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## World Wide Green

Green electricity available worldwide through  
green electricity certificates

Gerrit Jan Schaeffer, World Wide Green  
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## Issues of this presentation

- World Wide Green: What?
  - The emergence of green certificates systems worldwide
  - The principle of separation and its possible consequences
- World Wide Green: How?
  - Delivering the service 'green update'
  - A quality product
- World Wide Green: the possibilities
  - Advantages of this approach
  - Potential new green services
- World Wide Green: first experiences
  - The principle works
  - How to make it work in practice?
- Conclusions



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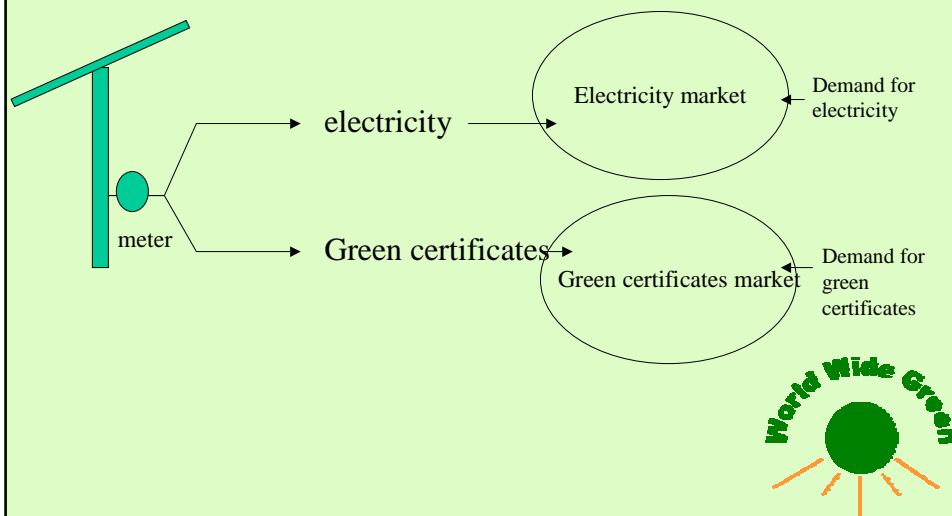
### Overview of official green certificate systems

- Countries with a renewables obligation + g.c.
  - Australia
  - Texas
  - Belgium
  - Italy
  - United Kingdom
  - Sweden
  - Japan
- Countries with a tax exemption + g.c.
  - Netherlands
- EU-member states certificates for the guarantee of origin (October 2003)
- EU-RECS (private initiative)



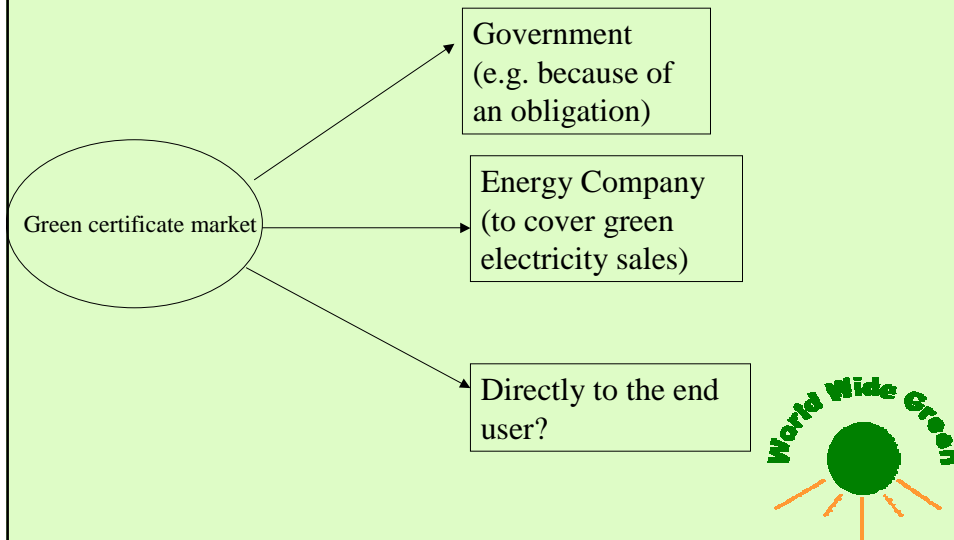
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### Principle green certificates



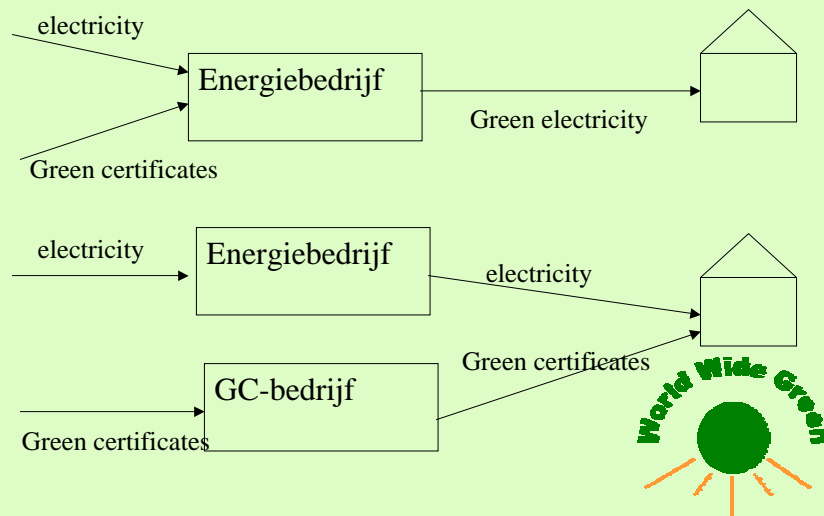
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## Demand for green certificates



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In principle no difference between green electricity or direct supply of green certificates to the final consumer!



## World Wide Green: principle

1. Green electricity is not different from electricity + green certificates
  2. At this moment green certificates are available from many different countries all over the world
- 
- A. Green electricity can be offered worldwide
  - B. Certificates for this offer can be sourced worldwide



## WWG: how does it work?

- WWG buys and redeems, on behalf of its clients, green certificates
  - For instance wind from Texas and solar from Australia
- WWG sells a 'service':
  - A green update of electricity consumption
  - via internet (for private persons)
  - Bilateral contracts (for companies)
  - The customer can make its own renewable energy mix (currently solar and wind)



# GREEN ELECTRICITY DECLARATION

Manuel de Noord

living at

Winkelwaard 57, Alkmaar, The

Netherlands

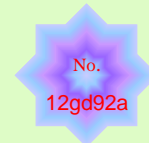
GREEN UPDATE OF ELECTRICITY CONSUMPTION

valid from 1 February 2002 through 31 January 2003



Products:

World Wide Green Wind	176 kWh
World Wide Green Solar	1245 kWh



[worldwidegreen.com](http://worldwidegreen.com)

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## Quality characteristics of WWG products

- WWG has itself audited by an independent environmental NGO (Oeko-Institut)
- Only certificates are used that are produced from plants installed after 1 January 1999
- Only from sources that are acceptable to the NGO community (Eugene rules)
  - Wind
  - Solar PV,
  - green hydro
  - Clean biomass
- Financial additionality
  - If sources are subsidized to a large extent, WWG will purchase and redeem additional certificates to compensate for that. It should be sure that the customer makes a difference over and above existing support schemes.



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## Potential advantages of WWG approach

- Large-scale, diversified supply market
- Globally lowest-cost options available (e.g. solar energy for 30 Eurocent/kWh premium)
- Quality product possible for reasonable prices
- Companies with multiple sites can 'up-green' their electricity use with just 1 contract



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## Current wind and solar projects with some support from World Wide Green customers

- Woodward II wind plant in Texas
- Singleton Solar Farm in New South Wales, Australia



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## Woodward II (Texas)



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## Singleton Solar Farm



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## World Wide Green: additional possibilities

- Greening products and processes
  - Direct energy use of products (computers, printers, cars)
  - Indirect energy use (food items, user goods)



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## Example of greening the direct energy use of cars

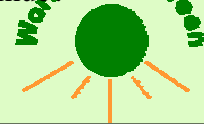
- Assumptions:
  - 200 000 km for petrol cars and 300 000 km for diesel engine cars
  - Greening on the basis of CO<sub>2</sub>-content
  - Using wind certificates from Texas
- Results (order of magnitude)
  - Smart: 500 Euro (0,25 €/t/km)
  - Middle class car: 1000 Euro (0.5 €/t/km)
  - Ferrari: 2500 Euro (1.25 €/t/km)



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## World Wide Green: First experiences

- The principle works in practice ☺
  - Today customers from countries as different as Sweden, Denmark, The Netherlands, Germany, Japan and the United States support wind energy production in Texas and solar energy production in Australia
- It doesn't reach many people just by having an internet-site ☹
  - The number of customers is very limited and our cost are far from covered. How long shall we continue



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## Strategic alliances

- Several contacts with strategic partners on Dutch market
- One official collaboration partner on Dutch market
- Dutch green market reform (from tax incentives to feed-in subsidies) has diminished our chances on this market
- How to proceed?



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## Conclusions

- Green certificate systems make worldwide sales of green electricity possible in principle
- World Wide Green first company that realizes this possibility
- Only an internet site is not enough to make it a financially viable operation
- A world of new 'green services' is potentially possible with green certificates
- Knowledge and education on the part of the public and companies is essential



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allows

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