MARKET MECHANISMS FOR WHITE CERTIFICATES: ISSUES AND CHALLENGES IN DEVELOPING NEW POLICY MEASURES

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Establishment of Energy Saving programmes on energy end-uses
STEP I

A Public Board (e.g. Governmental) defines:

- Energy saving national targets (e.g. Mtoe/year)
- Eligible Energy Saving Projects
- Obligation-bound actors (OB)
- Apportionment of the global target on OB’s
- Eligible implementers of Energy Saving Projects (EI)
STEP II

Equivalence between attained target and a proportional amount of **White Certificates (WhC)**

![Diagram showing N saved toe equating to M White Certificates.]

**“White certificates”:** certificates issued by independent certifying bodies confirming the claims of market actors for savings of energy, as a consequence of energy end-use efficiency measures  
(From Proposal for a **DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on energy end-use efficiency and energy services**)

21/9/04  IEA-DSM Task XIII Experts Meeting
**STEP II**

**OB** must comply with a WhC target obligation: WhC demand

**EI** may gain and own WhC: WhC supply
A market can be established where WhC demand and offer match:

**OB** can buy lacking WhC to reach their target

**EI** can sell their WhC surplus:

Since:

- they have no target to match
- or

- they gained WhC above their target
IEA-DSM Task XIII Experts Meeting

21/9/04

General Scheme

Public board: mandatory EE (=WhC) targets

Obligation-bound actor (OB)

Eligible Implementer (EI)

Target\textsubscript{1} → OB\textsubscript{1}

Target\textsubscript{N} → OB\textsubscript{N} EI\textsubscript{3}

Target\textsubscript{2} → OB\textsubscript{2} EI\textsubscript{2}

Marketplace

EI\textsubscript{1} → EI\textsubscript{1}

EI\textsubscript{M}
MATTER TO BE DISCUSSED

Obligation-bound actors = WhC target fulfilment: who?

- producers?
- distributors (e.g. in Italy, distributors over a threshold)?
- retailers?
- consumers?
MATTER TO BE DISCUSSED

Eligible implementers of Energy Saving Projects = WhC gain: who?

- obligation-bound actors?
- exempted actors (e.g. in Italy: distributors below the threshold)?
- energy services companies (ESCO)?
  - minimum requirements? official register?
- consumers?
  - all? only large ones?
- market intermediaries?
MATTER TO BE DISCUSSED

Apportionment criteria for Energy Savings targets on OB (= WhC targets) : how?

- number of served customers?
- volume of distributed electricity?

Eligible (= WhC generating) Energy Saving Projects:

- criteria
- size
- valuation of the saving impact = n. of WhC generated persistence of the saving effects
MATTER TO BE DISCUSSED

Trading mechanisms:

participants to the market
lifetime of certificates
frequency of transactions
safety rules
banking

Interaction with other trading schemes (REC, ET)

Chance of extra-national enlarged market:

within EU (Proposal EU Directive on EE in end-uses)
within OCDE
A POSSIBLE TRADING SCHEME - Italy

Italian targets

Twins Ministerial Decrees of April 2001

Mandatory quantitative targets of primary energy savings at the national level (against the “business as usual” scenario)

<table>
<thead>
<tr>
<th>Year</th>
<th>Target (Mtoe/Yr)</th>
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<tr>
<td></td>
<td>Electricity</td>
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<tr>
<td>2002</td>
<td>0.1</td>
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<td>2003</td>
<td>0.5</td>
</tr>
<tr>
<td>2004</td>
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<tr>
<td>2005</td>
<td>1.2</td>
</tr>
<tr>
<td>2006</td>
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A POSSIBLE TRADING SCHEME - Italy

Italian targets

Twins Ministerial Decrees of July 2004

National cumulative energy savings targets

<table>
<thead>
<tr>
<th>Year</th>
<th>Mtoe</th>
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<tbody>
<tr>
<td>2003</td>
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<tr>
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<td>1.5</td>
</tr>
<tr>
<td>2007</td>
<td>2</td>
</tr>
<tr>
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<td>2009</td>
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First issue

Updated
A POSSIBLE TRADING SCHEME - Italy

Obligation-bound actors

Electricity and Gas Distributors

Threshold: 100,000 customers as at 31.12.2001

gas: 22 distributors; 60% of total customers

electricity: 8 distributors; 98% of total customers
A POSSIBLE TRADING SCHEME - Italy

Apportionment criteria

Apportionment on the basis of the quantity of electricity/gas distributed to final customers compared to the national total, in the previous year.
A POSSIBLE TRADING SCHEME - Italy

Eligible Energy Saving projects

only demand-side actions (energy savings in generation ineligible)

illustrative list: 14 classes of projects with more than 35 sub-classes; among the others:

- use of high efficiency electric devices/motors,
- substitution with electric energy where convenient
- containment of electricity leaking (stand-by)
- increasing efficiency of lighting systems
- power factor regulation in final uses
- improving the combustion efficiency
- building insulation
A POSSIBLE TRADING SCHEME - Italy

Eligible Implementers of the Projects

distributors (directly or via controlled companies)
ESCOs (still to develop)
A POSSIBLE TRADING SCHEME - Italy

Diagram showing the interactions between End-user, ESCO, Regulatory body, E.E. Fund, and DSO.
WILL IT WORK?

Implementation

time-shift of targets: 2 years
planned start-up: May 2004
Energy Savings certification = WhC issuing: within 2004
WhC trading: from 2005 on
Handled by the Electricity Market Operator
First verification of target matching: May 2005
WILL IT WORK?

Other interested Countries:

UK and New South Wales (Australia) are handling a similar scheme
France is going to introduce WhC trading
Sweden and Norway are interested in principle to the subject
Interest was stated also by Germany, Holland and Academia
IEA-DSM Task XIV

A new task on WhC trading was launched within IEA-DSM:

Italy
France
Norway
Sweden
UK

Central European University (as observer)
Other Countries are going to join:

EC
Australia
Holland
Denmark
IEA-DSM Task XIV - OBJECTIVES

• whether – and how – a scheme involving the issuing and the trading of White Certificates (WhC) provides reduction of:
  – primary energy consumption (main concern)
  – CO₂ emissions (secondarily)

• most suitable format for such a scheme

• implementation problems involved

• interactions with other schemes.
### IEA-DSM Task XIV - APPROACH

<table>
<thead>
<tr>
<th>Event</th>
<th>Workshop</th>
<th>Workshop subject</th>
<th>Task experts meeting subject</th>
<th>Month</th>
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<tbody>
<tr>
<td>1</td>
<td>NO</td>
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<td>Kick-off, Task organisation, Preparation of following workshop</td>
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<tr>
<td>2</td>
<td>YES</td>
<td>Existing experiences and expectations at national level</td>
<td>Discussion on the past workshop, Preparation of following workshop</td>
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<tr>
<td>3</td>
<td>YES</td>
<td>Policy/principle issues</td>
<td>Discussion on the past workshop, Preparation of following workshop</td>
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<tr>
<td>4</td>
<td>YES</td>
<td>Organisation / practical issues</td>
<td>Discussion on the past workshop, Preparation of following workshop</td>
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<tr>
<td>5</td>
<td>YES</td>
<td>Interaction with other schemes/EE policies</td>
<td>Closing meeting, Discussion on the past workshop, Discussions on the organisation and structure, Final Synthesis Report</td>
<td>16</td>
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**Month and Location:**
- 1 June 04, Italy
- 4 Nov 04, UK
- 8 March 05, France
- 12 June 05, Sweden
- 16 Oct 05, Norway
Task XIV: Market Mechanisms for White Certificates Trading

http://dsm.iea.org/NewDSM/Work/Task14/WhiteCertificates.htm

Market-based policies for accelerating energy efficiency programmes

General goal
This project (‘Task’) aims to address:

- whether - and how - a scheme involving the issuing and the trading of White Certificates (WCT) provides an effective means of attaining targets of reduction of: 1. primary energy consumption (main concern) 2. CO2 emissions (secondarily)
- what is the most suitable format for such a scheme
- what implementation problems are involved, at national and extra-national levels
- how it can interact with other schemes.

Questions to be addressed
Policy and operational issues will considered throughout the task. Principle (policy) issues

- Send this to a colleague
- Register your interest
- Contact: Operating Agent
IEA-DSM Task XIV - MORE INFO?

SEE TASK XIV WEBSITE

http://dsm.iea.org/NewDSM/Work/Tasks/14/task14.asp
THANK YOU

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