White Certificate Schemes in Europe

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Basics & Why

Benefits

Drawbacks

First experiences

Road map to European scheme
Why white certificates?

• Marked-based approach (compared to command-and-control policies)
• Avoiding energy price distortion between sectors (compared with taxes on energy consumption)
• Avoiding using identical performance standards for all market actors
  -> higher feasibility
  -> lower transaction costs
• Saving public money (compared to a system of subsidies)
The basics of the scheme

- Market based system to support achievement of end-use energy efficiency
- Often combined with an obligation scheme where market actors have an obligation on energy saving
- Certificates can be created from projects that result in e-savings beyond business-as-usual
- Certificates can be used for compliance and trading
Key benefits

- Introduction of tradability aims at least-cost achievement of targets
- The system could unlock energy saving potentials and actors that are currently not unlocked by other instruments
- Can stimulate the market for ESCOs
- Penalties guarantees meeting the agreed target
Potential drawbacks

- Could impede to enjoy local benefits due to energy efficiency action implementation
  - employment opportunities,
  - pollution reduction,
  - reduced external fuel dependency,
  - technical innovation,
  - etc.
- Could involve large transaction costs
- Might favour mainly most competitive actions and measures
- Linking various systems may require substantial harmonization in energy policies
First European experiences (1)

<table>
<thead>
<tr>
<th></th>
<th>Italy</th>
<th>France</th>
<th>UK*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start date</td>
<td>Jan. 2005</td>
<td>July 2006</td>
<td>April 2002</td>
</tr>
<tr>
<td>Compliance period</td>
<td>Every year; 2 yr borrowing for max. 50% target</td>
<td>In 3 yrs (July 2009)</td>
<td>Each 3 yrs (March ’05 and ’08)</td>
</tr>
<tr>
<td>Obliged parties</td>
<td>Distributors gas/electr. &gt; 100,000 clients</td>
<td>Suppliers gas/electricity</td>
<td>Distributors &gt; 15,000 clients</td>
</tr>
<tr>
<td>Market size</td>
<td>2.9 Mtoe in 2005-09</td>
<td>54 TWh in 2006-08</td>
<td>1st: 62 TWh</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2nd: 130 TWh</td>
</tr>
</tbody>
</table>

*: Strictly speaking not a white certificate scheme as there is no certification. Obligated parties can trade (parts of) their obligation.
# First European experiences (2)

<table>
<thead>
<tr>
<th>Eligible customers</th>
<th>Italy</th>
<th>France</th>
<th>UK*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All incl. transport</td>
<td>All (incl. Transport) excl. EU trading</td>
<td>Residential only</td>
</tr>
<tr>
<td>Eligible participants</td>
<td>Gas and electricity grid companies or ESCos</td>
<td>Any economic actor</td>
<td>Gas and electricity suppliers only</td>
</tr>
<tr>
<td>Penalty</td>
<td>Related to size of miss</td>
<td>20 euro/MWh</td>
<td>Related to size of miss</td>
</tr>
<tr>
<td>Nature of savings</td>
<td>Cumulative primary energy</td>
<td>Lifetime cumulated 4% discounted</td>
<td>Lifetime cumulated 6% discounted</td>
</tr>
</tbody>
</table>
The Italian scheme: market prices

Certificate price (€/tep)

Sessions March06-July06

- Electricity
- Gas
- Other
Issues observed in Italian market

• Very little price fluctuation
• Maximum prices just below 100 €/Toe (~2.2 Eurocent/kWh), which is the maximum that distribution companies may recover from their clients.
• Prices are significantly higher than in FR and GB.
• The Italian system did trigger ESCO activities 64% of certificates issued in 2005 were issued to ESCOs.
• Double counting issues: some savings resulting in creation of white certificates also generate CO₂ reductions on the EU ETS and some also generate green certificates.
France: some first indications

- Market is starting up. End of 2006, 280 Million kWh had been delivered, split between Electricité de Strasbourg; EDF; Elyo Suez Energie Services and Soregies.

- No public price for certificates yet. Estimated price for first year ~10 euro/MWh, which is well below penalty price of 20 euro/MWh
## The British scheme

- The scheme has unlocked significant energy saving potentials and actors that were not unlocked by other instruments
- Prices of saving measures have significantly gone down
- Costs are < 1.5% of fuel prices

### Costs and benefits

- Total costs of all participants £ 690 mln
- Costs for admin £ 1 mln
- + £3.03 on average cons. bill per fuel (< 1.5% fuel prices)

### Costs in p/kwh

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Costs EEC</th>
<th>Consumer price (ex VAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>1.3</td>
<td>6.68</td>
</tr>
<tr>
<td>Gas</td>
<td>0.5</td>
<td>1.66</td>
</tr>
</tbody>
</table>
Observed price reductions

Prices corrected for inflation using Retail Price Indices (RPIX)
(Relevant) Lessons learned from other market-based systems

- Clear, simple and correct penalty setting is essential for compliance
- Avoiding double counting and double selling is essential for the trust in the system
- Ensure reciprocity of certificates
- Ensure sufficient liquidity
- Keep it simple! Complexity confuses
- Pursue a continuous policy
Future scheme?

- Set long-term targets
- Add wider possibility for ESCOs on the market
- Combine with requirements from:
  b) Directive on energy end-use efficiency and energy services (EE & ES)
  c) Domestic offset projects
- Replace system by:
  a) ETS for built environment and transport sector (separate from existing ETS)
  b) Establishment of national energy saving company to act as fund manager, tenderer, ....
  c) ..........
Roadmap towards EU scheme

Define agreed common policy objectives
(energy saving, GHG reductions, employment creation, security of supply etc.)

Develop common set of guidelines
(design, eligible technologies, measurement savings etc.)

Establishment of White Certificate schemes
(in individual Member States according to common guidelines objectives)

Modification of schemes
(to form pan European scheme and to allow trading between countries)
Thank you for your attention

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