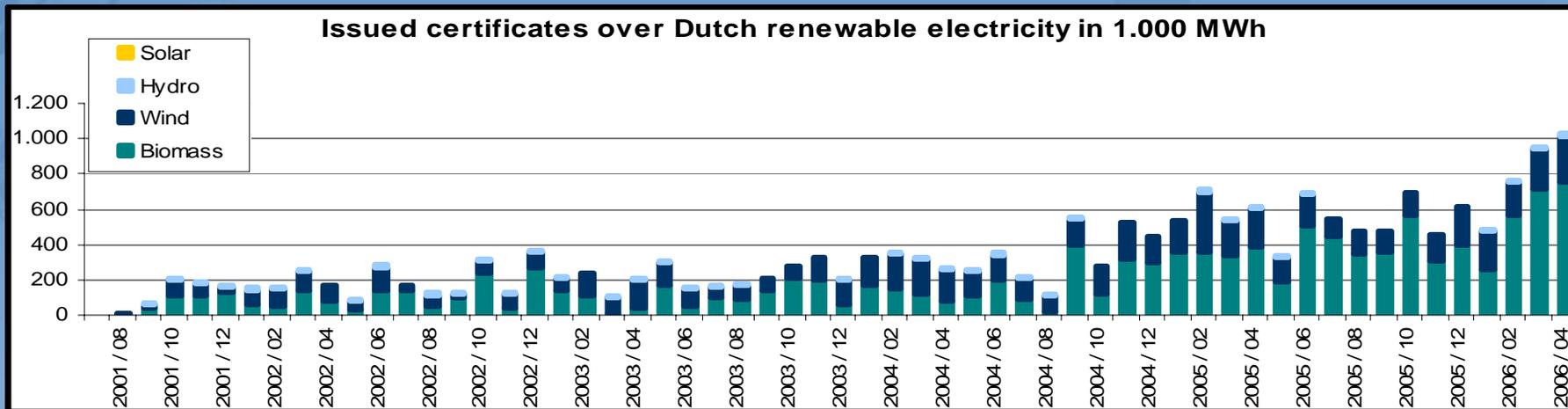
Participants RECS and/or EECS		Per 1-5-2006
RECS		
Number of producers (grid connections)		201
Number of traders		22
Number of aggregators		0
Number of trade platforms		0
EECS		
Number of producers (grid connections)		1.601
Number of traders		55
Number of aggregators		5
Number of trade platforms		0

Participants Combined Heat and Power		Per 1-5-2006
Number of producers (grid connections)		677



Statistics

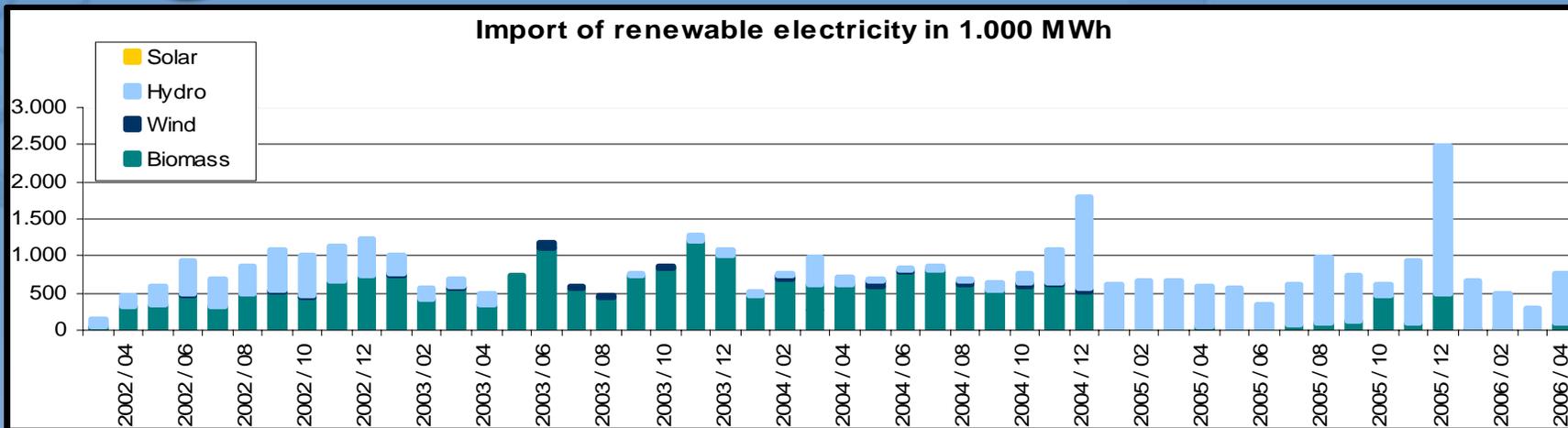
Number of renewable certificates





Statistics Imports

Number of renewable certificates



Imported Guarantees of Origin over renewable electricity

(In MWh)		Apr-06	From 1-1-2004
	Total	768.195	20.305.924
	Hydro	668.195	12.524.353
	Biomass	100.000	7.460.423
	Wind	0	321.148
	Solar	0	0

Issued certificates over foreign renewable electricity (no longer possible)

The last Green Certificates over foreign production up till 01 Januari 2004 have been issued in April. Following an international agreement it became possible to trade internationally with Guarantees of Origin in March 2004. (In MWh)		From 1-1-2002
	Total	19.912.210
	Hydro	4.991.546
	Biomass	14.589.076
	Wind	331.588
	Solar	0

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The text "Subsidy system" is centered on the slide in a bold, black, sans-serif font. The background of the slide is a light blue gradient with faint, semi-transparent images of power lines and a wind turbine. A circular collage of images is positioned at the top, containing scenes of solar panels, yellow flowers, a wind farm, and sheep in a field.

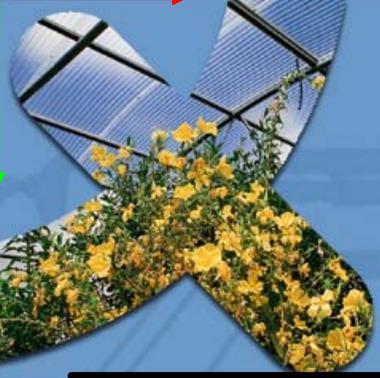
Subsidy system



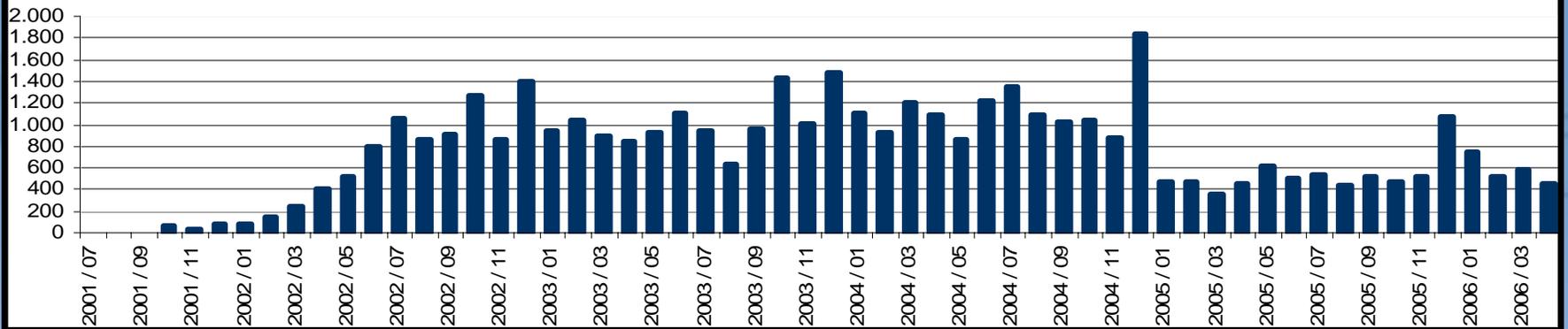
A change in subsidy system in The Netherlands

- At first a consumption subsidy driven subsidy: Ecotax exemption for consumers (Energy Tax article 36i)
- Step by step replaced by a production subsidy, eliminating the uneconomic top of the renewable production location: The MEP (granted for 10 years)
- Both subsidies are granted over the certificates issued at CertiQ
- Now only the production of renewable electricity is subsidised, the certificate trade is a voluntary system

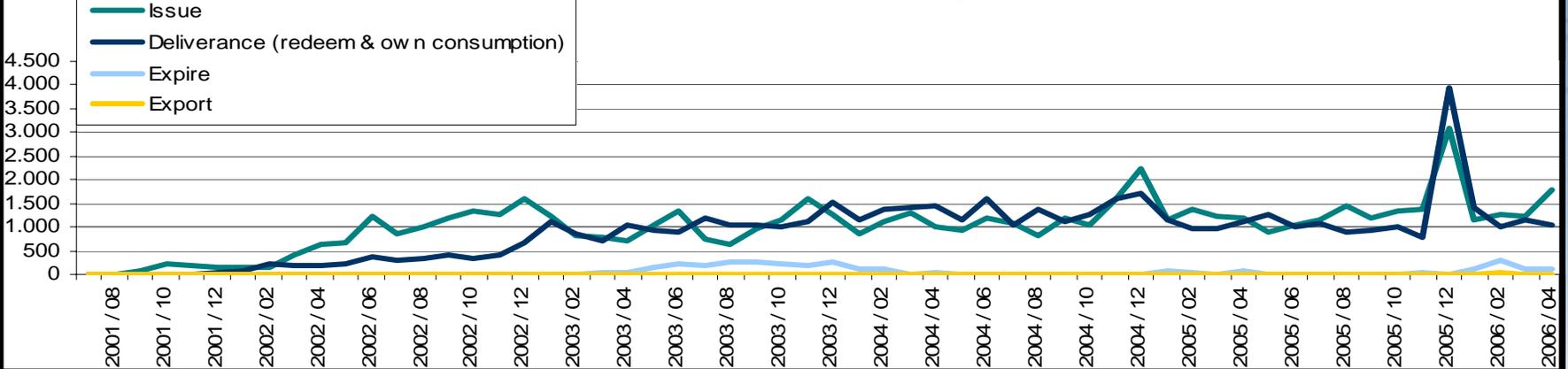
Statistics (of the market)



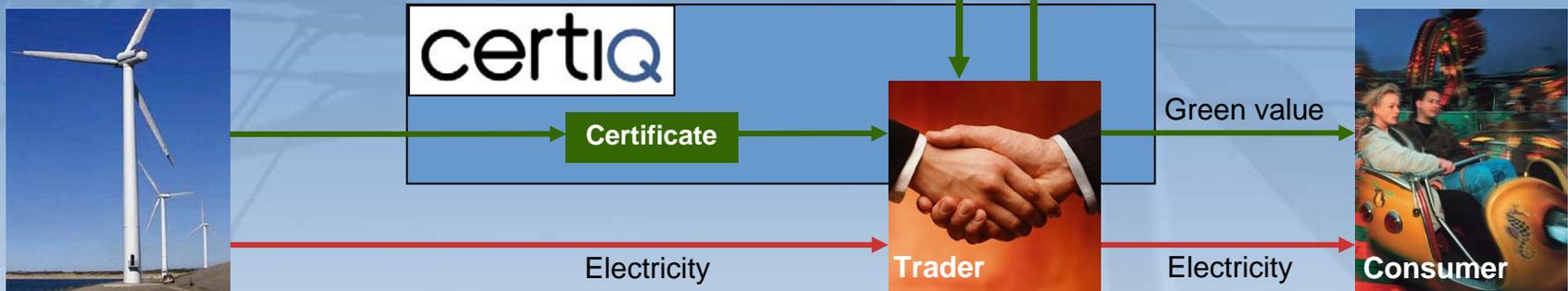
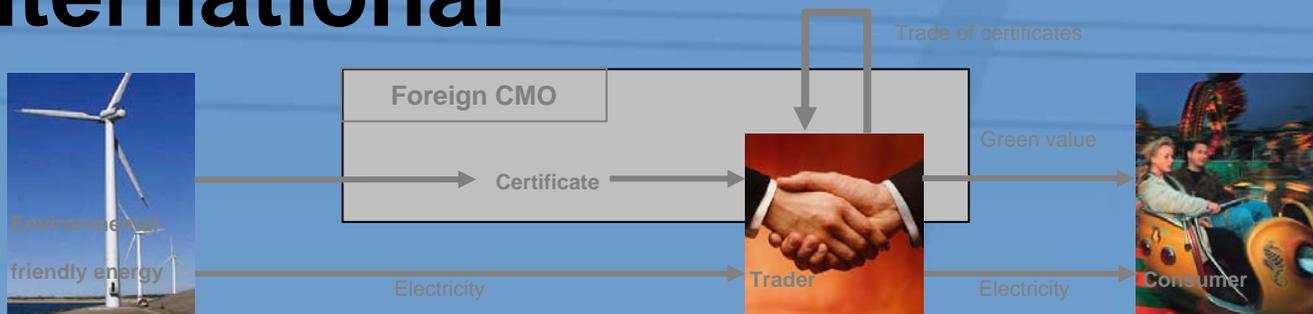
Transfers of certificates in 1.000 MWh



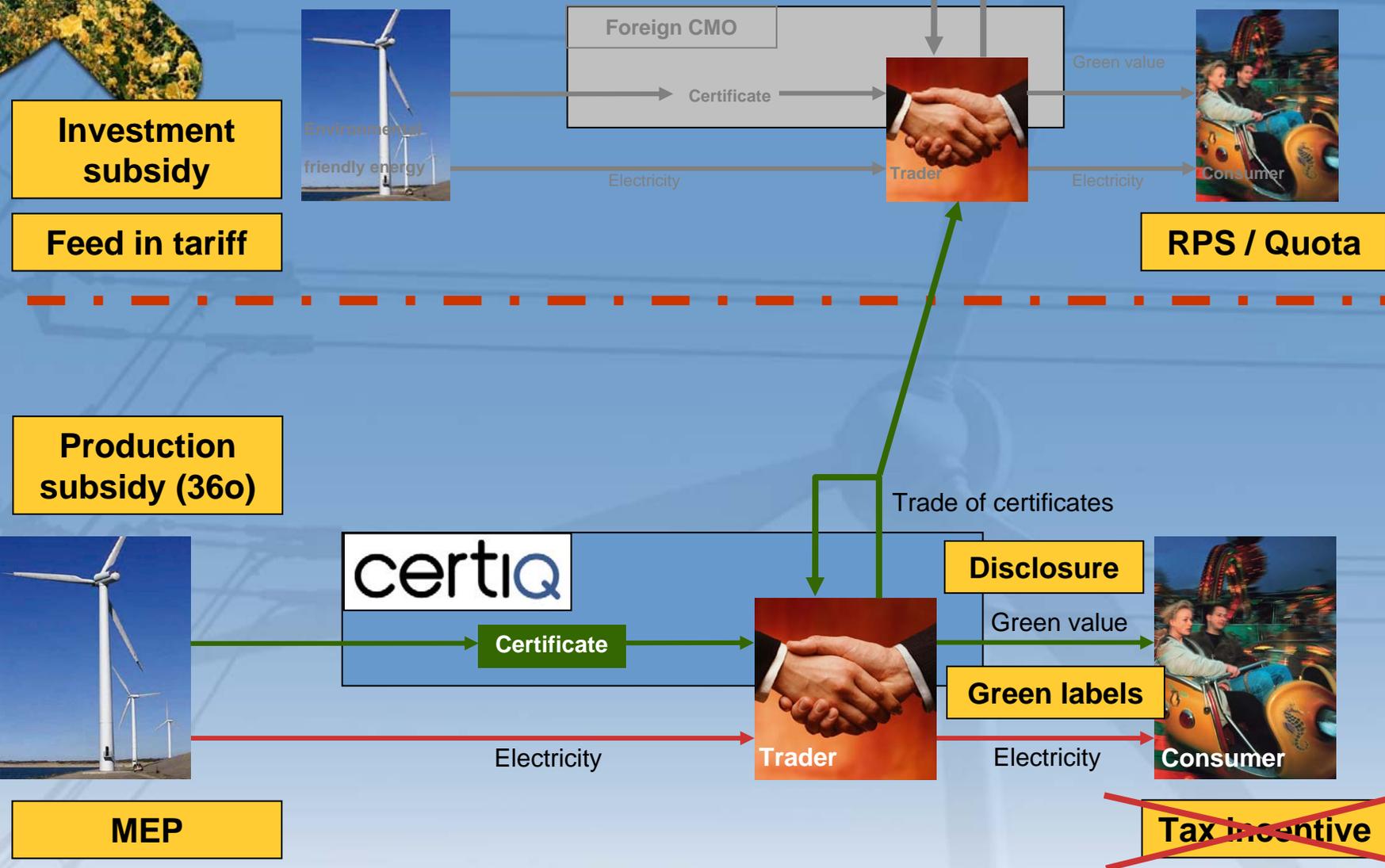
Activities with renewable electricity in the system in 1.000 MWh



International



International examples



International examples

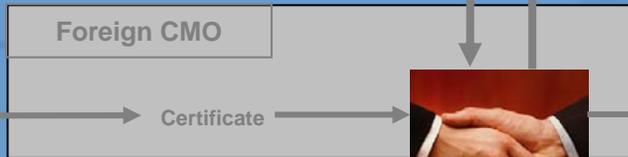
Investment subsidy

Feed in tariff



Environmental friendly energy

130 TWh



Trader

Trade of certificates

Green value

Electricity

Cons. 70 TWh



Consumer

RPS / Quota

Int. trade 40 TWh

Production subsidy (360)



40 TWh



Certificate

Imp. NL 20 TWh

Trade NL 43 TWh

Trade of certificates



Trader

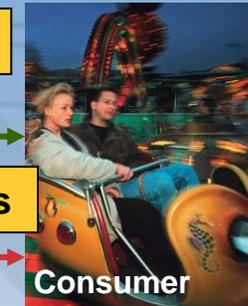
Disclosure

Green value

Green labels

Electricity

Cons. 51 TWh



Consumer

MEP

Subsidy 8 TWh =
500.000.000 Euro's

~~**Tax incentive**~~

Tax 35 TWh



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Future Developments



Future developments

- GO is now implemented in 6 to 7 countries, but according to the European directive 2001/77/EC, it will be implemented in all 25 countries
- Combined Heat and Power (CHP) (is until now only implemented nationally), but following the European Directive 2004/8/EC it has to be implemented in August 2006 as a international tradable Guarantee of Origin
- Disclosure in The Netherlands is now implemented with statistical data, soon it will be implemented more secure by using the Certificate System

The logo for certiq, featuring the word in a lowercase, sans-serif font. The 'c' and 'e' are black, while the 'r', 't', 'i', and 'q' are blue. The 'q' has a distinctive blue tail that curves downwards and to the right.

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A large, bold, blue sans-serif text message centered on the page.

**Thank you for your
attention!**

The website address in a black, sans-serif font.

www.certiq.nl